

Central University of Punjab Bathinda

(NAAC Accredited "A" Grade University)



Annual Report 2016-17
(01.04.2016 - 31.03.2017)



CENTRAL UNIVERSITY OF PUNJAB, BATHINDA



WELCOME



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CHANCELLOR'S MESSAGE

Prof. (Dr.) S.S. Johl
Padma Bhushan Awardee



At the outset, I congratulate the Central University of Punjab, Bathinda (CUPB) for setting a benchmark for excellence by accomplishing the much-coveted and much-deserved 'A' grade in the very first cycle of its National Assessment and Accreditation Council (NAAC) evaluation.

I feel immense pride in associating with the CUPB not just because I have been the founding Chancellor of the University, but also because the university has always given me multiple reasons to be proud of my association with it. The CUPB is expanding exponentially in numbers, with newer Centres opening and more and more bright young faces joining the university as students and faculty members. The fresh impetus to the research and development provided by this young blood is visible to all in terms of all parameters of assessment: The NAAC 'A' grade, the NIRF ranking of the 65 among the 3565 institutes in 2016, a position in the NIRF Rank Band 115-120 in 2017, as well as the Total Impact Points of 402.6 and, the highest number of research publications among all newly-established Central Universities. The eighth rank that the CUPB secured in the Vitiya Saksharta Abhiyan (VISAKA), the Human Resource Development Ministry's drive for promoting digital economy, also speaks volumes about the hard work and dedication of everyone associated with the university.

The university is already keenly aware of the relevance and role of the talent it possesses and the hard work they put in for the growth of the university. Now, the only way forward for the CUPB is to nurture this talent more and let it flourish even further to achieve its maximum potential so that the university can fulfil its foundational objectives vis-à-vis the welfare of the society and the nation at large. I am confident that under the able leadership of Hon'ble Vice-Chancellor, Prof. R.K Kohli, the CUPB will relentlessly pursue these goals and cross more milestones on the way.

I wish every individual associated with the university all the success in all their endeavours and look forward to working with the university as it continues to prosper.

Jai Hind!

(Prof. S.S. JOHL)
 Chancellor

VICE-CHANCELLOR'S MESSAGE

Prof. (Dr.) R.K. Kohli
FNA, FASc, FNASc, FNAAS
JC Bose National Fellow
Certified Sr. Ecologist, ESA, USA



My third year of association with the Central University of Punjab, Bathinda (CUPB), witnessed the university growing holistically in a direction we all desired to see it move in teaching and research. In all indices of academic excellence, the CUPB is doing exceptionally well.

The CUPB faculty members have secured 51 externally-funded research projects worth Rs. 13.08 crores and the CUPB has consolidated its position as the one of the fastest emerging centres of academic research and innovation, with the highest number of ResearchGate (RG) Total Impact Points (402.62) and RG Score (1,808.20), in addition to one of the topmost positions in SCOPUS relative research paper citations (1467), *h*-index (18), and total number of papers published (256) among the newly-established Central Universities, two years in a row. Apart from this, 51 students from the CUPB qualified national level competitive exams like CSIR/UGC NET/ JRF, GATE, GPAT, ICAR-ARS, etc. in 2016-17. The CUPB also secured the eighth position in the Vittiya Saksharta Abhiyan (VISAKA), an initiative by the Human Resource Development Ministry (HRD) to create awareness about digital transactions.

The feather in the cap was the 'A' grade the CUPB received from the National Assessment and Accreditation Council (NAAC) in the very first evaluation cycle, within the 6th year of the CUPB's establishment—a rare feat for an infant in terms of academic age. All these accomplishments were the cumulative result of hard work put in by our talented and industrious faculty members, students and staff.

The total number of Centres expanding to 19, an increase in the number of courses to 34, and admission to students from 28 different states of India are signs of our commitment to spread our wings wide enough to embrace knowledge in all possible forms and for the benefit of all. The university is growing organically towards achieving its objectives of imparting gainful education to the new generations of India. In addition to making our university a hub of innovation, our focus remains on making it relevant and approachable to all sections of the society. The Community College and Legal Awareness Cell etc. are established to serve the society at large where students, after higher secondary school, can obtain training in skills required for the larger welfare of the society.

The first phase of the new campus at Ghudda is at the last stages of completion, and we hope to shift to the brand new campus very soon. The university is aware of the challenges and the opportunities it faces, and is geared up to face them to reach the greatest heights of academic excellence.

Jai Hind!


(R.K.KOHLI)
Vice-Chancellor

**CHANCELLOR, VICE CHANCELLOR AND STATUTORY OFFICERS OF THE UNIVERSITY****Prof. (Dr.) S.S. Johl**

Chancellor

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Vice Chancellor

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**Prof. Jagdeep Singh**

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**DEANS OF THE SCHOOLS OF STUDIES****Prof. (Dr.) P. Ramarao**

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**Prof. (Dr.) Ramakrishna Wusirika**

Dean, School of Global Relations

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EXECUTIVE SUMMARY

In the year 2016-2017, the CUPB showed tremendous growth in all aspects of academic excellence. The CUPB received 'A' grade in its very first NAAC assessment cycle. In relative *h*-index, relative research papers citations and relative ranking, RG score, and external funding for research projects, the CUPB not only ranked number one among the 13 Central Universities established in 2009 but also stood a way ahead of other universities. The major achievements of the university in terms of research publications and R&D projects are as under:

S. No.	Description	Number
1.	Publications in peer reviewed impact journals/books/book chapters	256
2.	Papers presented in national/international conferences	104
3.	Research projects formulated from the CUPB and funded by various external agencies	51

The CUPB was positioned in the NIRF Rank Band 115-120 for the year 2017. The CUPB also secured the eighth position in the Vitiya Saksharta Abhiyan (VISAKA), a drive by the Human Resource Development Ministry (HRD) to create awareness about digital transactions and to promote digital economy.

In the academic session 2016-17, the university offered 56 courses in 09 Schools and 19 Centers of Study. As a part of its objective of the social development of the region, the Community Development Cell organised field visits to get first-hand information on various social, economic, environmental, geographical and health-related issues. The Community College has strode ahead by way of offering Certificate, Diploma and Advanced Diploma in Green Farming Technologies.

The 7th entrance examination for admission to M.A., M.Sc., M. Pharm., L.L.M., M. Tech. M.Ed. and MBA (Agribusiness) courses of the academic session 2016-17 was held at various centres spreading throughout the country, including the City Campus of Central University of Punjab, Bathinda. Online applications were invited for admission to various programmes, and more than 11060 applications for admission were received. Since a large number of candidates appeared for the test, the entrance examination was held on 21st May 2016 and 22nd May 2016 in three shifts, from 9 A.M. to 5 P.M. and 511 candidates were given admission in the University at Bathinda. In addition, 24 students with external fellowships were admitted to the Ph.D. programmes in various Centres. Apart from this, a panel of 23 students who qualified for the admission was also prepared for Ph.D. admission during the session 2016-17. The admission process was successfully completed in time.

The University library continued with its relentless efforts to establish itself as an updated reservoir of knowledge for students, researchers and scholars. It has successfully increased its cumulative stock of books, which rose exponentially to 33940 books as compared to the previous year's stock of 28046 books, in addition to subscription to 71 print journals and 9572 full text online journals. The university library also subscribed to the software "Grammarly" for proof-reading, language correction and plagiarism detection.

At the Central Instrumentation Laboratory of the CUPB, high-end equipment like Clinical Chemistry Analyzer, Flow Cytometer, Inductively Coupled Plasma Mass Spectrometer were added.

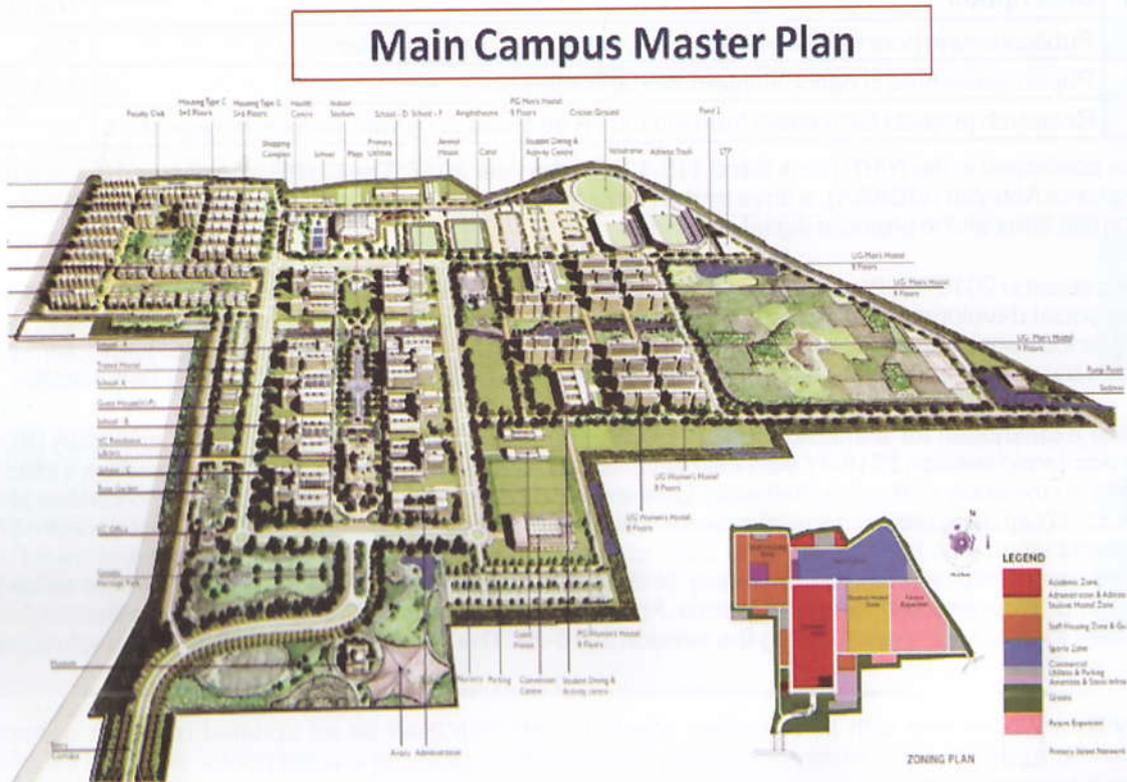
To diversify and promote research activities among institutions, MoUs were signed between CUPB and institutions such as National Council of Rural Institutions, Hyderabad, Rajiv Gandhi National Law University, Patiala, Maharaja Ranjeet Singh Punjab Technical University, Bathinda, Adesh University, Bathinda, DAV College Bathinda, Dashmesh Girls College of Education, Badal and Rasi HyVeg Pvt. Ltd., Gurugram.

The second Convocation of the Central University of Punjab was held on 15th October, 2016 at its City Campus, during which 148 degrees were awarded to students and scholars by the Vice-Chancellor in the presence of the esteemed Chief Guest Prof. Ajay Kumar Sood, President-elect INSA and Honorary Professor, Department of Physics, Indian Institute of Science, Bangalore, Hon'ble Chancellor Prof. S.S Johl, and the Guest of Honour Prof. A.S. Brar, Vice Chancellor, Guru Nanak Dev University, Amritsar. Toppers were awarded Gold Medals with Hallmark certification.

The CUPB was also credited with 93% success rate in national-level examinations and fellowships (UGC/CSIR-NET/JRF/GATE etc.) as on 31st March 2017. A meeting of the CUPB Alumni Association was held to strengthen the relations of the institution with its former students. The self-composed poem 'Rio Mein Lalkar' written by Mr. Suraj Kumar Upadhyaya, an M.Phil. student, was selected out of thousands of poems and recited by the Hon'ble Prime Minister of India Sh. Narendra Modi in his Radio Talk 'Mann Ki Baat'. It was shared on the Twitter and Facebook pages of the PMO as well.

The University Faculty strength got increased from 88 in March 2016 to 100 by March 2017. Two faculty members of the CUPB were selected by the Ministry of Earth Sciences, Government of India for the 36th India Scientific Expedition to Antarctica held in December 2016.

The construction of buildings in the Main Campus at Ghudda village, under Phase 1 (A), is in full swing. The current status of the construction activities is depicted in the following pictures:



Glimpses of buildings under construction at the Main Campus of the University



A view of the Girls & Boys Hostels under construction



Frontal & Backside view of the Academic Block under construction



A side view of the Guest House under construction



A view of the Water Storage Centre under construction



A view of the Residential Buildings (for Faculty & Staff) under construction



**A view of the Residential Buildings
(for Bachelors and Research Scholars Accommodation) under construction**

VISION, MISSION AND OBJECTIVES OF THE CENTRAL UNIVERSITY OF PUNJAB

Vision

- To uplift and upgrade the standards of teaching, learning and research to the global levels of excellence;
- To create benchmarks in research, patents and consultancy services;
- To strategize to become a global epicenter of knowledge, culture, skills and technologies;
- To develop a scientific temper and a performance-oriented culture of pro-active decision-making;
- To act as a catalyst of change by setting standards in infrastructural growth, academic and co-academic excellence, learning and evaluation, social interfacing with the stake-holders, human resource development, safety and security systems, process management, and seamless integration with the surrounding communities;
- To cross-pollinate new ideas, new technologies, new platforms and new world-views.
- To continue expanding and exploring locally, nationally and globally.

Mission

- To offer a wide range of instructional and research facilities across integrated and cross-disciplinary studies;
- To promote innovation in teaching, learning, evaluation, research and consultancy services;
- To create an ignited workforce responsive to regional, national and global needs in tune with the requirements of the academics, industry, business and administration;
- To participate in finding solutions to the problems and concerns of the surrounding community and civil-society and to help provide solutions to these problems.

Objectives

- Disseminating and advancing knowledge by providing instructional and research facilities in such branches of learning as it may deem fit.
- Making special provisions for integrated courses in humanities, social sciences, science and technology in its educational programmes.
- Establishing links with industries for the promotion of science and technology.
- Paying special attention to the improvement of the social, economic conditions of the nation and striving for the intellectual, academic and cultural development of its stakeholders.



STATUTORY BODIES OF THE UNIVERSITY

Court

Chairman Prof. (Dr.) S.S. Johl Chancellor, (Ex-officio Chairman) Central University of Punjab, Bathinda	
Members of Court	
Prof. (Dr.) R.K. Kohli Vice-Chancellor, Central University of Punjab, Bathinda	Prof. (Dr.) Ajai Singh Brar Vice Chancellor Guru Nanak Dev University, Amritsar
Shri. Rajendra Singh Magsaysay Awardee Community Development 32/34, Kiran Path, Mansarovar, Jaipur	Prof. (Dr.) Gurpreet Bal Professor and Head, Deptt. of Sociology Guru Nanak Dev University, Amritsar
Prof. (Dr.) Kapil Hari Pranajape Professor and Head Department of Mathematical Sciences Indian Institute of Science Education & Research, Mohali	Prof. (Dr.) M.K. Surappa Professor Department of Materials Engineering Indian Institute of Science, Bangalore
Prof. (Dr.) Arun Kumar Grover Vice Chancellor Panjab University, Chandigarh	Prof. (Dr.) G.P.S. Raghava Scientist and Head of Bioinformation Institute of Microbial Technology, Chandigarh
Prof. (Dr.) Timothy A. Gonsalves Director, Indian Institute of Technology, Mandi (HP)	Prof. (Dr.) A.D.N. Bajpai Vice Chancellor Himachal Pradesh University, Summer Hill, Shimla
Prof. (Dr.) Jaspal Singh Vice Chancellor Punjabi University, Patiala	Prof. (Dr.) C.L. Anand Retired Professor of Education, NCERT 2536, Sector 37-C, Chandigarh
Prof. (Dr.) K.S. Viswanathan Professor and Head Department of Chemical Sciences, Indian Institute of Science Education & Research, Mohali	Shri. Charan Kaushal Social Worker R/o. B11/621 Street No. 7 K C Road, Barnala
Cdr. K.V. Subramanyam, YSM (Retd.) 1-2-412/2, Gagan Mahal Colony, Hyderabad	Prof. (Dr.) P. Ramarao Dean, School of Basic and Applied Sciences, Central University of Punjab, Bathinda



<p>Prof. (Dr.) Gurmail Singh Vice Chancellor Akal University, Talwandi Sabo, Bathinda</p>	<p>Prof. (Dr.) Surjit Patar Padma Shri Awardee Professor of Eminence, Sri Guru Granth Sahib World University, Fatehgarh Sahib</p>
<p>Prof. (Dr.) Bhanu Kumar Former Professor Department of Meteorology, Andhra University, Sethammadhara, Vishakapatnam</p>	<p>Prof. (Dr.) Anand Mohan Director National Institute of Technology, Kurukshetra</p>
<p>Prof. (Dr.) Nishtha Jaswal Professor and Chairperson Department of Law, Panjab University, Chandigarh</p>	<p>Dr. Sunil Singh Former Principal Christian Medical College Ludhiana</p>
<p>Dr. Samir Kumar Das Director, Dr. B.R. Ambedkar National Institute of Technology, Jalandhar</p>	<p>Prof. (Dr.) Girish Sahni Director General Council of Scientific and Industrial Research, New Delhi</p>
<p>Shri Narinder Singh Social Worker R/o. 47B, Kauhrian Home, Lehal, Patiala</p>	<p>Prof. (Dr.) Ravinder Goswami Additional Professor Department of Endocrinology & Metabolism, All India Institute of Medical Sciences, New Delhi</p>
<p>B. Jaswinder Singh Sikhanwala Social Worker R/O Baba Fareed Nagar, St No. 1 Old Cantt Road, Faridkot</p>	<p>Shri. J.S.K. Atchutha Ramayya Social Worker D No. 67-1-24, Ashok Nagar Kakinada, Andhra Pradesh</p>
<p>Shri. B. Rama Murthy Social Worker B-1851, 3rd Avenue, Sainikpuri, Hyderabad</p>	<p>Prof. (Dr.) Pradeep Bhargava Director G. B. Pant Social Sciences Institute, Jhusi, Allahabad (UP)</p>
<p>Prof. (Dr.) Harish Kumar Sharma Dean (Research & Consultancy) Sant Longowal Institute of Engg. & Technology, Longowal, Sangrur</p>	<p>Dr. Harbans Lal Bansal Social Worker R/o. # 5, Dhaliwal Colony, Jagdish Marg, Patiala</p>
<p>Prof. (Dr.) Jagdeep Singh Registrar (<i>Ex-officio</i> Member Secretary) Central University of Punjab, Bathinda</p>	

Executive Council

<p>Prof. R. K. Kohli Vice Chancellor (<i>Ex-officio</i> Chairman) Central University of Punjab Bathinda</p>	
<p>Prof. Ashwani K. Mohapatra Professor, Centre for West Asian Studies Jawahar Lal Nehru University New Delhi</p>	
<p>Dr. Rekha Kalia Bhardwaj Registrar DAV University Jalandhar</p>	
<p>Dr. Balwan Gautam Associate Professor of Political Science Ramanujan College University of Delhi</p>	
<p>Prof. R.C. Sobti Vice Chancellor Babasaheb Bhimrao Ambedkar University, VidyaVihar, Rai Bareilly Road, Lucknow</p>	
<p>Sh. Vijay Inder Singla Former Member of Parliament, Lok Sabha (Sangrur), 30, Mahadev Road, New Delhi</p>	
<p>Sh. Shamlal Garg (Former President, Institution of Engineers, Kolkata) House No-55, Sector-6 Panchkula</p>	
<p>Prof. Timothy A. Gonsalves Director Indian Institute of Technology Mandi (HP)</p>	
<p>Prof. A.D.N. Bajpai Vice Chancellor Himachal Pradesh University Summer Hill, Shimla</p>	
<p>Prof. P. Ramarao Professor and Dean School of Basic and Applied Sciences Central University of Punjab, Bathinda</p>	
<p>Prof. A. K. Dhawan Professor and Dean School of Health Sciences Central University of Punjab, Bathinda</p>	
<p>Prof. V. K. Garg Professor and Dean School of Environment and Earth Sciences Central University of Punjab, Bathinda</p>	
<p>Prof. Ramakrishna Wusurika Professor and Dean School of Global Relations Central University of Punjab, Bathinda</p>	



Prof. Anjana Munshi

Professor and Dean
School of Health Sciences
Central University of Punjab, Bathinda



Dr. Sunil Mittal

Assistant Professor
Centre for Environment Science and Technology
Central University of Punjab, Bathinda



Dr. Felix Bast

Assistant Professor
Central University of Punjab, Bathinda



Prof. Jagdeep Singh

Registrar (Ex-officio Secretary)
Central University of Punjab
Bathinda



Academic Council

Prof. R. K. Kohli

Vice Chancellor (*Ex-officio* Chairman)
Central University of Punjab
Bathinda



Prof. K. N. Pathak

Professor Emeritus & Former Vice Chancellor
Panjab University
Chandigarh



Dr. Veer Singh

(Former Director, Academics, Chandigarh Judicial academy)
HIG Independent, House No. 5567,
Sector 38 (West) Chandigarh



Prof. P. S. Jaswal

Vice Chancellor
Rajiv Gandhi National University of Law
Sidhuwal-Bhadson Road, Patiala



Prof. S. P. Singh

Former Vice Chancellor
Guru Nanak Dev University, Amritsar
49, Ground Floor, Raj Guru Nagar, Ludhiana



Prof. Narpinder Singh

Professor, Department of Food Science & Technology
Dean, Faculty of Applied Sciences,
Guru Nanak Dev University, Amritsar



Prof. M. P. S. Ishar

Vice Chancellor
Maharaja Ranjit Singh State Technical University
Bathinda



Prof. Gurmail Singh

Vice Chancellor
Akal University
Talwandi Sabo Bathinda



Prof. S. S. Chahal

Former Vice Chancellor
Khalsa University
Amritsar



Prof. Anita Kaushal

Dean, School of Languages
Panjab University
Chandigarh



Dr. P.S. Ahuja

(Former Director General, CSIR, and Former Director, IHBT)
Adjunct Professor, IISER, Sector-81, Mohali



Prof. P. Ramarao

Professor and Dean, School of Basic and Applied Sciences
Central University of Punjab
Bathinda



Prof. V. K. Garg

Professor and Dean
School of Environment and Earth Sciences
Central University of Punjab Bathinda



Prof. Ramakrishna Wusurika

Professor and Dean
School of Global Relations
Central University of Punjab Bathinda



Prof. Anjana Munshi

Professor and Dean
School of Health Sciences
Central University of Punjab Bathinda



Prof. S. S. Marwaha

Professor and COC
Centre for Applied Agriculture
Central University of Punjab Bathinda



Dr. Tarun Arora

Associate Professor
School of Legal Studies & Governance
Central University of Punjab Bathinda



Dr. Sunil Mittal

Assistant Professor
Centre for Environment Science and Technology
Central University of Punjab, Bathinda



Dr. Felix Bast

Assistant Professor
Central University of Punjab
Bathinda



Prof. Jagdeep Singh

Registrar (*Ex-officio* Secretary)
Central University of Punjab
Bathinda



Finance Committee

Prof. H. K. Kohli
Vice Chancellor (*Ex-officio* Chairman)
Central University of Punjab, Bathinda



Prof. Ashwani K. Mohapatra
Professor, Centre for West Asian Studies
Jawahar Lal Nehru University, New Delhi



Prof. S.S. Chahal
Former Vice Chancellor
Guru Nanak Dev University, Amritsar



Prof. R.C. Sobti
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Prof. Agayajit Singh
Former Head, Department of Psychology
Punjab University, Patiala



Sh. Shamlal Garg
Former President
Institution of Engineers, Kolkata
House No 55, Sector-6, Panchkula



Joint Secretary (CU), UGC
or any other Joint Secretary level Officer
nominated by the Chairman, UGC.

Joint Secretary and Finance Advisor, MHRD
or teacher nominee from Finance Bureau of MHRD
not below the rank of Deputy Secretary.

Joint Secretary (CU & L) of MHRD
or teacher Nominee
not below the rank of Joint Secretary to the Government of India.

Prof. P. Ramarao
Dean, School of Basic and Applied Sciences
Central University of Punjab, Bathinda



Sh. Ajit Singh
Finance Officer (*Ex-officio* Secretary)
Central University of Punjab, Bathinda



Building Advisory Committee

Sr. No.	Constitution	Designation	Name of the Officials
1	Vice-Chancellor	Chairperson	Ex-Officio,
2	A representative of the Planning Board of the University	Member	Prof. N. K Verma, Former Chief Engg. CSIR, Lucknow & Member Planning Board CUPB.
3	A representative of the user Department	Member	Prof. P. Ramararo, Dean SBAS



4.	Two Professors/Associate Professor of the University nominated by VC	Member	Prof. V. K. Garg, COC, Centre for EVST Dr. Sanjeev Kumar, Associate Professor & COC, Centre for Plant Sciences
5.	Finance Officer of the University	Member	Ex-Officio
6.	Principal of the Engineering College of the University or Head of Civil Engineering Department (where it exists), otherwise a person of a equal status from a neighbouring University/College	Member	Prof. Manjit Bansal, Head of Civil Engineering, GZSCET, Bathinda (Neighbouring Engineering College)
7.	Chief Engineer (Civil) of CPWD or State PWD or his representative not below the rank of Superintending Engineer	Member	Er. N. R. Goyal, Superintending Engineer, PWD Bathinda Divison
8.	A retired Chief Engineer/Superintending Engineer (Civil) of CPWD/State PWD/Public Section Undertaking	Member	Er. N. R. Verma (Retd. Chief Engineer. CSIR)
9.	Superintending/Executive Engineer	Member	Er. Manjit Singh, Additional Superintending
10.	Superintending/Executive Engineer (Public Health) of CPWD or State PWD	Member	Er. Jaswinder Singh, Executive Engineer, Public Health Divison -1, PWD, Bathinda
11.	University Engineer	Member	University Engineer
12.	Senior most Architect of the University (where it exist), otherwise a Chief Architect or person of equal status from a neighboring University/College	Member	Ar. Ripu Daman Singh, Head of Architecture, GZSCET (Neighbouring Engineering College)
13.	Chief Architect/Deputy Chief Architect or a person of equivalent status from a Central or State Department	Member	Ms. Sapna, Chief Architect, Punjab
14.	Senior most Landscaping Expert of the University(where it exist), otherwise from some neighboring Institution/Government Department/Public Sector Undertaking or to be the University for a limited period	Member	Dr. J. S. Bilga, Consultant (Horticulture), Central University of Punjab
15.	Registrar of the University	Member Secretary	Ex-Officio

Meetings of Statutory Bodies

S. No.	Name of the Statutory Body	Date of the Meeting
COURT		
1	5 th Meeting	4 November 2016
EXECUTIVE COUNCIL		
2	21 st meeting	22 June 2016
3	22 nd meeting	12 October 2016
4	23 rd meeting	14 December 2016
5	24 th meeting	20 March 2017
ACADEMIC COUNCIL		
6	11 th meeting	20 June 2016
7	12 th meeting	13 August 2016
8	13 th meeting	14 October 2016
9	14 th meeting	16 March 2017

FINANCE COMMITTEE

10	14 th Meeting	30 June 2016
11	15 th Meeting	26 September 2016
12	16 th Meeting	17 March 2017
13	17 th Meeting	29 March 2017

BUILDING ADVISORY COMMITTEE

14	31 st meeting	25 May 2016
15	32 nd Meeting	15 September 2016
16	33 rd meeting	11 November 2016
17	34 th meeting	07 December 2016
18	35 th meeting	15 February 2017
19	36 th meeting	22 March 2017



Academic Council Meeting

17th Finance Committee Meeting24th Executive Council Meeting

MILESTONES ACHIEVED

- Central University of Punjab, Bathinda ranked 65th out of 3565 institutions of Higher Learning as per the National Institutional Ranking Framework (NIRF) of MHRD in the year 2016, and ranked in the band of 115-120 in the year 2017.
- The University is continuously earning very high *h*-index amongst the newly established **Central Universities** and other regional universities.
- The University Faculty strength increased from **88** in March 2016 to **100** by March 2017.
- Externally Funded Research Projects Secured by Faculty of the CUPB are worth about **Rs. 13.08 Crores**.
- 93% of students qualified the National level examinations/National level fellowships as on 31st March 2017.
- The CUPB was the first among the newly established central universities to have an active role in the Scientific Expeditions, as two of the faculties were selected for the 36th Indian Scientific Expedition to Antarctica, coordinated by the Ministry of Earth Sciences, Government of India.
- The self composed poem 'Rio Mein Lalkar' written by Mr. Suraj Kumar Upadhyaya, an M.Phil. Student was selected out of thousands of poems and recited by Hon'ble Prime Minister of India Sh. Narendra Modi in his 'Man Ki Baat' on Radio and shared it on Twitter and Facebook.
- University was awarded with the **8th** Rank out of the 4896 institutions across the nation by the Hon'ble Minister of HRD and the Minister of I&B for promoting the awareness about Govt. of India's initiative *Vittiya Saksharta Abhiyaan*
- The Second Convocation** of Central University of Punjab was held on 15th October 2016 at its City Campus, wherein 148 degrees including 5 Ph.D. were awarded to the students by the vice-chancellor in the presence of the esteemed Chief Guest Prof. Ajay Kumar Sood, FNA, FASc, FNASc, FRS, President elect INSA, Gen. Secretary TWAS, Indian Institute of Science, Bangalore and Hon'ble Chancellor Prof. S. S Johl and the Guest of Honour Prof. A. S. Brar, Vice Chancellor, Guru Nanak Dev University, Amritsar.
- Toppers were honoured with **Gold Medals** and Merit certificates.
- Seven MoUs were signed between CUPB and institutions such as Rajiv Gandhi National Law University, MRSPTU, NCRI etc.

AWARDS & HONOURS

1. Dr. Monisha Dhiman, Associate Professor from Centre for Biochemistry and Molecular Medicine, received Prof. A F Rao Memorial Young Scientist Award from the Society for Mitochondrial Research and Medicine-India in February 2017.
2. Dr. Monisha Dhiman, Associate Professor from Centre for Biochemistry and Molecular Medicine, received Merit Certificate for the commendable work in Community Development Cell, awarded by CUPB in February 2017.
3. Dr. Rajesh Kumar Gupta, Associate Professor from Centre for Mathematics and Statistics, received the UG Research Award on 21 April 2016.
4. Dr. Raj Kumar, Associate Professor, Centre for Pharmaceutical Sciences and Natural Products, received the CUPB Research Award (2015-16).
5. Dr. Vinod Kumar, Assistant Professor from the Centre for Pharmaceutical Sciences and Natural Products, received the CUPB Research Award (2015-2016).
6. Dr. Vikas Jaitak, Assistant Professor from the Centre for Pharmaceutical Sciences and Natural Products, received the CUPB Research Award (2015-2016).
7. Dr. Sandeep Singh, Assistant Professor from the Centre for Human Genetics and Molecular Medicine, received the CUPB Research Award and a certificate of commendation for research publication with CIF more than 15 and for research publication with more than 10 impact factor.
8. Dr. Yogalakshmi K. N., Assistant Professor from the Centre for Environmental Science and Technology, was awarded Best Teacher Award for the year 2016-17.
9. Dr. Sunil Mittal, Associate Professor from the Centre for Environmental Science and Technology, was awarded Best Teacher Award for the year 2016-17.
10. Dr. Kiran K. Singh, Assistant Professor the Centre for Geography and Geology, received the Merit Certificate for contribution in CEC at Central University of Punjab, Bathinda 2017.
11. Dr. Sumedha Dutta, Assistant Professor from the Centre for Sociology, was honoured by Johannes Kepler University (JKU), Linz, Austria, from 9 to 13 January, 2017 for presenting a paper as a plenary speaker, on "Beginning with Polanyi: Global Capitalism vs. Civil Society Movements in Neo-liberal India", in the International Conference "A Great Transformation? Global Perspectives on Contemporary Capitalisms".
12. Dr. Rajendra Singh Dhayal, Assistant Professor from the Centre for Chemical Sciences, has received the Best Teacher Award.
13. Dr. Rajendra Singh Dhayal, Assistant Professor from the Centre for Chemical Sciences, received the CUPB Outstanding Research Award.
14. Dr. Rajendra Singh Dhayal, Assistant Professor from the Centre for Chemical Sciences, received the Commendation for Research Publication with impact factor more than 10 and another Commendation for Research Publication with highest impact factor.
15. Dr. Jyoti Prakash, Assistant Professor from the Centre for Animal Sciences, received two CUPB Research Awards.
16. Dr. Manju Jain, Assistant Professor from the Centre for Biochemistry and Microbial Sciences, received Travel Award to attend Kyoto T Cell Conference (KTCC) on 13th March 2017. The awarding body was is Global Thymus Network conference series organization



ACADEMICS: SCHOOLS AND CENTRES OF STUDIES

Sr. No.	Name of Schools and Centres
1.	School of Basic and Applied Sciences
1.1	Centre for Animal Sciences
1.2	Centre for Applied Agriculture
1.3	Centre for Biochemistry and Microbial Sciences
1.4	Centre for Chemical Sciences
1.5	Centre for Computational Sciences
1.6	Centre for Mathematics and Statistics
1.7	Centre for Pharmaceutical Sciences and Natural Products
1.8	Centre for Physical Sciences
1.9	Centre for Plant Sciences
2.	School of Education
2.1	Centre for Education
3.	School of Engineering & Technology
3.1	Centre for Computer Science and Technology
4.	School of Environment & Earth Sciences
4.1	Centre for Environmental Sciences and Technology
4.2	Centre for Geography and Geology
5.	School of Global Relations
5.1	Centre for South and Central Asian Studies (including Historical Studies)
6.	School of Health Sciences
6.1	Centre for Human Genetics and Molecular Medicine
7.	School of Languages, Literature and Culture
7.1	Centre for Languages and Comparative Literature
8.	School of Legal Studies & Governance
8.1	Centre for Law
9.	School of Social Sciences
9.1	Centre for Economic Studies
9.2	Centre for Sociology

Activities of various Schools and their Centres are given in the following sections

SCHOOL OF BASIC AND APPLIED SCIENCES

Centre for Animal Sciences

The Center for Animal Sciences was created in 2015, which was originally a part of the Center for Biosciences (established in 2009), is well-equipped with teaching and research laboratories. The center has vibrant and young faculties with National and International experience and expertise in frontier areas of basic and advanced research specialization from neuroscience to cancer biology to entomology.

Academic Programmes offered by the Centre

1. M.Sc. Life Sciences (Animal Sciences)
2. Ph.D. Animal Sciences

Faculty Members of the Centre

<p>Dr. Anil K. Mantha Associate Professor and Coordinator of Centre</p> <p>Area of Specialisation: Oxidative Stress and Cancer Biology. DNA Damage-Repair and Human Diseases. DNA Repair and Regulatory Functions of Apurinic/Apyrimidinic.</p>	
<p>Dr. Aklank Jain Associate Professor</p> <p>Area of Specialisation: Detection & Identification of Potential Biomarkers of Cancers; DNA damage and repair mechanisms in cancer.</p>	
<p>Dr. Jyoti Parkash Assistant Professor</p> <p>Area of Specialisation: Hormone-dependent development and plasticity of the metabolic brain; Role of semaphorins in brain development and neuro_glia plasticity.</p>	
<p>Dr. Krishna Chaitanya Assistant Professor</p> <p>Area of Specialisation: Role of mosquito midgut digestive proteases during Plasmodium transmission; micro RNA-sequencing analyses of Plasmodium-infected midgut gene expression in Anopheles stephensi.</p>	
<p>Dr. Sunil Kumar Singh Assistant professor</p> <p>Area of Specialization: Nanotoxicology; Thrombus biology; Theranostics; and Nanobiosensor</p>	
<p>Dr. Thamil Mani Sivanandam Assistant Professor</p> <p>Area of Specialization: Neuroscience, Traumatic Brain Injury, and Biochemistry</p>	
<p>Dr. Shahnaz Rahman Lone Ramanujan Fellow</p> <p>Area of Specialization: Age related neurodegeneration; Sleep homeostasis; Social organization and circadian clocks</p>	

Papers Presented at National/International Conferences

1. Mantha, A. K. (2017, February). *Biology of Amyloid beta-induced oxidative stress in Alzheimer's disease: an association of mammalian thiol dioxygenase, ADO with the human AP-endonuclease 1 (APE-1) towards neuroprotection*. Presented at the 6th Annual Conference of Society for Mitochondrial Research and Medicine-India and International Conference on Mitochondria in Health and Disease, Jawaharlal Nehru University, New Delhi India.

Lectures/Workshops/Conferences Organised by the Centre

1. The Centre organized a series of extension Lectures by Prof. Ravi Parkash, Professor Emeritus, MDU, Rohtak from 15 March to 17 March 2017. He delivered lectures on important topics from Genetics to Molecular Biology.
2. The Centre organized an invited talk by Dr. Tarlochan Bhatt, retired Professor from the Department of Reproductive Physiology, St. Bartholomew's Hospital in London on "Biogenic Silica Fibres and Cancer" on 14 September 2016.
3. The Centre organized an invited talk, entitled "Harnessing the Therapeutic Potential of Macrophages Against Pulmonary Pathogens and Pancreatic Tumors," by Dr. Hridayesh Prakash, Ramanujan Fellow and Group leader at the Laboratory of Translational Medicine, School of Life Sciences, University of Hyderabad, on 17 May 2016.

Invited Lectures Delivered by the Faculty

1. Dr. Jyoti Parkash delivered an invited lecture on "Emerging role of semaphorins in neural-glia-endothelial plasticity in the adult hypothalamic median eminence" at Development and Plasticity of the Neuroendocrine Brain Neurobase Interantional Associated Laboratory U1172. JPARC INSERM, France on 8th June 2016.
2. Dr. Jyoti Parkash delivered an invited lecture on "Leptin dependent neuronal NO signaling facilitates reproduction in adult hypothalamic region of the brain" at Development and Plasticity of the Neuroendocrine Brain Neurobase Interantional Associated Laboratory U1172. JPARC INSERM, France on 15th June 2016.
3. Dr. Jyoti Parkash delivered a number of lectures as a resource person to train Bachelor, Master and Ph.D. students at Dr. Vincent Prevot lab at U1172, from 3rd June 2016 to 8th July 2016, JPARC INSERM, France.
4. Dr. Jyoti Parkash was an invited speaker in the International Symposium on "Genomic Medicine: Personalized care for you and me" organized by Department of Biotechnology, Doaba College, Jalandhar on 18th Oct. 2016.

Laboratory Facilities

The Centre for Animal Sciences features state-of-the-art laboratory with the latest scientific infrastructure. Among the high-end equipment are advanced gel documentation system, high speed refrigerated centrifuge, 2-D gel electrophoresis, inverted microscopes, humidified CO₂ incubators, and -80°C & -20 ° C deep freezers and animal tissue culture facility. In addition to its own facilities, other advanced facilities like Confocal Laser-Scanning Microscope with FCS, Field-Emission Scanning Electron Microscope, 96 capillary Automated DNA Sequencer and (FACS) are readily available through the Central Instrumentation Laboratory (CIL) at CUPB.



A view of the Animal Sciences Laboratories

Centre for Applied Agriculture

The Centre for Applied Agriculture established in 2016 under the School of Basic and Applied Sciences for undertaking the teaching and research in diverse areas of agriculture and allied sectors for generating trained human resources especially to meet the growing demand of the food sector including academic and research institutions and food processing industries. Food Science and Technology Programme of the Centre is focusing on the development of innovative technologies for the processing of agricultural produce/food for value addition also through minimizing the post-harvest losses. The Agribusiness Programme is envisaging to develop the backward and forward linkages for the production of quality food and its marketing in the national and global markets. The Agribusiness students are being prepared to take up carrier in management related to food and agribusiness and allied sectors in the fast changing national and international scenario.

Academic Programmes offered by the Centre

- M. Sc. Food Science and Technology
- MBA (Agri-Business)

Faculty Members of the Centre

Prof. (Dr.) Satwinder Singh Marwaha
Professor and Coordinator of Centre
Areas of Specialisation: Food & Fermentation Technology / Industrial Biotechnology / Environmental Biotechnology



Dr. Chidanand Patil
Assistant Professor
Areas of Specialisation: Agricultural Marketing, Agricultural Policy and Agripreneurship Development.



Dr. Khetan Shevkani
Assistant Professor
Areas of Specialisation: Processing of Cereals and Pulses



Dr. Yashi Srivastava
Assistant Professor
Areas of Specialisation: Oil Processing



Ms. Anupam
Assistant Professor
Area of Specialisation: Agri Business



Papers Presented at National/International Conferences

1. The Centre for Applied Agriculture organized a National Seminar on *Recent Trends in Food Processing* in collaboration with Indian Institute of Crop Processing Technology (IICPT), Thanjavur, Tamil Nadu, on 9th December 2016.

Seminar and Workshop organized by the Centre

1. National Seminar on *"Recent Trends in Food Processing"* jointly organized by the Centre for Applied Agriculture and Indian Institute of Crop Processing Technology, Thanjavur, Tamil Nadu, India on 9th December, 2016.
2. Workshop on *"Sanger DNA Sequencing and Applications"* jointly organized by the Centre for Applied Agriculture, Central Instrumentation Laboratory and M/s Thermo Fischer, New Delhi on 18th February, 2017.

Centre for Biochemistry and Microbial Sciences

The Centre strives to synergize the study of biochemistry and microbiology with health disparities research through innovation and collaboration and to provide the highest quality of translational biomedical research, education, and service. The internationally trained faculty of the centre is committed to provide outstanding teaching in the biochemical and microbial sciences and to conduct quality research of international repute and promote R&D activities in the emerging areas of biochemistry and microbiology. The centre is involved in the community service and awareness programs related to medical biochemistry and microbiology. The focus of the centre is to provide state of the art educational and research training for students. The Centre plans to impart specialized training to microbiologists and biochemists from pharmaceutical and food industries as well as agriculture and environmental sectors. The students will have excellent opportunities to explore the dynamic fields of biomedical including clinical biochemistry, immune-pharmacology, immunology, and drug research.

Academic Programmes offered by the Centre

1. M.Sc. Life Sciences with specialization in Biochemistry
2. M.Sc. Life Sciences with specialization in Microbial Sciences
3. Ph.D. Biochemistry and Microbial Sciences

Faculty Members of the Centre

Prof. (Dr.) Ramakrishna Wusirika
Professor and Coordinator of Centre

Areas of Specialisation: Plant growth promoting bacteria and their role in enhancing biomass, heavy metal remediation and soil health; Systems Biology to understand plant-microbe interactions; Development of novel plant natural products as anti-cancer drug



Dr. Monisha Dhiman
Associate Professor

Areas of Specialisation: Human cardiomyopathy, Cancer Oncology Immunology; Signaling pathways during inflammation and oxidative stress in various human diseases; Mechanism involved in the chemotherapeutic drugs induced toxicity; Disease Proteomics.



Dr. Malkhey Verma
Associate Professor

Areas of Specialisation: Bioprocess Engineering; Enzymology; Synthetic System Biology.



Dr. Somesh Baranwal
Assistant Professor

Areas of Specialisation: Molecular and Cellular Biology of Gastro-intestinal Cancer



Dr. Shashank Kumar
Assistant Professor

Areas of Specialisation: Molecular Biology of Cancer (breast and prostate); Molecular Biology of diabetes (wound healing and inflammatory markers); Characterization, identification and biochemical activities of Plant products



Dr. Pramod Kumar Kushawaha
Assistant Professor and DST Inspire Fellow

Areas of Specialisation: Drug and Vaccine development; Host pathogen interaction: Cell autonomous immunity.





Papers Presented at National/International Conferences

1. Gupta, K. B. (2016, October) from Centre for Biochemistry and Microbial Sciences delivered an oral presentation on "*Wheat protein induced inflammation and associated signaling pathways in human colon cancer cell line*" in the 7th International Conference on Stem Cells and Cancer (ICSCC-2016): Proliferation, Differentiation, and Apoptosis, Goa.
2. Gupta, K. B. (2017, 10 February) from Centre for Biochemistry and Microbial Sciences presented a paper titled "*Pollen Induced Inflammation and Role of Mitochondria in Human Lung Carcinoma A549 Cells*" in 6th International Conference on "Mitochondria in Health and Disease" organized by Society for Mitochondrial Research and Medicine-India (SMRM) at Jawaharlal Nehru University, New Delhi, India.
3. Gupta, K. B. (2016, 16 November) from Centre for Biochemistry and Microbial Sciences presented a paper titled "*Inflammation: compost of Celiac Disease*" in XL. All India Cell Biology Conference and International Symposium on Functional Genomics and Epigenomics at Jiwaji University, Gwalior, India.
4. Kaur, S. (2016, 8 December) from Centre for Biochemistry and Microbial Sciences presented a poster related to her M. Phil work in *International Conference on Current Trends in Biotechnology (ICCB 2016)* held in Vellore, India.

Lectures/Workshops/Conferences Organised by the Centre

1. Centre for Biochemistry and Microbial Sciences organized a lecture by Prof. Vijay K. Juneja on "**Predictive Microbiology for Food Safety**" on 26 September, 2016.
2. Centre for Biochemistry and Microbial Sciences organized series of lectures by Prof. Debasis Banerji in March, 2017.



Prof. Vijay K. Juneja (Delivering the Lecture)

Invited Lectures Delivered by the Faculty

1. Dr. Monisha Dhiman. "Role of Medicinal Plant Extracts on Doxorubicin-Induced Cardiotoxicity" at 6th International Conference on "Mitochondria in Health and Disease" of Society for Mitochondrial Research and Medicine-India (SMRM) organized by the Jawaharlal Nehru University (JNU), New Delhi, India 10-11 February 2017.
2. Dr. Monisha Dhiman. "Role of Mitochondria in Doxorubicin Induced Cardiotoxicity" at International Conference on Current Trends in Biotechnology" organised by Vellore Institute of Technology, Vellore from December 8-10, 2016.
3. Dr. Monisha Dhiman. "Trends In Immuno-technology: B and T- Cells Mechanisms and Experimental Advances". Baba Farid Group of Institutions, Dept of Biotechnology, Bathinda, 22 September, 2016.
4. Dr. Shashank Kumar. "Protein structure and function relationship". Banasthali University, Dept of Bioscience and Biotechnology, Banasthali Vidyapith, Rajasthan, 02-04 March, 2017.

Awards/Honours for Faculty/Students of the Centre

1. Dr. Monisha Dhiman was awarded with Prof. A. R. Rao Memorial Young Scientist Award by Society for Mitochondrial Research and Medicine-India; February 2017
2. Dr. Monisha Dhiman was awarded with Merit certificate for commendable work in Community Development Cell by the Central University of Punjab on 28th February 2017
3. Dr. Manju Jain was awarded with a Travel Award to attend Kyoto T Cell Conference (KTCC) by Global Thymus Network conference series organization on 13th March 2017.
4. Rubal (PhD) student awarded with RGNF on 1 April 2016 by UGC,
5. Shiv Govind Rawat Ph. D. Student awarded with CSIR-JRF in October 2016
6. Ravindra Kumar ASRB-NET 2016(1), 4 OCTOBER 2016.
7. Priyanka Singh qualified CSIR NET, DECEMBER 2016

Laboratory Facilities

The centre for Biochemistry and Microbial Sciences currently has 6 faculty members, running two M.Sc. courses, one Ph.D. course and has 13 Ph.D. students. As per the faculty expertise and teaching courses, a few basic and advanced equipments were procured by the Centre. At present, the Centre has one research and teaching laboratory equipped with basic research and teaching instruments such as electrophoresis units, water bath, cooling centrifuge, deep freezers, gradient PCR machine, digital analytical balance and water purification system.

Laboratory Equipments

B.No	Name of the Equipment	Qty	S.No	Name of the Equipment	Qty
1.	Digital Analytical Balance Model No :- MAB 220 Serial No :- 46022 Company :- Wensor Date of Purchase :- 22/09/2016	01	7.	Serological Water Bath 10 Ltr Model No :- HT-109 Company :- Helix Technology Date of Purchase :- 26/09/2016	01
2.	4 degree refrigerator with digital display Model No :- FKG 400 Series :- 1) 160500020 2) 160100200 Company :- Celfrost Date of Purchase :- 19/07/2016	02	8.	PCR Machine Model no :- T100 Thermal Cycler Serial No :- 621BR35383 Company :- Biorad Date of Purchase :- 24/01/2017	01
3.	-20 degree refrigerator with digital display Model No :- BFS 345 Series :- 00006092 Company :- vestfrost Date of Purchase :- 19/07/2016	01	9.	Incubator Shaker Model no :- KI 215 Serial No :- 6823 Company :- Khera Date of Purchase :- 31/03/2017	01
4.	Rotamantle 1 Ltr. Model No :- KI-144 Serial No :- 6475 Company :- Khera Date of Purchase :- 30/04/2016	01	10.	Incubator Shaker Model no :- E 24 Serial No :- SE24FS Company :- Eppendorf Date of Purchase :- 21/02/2017	01
5.	Vortex mixer with variable speed Model No :- KI-141 Serial No :- 6474 Company :- Khera Date of Purchase :- 30/04/2016	01	11.	BOD Incubator 570 Ltr Model no :- KI- 216 Serial No :- 11443 Company :- Khera Date of Purchase :- 06/03/2017	01
6.	Mini sub cell GT Horizontal Gel Electrophoresis Cat no 1704467 Company :- Biorad Date of Purchase :- 26/09/2016	01	12.	Hot Plate Magnetic Stirrer 5 Ltr. Serial No :- 15917 Company :- Arihant International Date of Purchase :- 28/09/2016	01



Thermal Cycler



Digital Balance



BOD Incubator



Refrigerator



Water Filtration Unit



A view of the center for Biochemistry and Microbial Sciences Laboratory

Centre for Chemical Sciences

Centre for Chemical Sciences (CCS) was established in 2015. At present, the Center is offering three programmes, M.Sc. Chemistry, M.Sc. Applied Chemistry and Ph.D Chemistry. The main motto of the Centre is to provide excellent opportunities for students in various fields of chemistry for their successful career. The Center is also focusing on cutting edge research for setting newer trends in sustainable environment and health. At present, there are five faculty members with international exposures. The Centre has expertise in the area of Biophysical and Bioinorganic Chemistry, Green & Sustainable Chemistry, Nano-Chemistry and its application in health, Renewable Energy including water splitting/hydrogen storage, Environmental and Supramolecular Chemistry. The research work of faculty members is supported by various funding agencies like DST-SERB, UGC, BARC, ICMR and DBT. In future, the Center is aiming to initiate various programmes for addressing various local issues related to testing of heavy metals in water and food of the Malwa region.

Academic Programmes offered by the Centre

1. M.Sc. in Chemical Sciences (Organic/Inorganic/Physical Chemistry)
2. Ph.D. in Chemical Sciences

Faculty Members of the Centre

Dr. Rajesh Kumar
Coordinator of Centre And Associate Professor

Area of Specialisation: Kinetics, Thermodynamics, Functional, and Structural Studies of Metalloproteins and Enzymes.



Dr. Rakesh Kumar
Assistant Professor

Area of Specialisation: Development of new and environmental friendly methodologies for C-C and C-N bond formation, activation/functionalization strategies, Ionic liquids, Microwave- assisted organic synthesis, Multi-component reactions, and Solid phase organic synthesis.



Dr. Krishna Kanta Haldar
Assistant Professor

Area of Specialisation: Designing of anisotropic nanocrystals of metal, metal oxide nanoparticles, semiconductor nanocrystals and hybrid nanostructures of materials with controlled dimensions.



Dr. Rajendra Singh Dhayal
Assistant Professor

Area of Specialisation: Metal hydrides and their applications; Super atom Chemistry; Chalcogen stabilized metal complexes and their applications; Organometallic chemistry; Hydrogenation and hydroformylation.



Dr. J. Nagendra Babu
Assistant Professor

Area of Specialisation: Supramolecular Chemistry; Nanomaterials and Advanced Catalysis; Air Pollution; Environmental Monitoring.



Papers Presented at National/International Conferences

1. Dhayal, R. S. (2016, 7 November) presented a paper "Intrinsic Chirality within Copper Nanocluster" at International Conference, University of Delhi, India.
2. Haldar, K. K. (2017, 19 February) presented a paper "ZnO/TiO₂ Hybrid Nanostructure for Efficient Photocatalytic activity" at International Conference, IIT, Banaras Hindu University, India.
3. Kumar, R. (2017, 22 March) presented a paper "Role of Macromolecular Crowding on Structural, Kinetic and Thermodynamic Properties of Metalloproteins" at Annual Symposium of the Indian Biophysical Society, IISER Mohali, Punjab.

Invited Lectures Delivered by the Faculty

1. Dhayal, R. S. (2017, 20 March) delivered an invited talk on "Nanosized Polyhydrido Copper Clusters" at Women University, Banasthali Vidyapith, Rajasthan.

Laboratory Facilities

The centre has presently gathered various sophisticated equipment required for research in the organic, inorganic and biophysical chemistry research through either extramural funding or through institutional funding. The major equipments like Millisecond stopped flow fluorescence spectrophotometer, Fast protein Liquid Chromatography system, immersion cooler and rotary evaporator worth Rs. 55 Lacs approximately through extramural fundings from various funding agency like ICMR, DBT and DST-SERB in the projects of the principle investigators. Apart from this the centre had established basic laboratory equipments for the Post graduate practicals and for research in the department namely, Deep freezer, Magnetic Susceptibility Balance, Semimicro-Analytical and Analytical Balances, Potentiometer, Conductivity meter, pH meter, Muffle Furnace, Orbital shakers, Diaphragm Pump, Magnetic Stirrers and Laboratory Oven etc.

The details of the major equipments purchased are as follows

1. Millisecond Stopped-Flow Fluorescence Spectrophotometer:

The equipment is used for ultrafast reaction kinetic studies i.e., protein folding kinetics, enzymatic kinetics and metal binding and release kinetic studies of metalloproteins.

Make: Biologic, France
Model: AKF-300, SPD-300
Cost of the equipment: Rs. 35 Lacs



Millisecond Stopped-Flow Fluorescence Spectrophotometer

2. Fast protein liquid chromatography (GE-Health Care)

The extractions of pure protein from biological samples can be performed and the demonstration of size-exclusion chromatography to graduates could be performed on this instrument.

Make: GE Health Care
Model: Akta Pure®
Cost of the Equipment: 17 Lacs



Fast Protein Liquid Chromatography

3. **Other Equipment in the Centre:** Rotary evaporator is used for the low pressure distillation of solvents whereas immersion cooler is used for ultralow temperature reactions.



Rotary Evaporator



Immersion Cooler

Centre for Computational Sciences

The Centre is involved in cutting edge research in graph isomorphism, structural bioinformatics, molecular modeling, nanotechnology, computational biology, molecular reaction dynamics, QM/MM, and CPU-GPU hybrid computing. The centre has three faculty members and is conducting three different post graduation programmes. Importantly, the centre aims to provide next generation computational science education, and offer facilities to pursue cutting edge research. The Centre for Computational Sciences is striving for establishing new lab facilities with perhaps in future shall borne fruits.

Academic Programmes offered by the Centre

1. M.Sc. Life Sciences (Specialization in Bioinformatics)
2. M.Sc Chemistry (Computational Chemistry)
3. M.Sc. Physics (Computational Physics)
4. Ph.D. Computational Sciences

Faculty Members of the Centre

Dr. Kousik Giri
Assistant Professor and Officiating HOD

Area of Specialisation: Generating potential energy surface and fitting, Full-dimensional quantum dynamics of small systems, Surface-molecule scattering, Reduced dimensional molecular dynamics of large systems, inorganic and organic reactions, Ground and excited state electronic structure studies of organic and inorganic molecules



Dr. Mahesh Kulharia
Assistant Professor

Area of Specialisation: Molecular communication, Modulating the protein behaviour with small molecule / peptide, Tool design and development



Dr. Budip Chakraborty
Assistant Professor

Area of Specialisation: Polarizable and Fixed charge force field development, Capacitive energy storage by ionic liquids in nanoporous electrodes, Graphene based membranes for molecular separation, Metal-organic frameworks designing for hydrogen storage, CO₂ capture and storage, Protein (G Protein-Coupled Receptor) and Drug Modeling, CPU-GPU hybrid computing

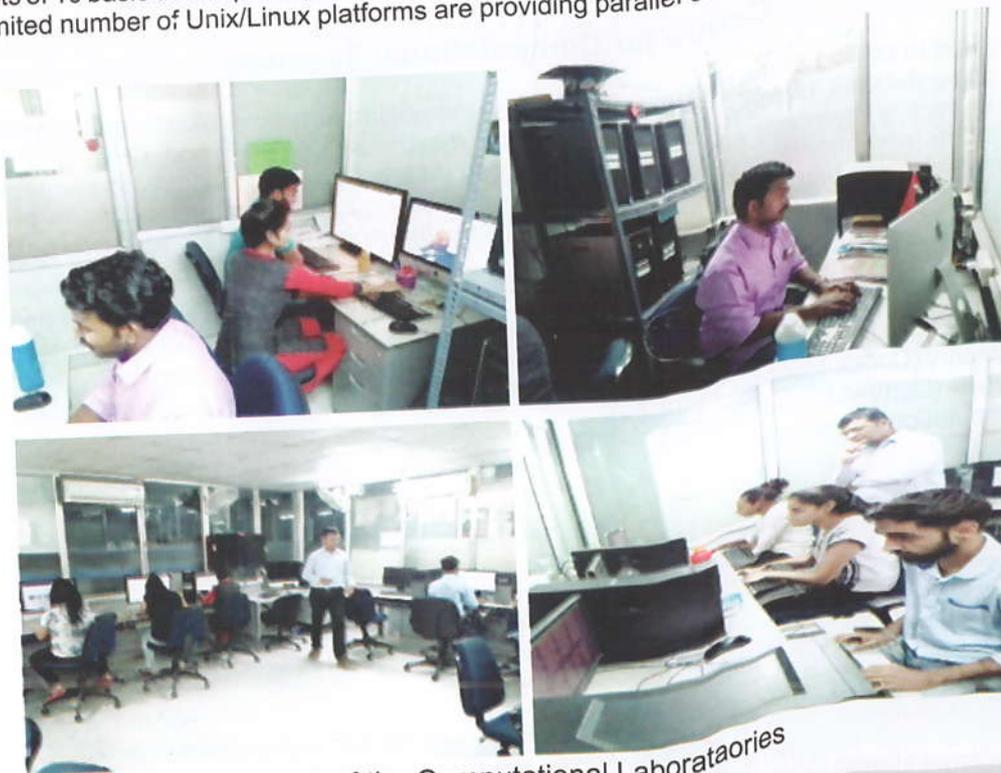


Invited Lecture Delivered by the Faculty

1. Dr. Sudip Chakraborty: delivered an invited lecture on "Buttering on Serotonin_{1A} Receptor as Resource Person". In Molecular Modelling and Developmental Genetics Workshop, organized by Centre for Human Genetics and Molecular Medicine, CUPB.

Laboratory Facilities

The M.Sc. teaching and research laboratory is a part of the Centre for Computational Sciences. The lab is equipped to conduct various computer experiments for the measurements of characteristics of the small biomolecules. Notably, the laboratory consists of 10 basic desktop computer, 5 iMac, and couple of workstations (Z600, Z800, and Z820). Such highly dedicated and limited number of Unix/Linux platforms are providing parallel computing environment for advancement of



View of the Computational Laboratories

Centre for Mathematics and Statistics

The centre was established as a Centre for Physical and Mathematical Sciences in 2013 and as an independent Centre for Mathematics and Statistics in the year 2015. The aim of the centre is to establish an international reputation as a centre for research and teaching in Mathematics and Statistics. Centre for Mathematics and Statistics at the Central University of Punjab offers programs in the area of pure and applied mathematics and in the area of statistics that leads to the Master of Science degree in Mathematics/Statistics. The Centre has purchased the mathematical software MAPLE and Matlab recently. During the period, April 01, 2016 to March 31, 2017, the centre has published 18 research papers in reputed international journals and got sanctioned two research projects and received one national level award.

Academic Programmes offered by the Centre

1. M.Sc. in Mathematics
2. M.Sc. in Statistics
3. Ph.D. in Mathematics
4. Ph.D. in Statistics

Faculty Members of the Centre



Dr. Gauree Shankar
Associate Professor and CoC

Area of Specialisation: Differential Geometry; Differential Topology; Riemann-Finsler Geometry



Dr. Rajesh Kumar Gupta
Associate Professor

Area of Specialisation: Lie Algebra; Non-linear Partial Differential Equations; and Einstein Field Equation.



Dr. Sachin Kumar
Assistant Professor

Area of Specialisation: Symmetries and exact solution of Non-linear Partial Differential Equation, Soliton and Travelling wave solution of Non-linear Partial Differential Equations.



Dr. Anoop Kumar
Assistant Professor

Area of Specialisation: First order hyperbolic system of Non-linear Partial Differential Equations; shock waves; and similarity solutions.



Dr. Ashok Kumar Pathak
Assistant Professor

Area of Specialisation: Probability and Statistics.



Dr. Harmanpreet Singh Kapoor
Assistant Professor

Area of Specialisation: Actuarial Science; Financial Mathematics; Survival Analysis; Inferential Statistics; and Rbk Models.



Dr. Sandeep Kaur
Assistant Professor

Area of Specialisation: Differential Manifolds



Mr. Kamaljeet
Assistant Professor

Area of Specialization: Mathematics

Papers Presented at National/International Conferences

1. Dr. Gauree Shanker from Centre for Mathematics and Statistics presented a paper "Reversible geodesics with special (α, β) metric" in the International conference of TIMC & American Mathematical Society held at BHU, Banaras from 14 December, 2016 to 17 December, 2016.

Lectures/Workshops/Conferences Organised by the Centre

1. Centre for Mathematics and Statistics organized a lecture by Dr. K. Gongopadhyay on "*An Introduction to Hyperbolic Geometry*" on 25 October, 2016.
2. The Centre organized a lecture by Prof. Valeriy Bardakov on Sobolev on "*Knot Theory and Its Applications*" on 28 October, 2016.
3. The Centre organized a lecture by Prof. Rakesh Kumar on "*Nagaich Geometry from Ancient to Modern Era*" on 16 February, 2017.
4. The Centre organized a lecture by Dr. Rakesh Kumar on "*The Applications of Numerical Methods*" on 18 February, 2017
5. The Centre organized a lecture by Prof. A. N. Gill on "*Stochastic Modelling through Data Exploratory Techniques*" on 22 March, 2017

Invited Lectures Delivered by the Faculty

1. Gauree Shanker delivered a lecture on "Osculating Circle and Osculating Sphere", at Baba Farid College Bathinda on 20 December, 2016.
2. Gauree Shanker delivered a lecture on "Hyperbolic Geometry", at National conference on treasures of great Indian mathematician Srinivas Ramanujan organized by Ramanujan Society of Mathematics and Mathematical Sciences held at TDPG College Jounpur, Uttar Pradesh from 03 November, 2016 to 07 November, 2016.

Centre for Pharmaceutical Sciences and Natural Products

Centre for Pharmaceutical Sciences and Natural Products (formerly known as Centre for Chemical and Pharmaceutical Science) was established in 2011. At present the Centre has two well established research labs with a number of sophisticated research instruments, such as, microwave synthesizer, solid phase peptide synthesizer, solvent extraction, flash chromatography, monochromatic micro plate reader and many more. The main motto of the centre is to conduct research on cancer and to find out an authentic drug in overcoming this disease which is a major problem in this Malwa region, causing higher rates of cancer incidence.

Currently the Centre has employed highly qualified faculty and also organizes guest lectures from time to time for the benefit of the students and to apprise the students of the recent trends followed in medicinal chemistry research worldwide. The Center has also achieved research grants from pioneer funding agencies like DST and UGC, in the form of DST-FastTrack, UGC-Major Project and UGC start up grant and own university grant (RSM). Besides this many research/review papers are being continuously published in various pioneer national and international journals which speak about the excellence of the centre. The Centre is currently following the latest trends and conducting a thorough research on Design, Synthesis and Biological Screening of Novel Multi-target inhibitors of Tyrosine Kinase(s) and Topoisomerase, Synthesis of Bioactive Heterocyclic Scaffolds using Novel Green Technologies and Synthesis of Rebaudioside-A: Natural Substitute for Sugar from *Stevia rebaudiana* (Bertoni) and many more.

Academic Programmes offered by the Centre

1. M.Pharm. (Medicinal Chemistry)
2. M.Pharm. (Pharmacognosy and Phytochemistry)
3. M.Sc. (Medicinal Chemistry)
4. Ph.D. in Pharmaceutical Sciences
5. Ph.D. in Medicinal Chemistry

Faculty Members of the Centre

Prof. (Dr.) P. Ramarao
Dean, School of Basic and Applied Sciences

Area of Specialisation: Receptor mechanism in normal and diseased conditions. Diabetes and cancer relationship, regulatory toxicology.

Member of national and international bodies and has won 13 awards and honours in academics.



Dr. Raj Kumar
Associate Professor and Coordinator of Centre

Area of Specialisation: Design and Synthesis of novel small heterocycles as anticancer, Anti-malarial and xanthine oxidase inhibitors, Synthesis and methodology development of small bioactive molecules. Rationale design and synthesis of EGFR/HDAC as well as dual EGFR and topoisomerase and APE-I inhibitors as anticancer agents.



Dr. Vinod Kumar
Assistant Professor

Area of Specialisation: Organic process development using environment friendly techniques; Reactions under Solventless, aqueous conditions and solid supported organic synthesis; Applications of Ionic Liquids in organic synthesis. Medicinal Chemistry, target based drug discovery



Dr. Vikas Jaitak
Assistant Professor

Area of Specialisation: Chemical investigation of bioactive compounds from natural resources. Development of SOPs for standardization of natural products formulation. Semi-synthesis of NCEs from natural bioactive compounds.



Dr. Pradeep Kumar
Assistant Professor

Area of Specialisation: Working on designing of novel medicinal compounds using 2D and 3D QSAR techniques, synthesis of designed compounds and their antimicrobial and anticancer evaluation. Currently working on design and synthesis of novel anti-methicillin resistant *Staphylococcus aureus* (MRSA) agents.



Dr. Kaki Venkat Rao
Assistant Professor

Area of Specialisation: Design Synthesis of New Chemical Entities (NCE) Natural product Chemistry



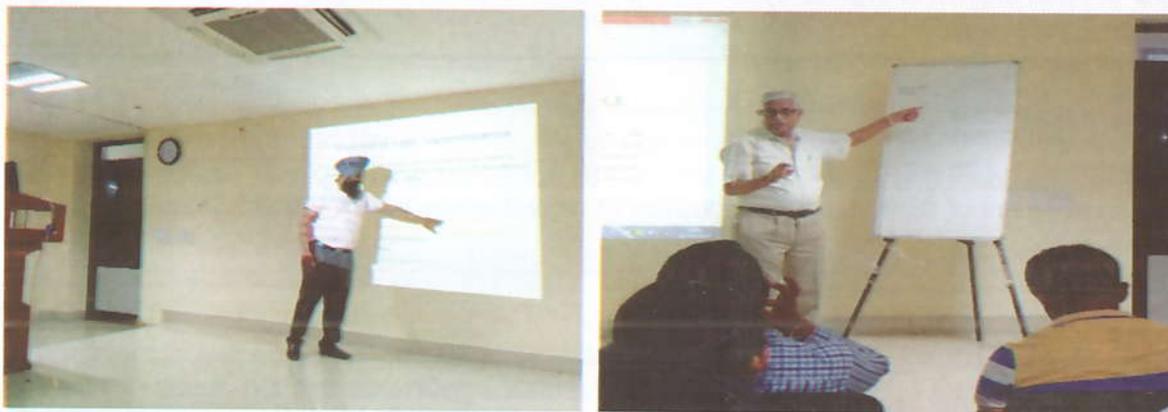
Papers Presented at National/International Conferences

1. Kumar, R. (2016) delivered an invited talk on "*Dual inhibitors of epidermal growth factor receptor and topoisomerase II derived from a quinoline scaffold*" at JCDM College of Pharmacy, Sirsa & APTI – Haryana.
2. Kumar, R. (2016, 21 October) delivered a lecture on "*4-Amino-3-nitroquinolines as Dual Inhibitors of Epidermal Growth Factor Receptor and Topoisomerase II α and Their Anticancer Potential*" in the 7th International Conference on Stem Cells and Cancer (ICSCC-2016): Proliferation, Differentiation and Apoptosis Ravindra Bhavan, Margao, Goa.

3. Kumar, R. (2016, 3 September) delivered a lecture and participated as a resource person in 8th National IPA student congress organized by ISF college of Pharma Moga and Indian Pharmaceutical Associatio-student forum at ISF College of Pharmacy, Moga, Punjab.
4. Kumar, R. (2016, 4 April) participated in the Acquaintance Program of Inter University Accelerator centre, New Delhi.
5. Singla, R. and Jaitak, V. (2016, 15 September) presented a paper on "*Exploration of Molecular Interaction of Steviol Glycosides from Stevia rebaudiana (Bertoni) with Sweet Taste Receptors: A Computational Approach*" at 9th Symposium of the European Stevia Association (EUSTAS), Gothenburg, Sweden.

Lectures/Workshops/Conferences Organised by the Centre

- 1) The Centre organised a Lecture by Dr. Narinder Singh, Associate Professor IIT Ropar on "Artificial Receptors for Sustainable Development and Biological Applications" on 31-03-2017.
- 2) The Centre organised a Lecture by Professor K. L. Dhar, Former Head, Natural Product Division, IIIM, Jammu on "Basics of NMR and its spectral interpretations" and "Terpenoids as Medicines" on 26-08-2016.



Dr. Narinder Singh and Prof. K. L. Dhar delivering invited lectures

Invited Lectures Delivered by the Faculty

1. Raj Kumar (2016) from the Centre for Pharmaceutical Sciences and Natural Products has delivered a lecture on 4-Amino-3-nitroquinolines as Dual Inhibitors of Epidermal Growth Factor Receptor and Topoisomerase II α and Their Anticancer Potential in the 7th International Conference on Stem Cells and Cancer (ICSCC-2016): Proliferation, Differentiation and Apoptosis Ravindra Bhavan, Margao, Goa.
2. Raj Kumar (2016) from the Centre for Pharmaceutical Sciences and Natural Products delivered an invited lecture on "Small molecules as target based anticancer agents: In silico and in vitro studies" at APTI Sponsored National Conference on "emerging trends in computer aided drug design & drug delivery held at "School of Pharmacy & Emerging Sciences (SPES)", Baddi, HP.
3. Vikas Jaitak (2016) delivered an invited oral presentation entitled "Synthesis of Rebaudioside A from Stevioside and their Interaction Model with hTAS2R4 Bitter Taste Receptor" in 9th Stevia Symposium "Stevia Science: from field to fork" 2016 organised by European Stevia Association in SP Technical Institute, Gothenburg, Sweden, from 15 September to 16 September, 2016.

Awards/Honours for Faculty/Students of the Centre

1. Dr. Raj Kumar received the Research Award (2015-16) from the Honourable Chancellor of Central University of Punjab, Bathinda.
2. Dr. Vinod Kumar received the Research Award (2015-16) from the Honourable Chancellor of Central University of Punjab, Bathinda
3. Dr. Vikas Jaitak received the Research Award (2015-16) from the Honourable Chancellor of Central University of Punjab, Bathinda



Dr. Raj Kumar receiving award
from the Hon'ble Chancellor



Dr. Vinod Kumar receiving award from the
Hon'ble Chancellor



Dr. Vikas Jaitak receiving award from the Hon'ble Chancellor

Laboratory Facilities

Pharmaceutical Sciences and Natural Products laboratories provide the best atmosphere in which students can perform their scientific experiments and research. Currently Pharmaceutical Sciences and Natural products department have well established teaching lab and research lab. We treat all graduate students as beginner so the lab is as such prepared that each beginner student can understand the lab and start their research in the presence of highly qualified and experienced teachers. In lab, workbenches and tabletop equipments are available which ensure comfortable working conditions. Cabinets and fume hood are available for the storage of chemicals and for the toxic chemical reactions. Both laboratories equipped with a number of equipments such as:

- Flash Chromatography (made by BIOTAGE)
- Micro Plate Reader (made by BIOTEK)
- Microwave Synthesizer (made by BIOTAGE)
- Speed Extractor E- 914 (made by BUCHI)
- Magnetic Stirrer with temperature Sensor (made by IKA)
- Shaking Incubator (made by Thermo scientific)
- Rotavapour (made by ILMVAC)
- UV-1800 (made by SHIMADZU)
- Microwave Peptide Synthesis System (made by CEM)



Fume Hood in Teaching Laboratory



Molecular Docking Laboratory



View of Pharmaceutical Medicinal Chemistry Laboratory

Centre for Physical Sciences

The Centre for Physical Sciences (CPS) has been started to produce young students to pursue a career in Physics and research on cutting edge topics having direct relevance to current science and technologies. The main objective is to provide strong foundations to the students through basic as well as applied courses. In addition, the Centre is trying to create an environment of scientific excellence where every member will be given ample opportunities to excel in their fields. Teaching and research are complementary to each other in creating healthy, vibrant and productive academic environment. At present, the centre has faculty members who are involved in high quality research in thrust areas. This will motivate the students who plan to make career in Physical Sciences. The CPS is striving to be recognized as a Centre of Excellence in education and research on national as well as international level. The centre aims to provide a beneficial impact on nearby educational communities by providing advanced education and research.

The CPS offers M. Sc. and Ph. D. program in Physics. The Master degree program has balanced semester and choice based credit course structure with flexible seamless curricula which emphasize interdisciplinary nature of Science in the 21st century and promote exploration, innovation and research. The Centre has involved in a wide variety of topics in experimental and theoretical aspects of design of electron & ion source, interactions of electron/ion with thin films, design of DC magnetron sputtering plasma, fabrication of MOS/MIS structure and its electrical properties, development of 2D materials, energetic materials for utilizations in efficient renewable/electric/magnetic energy storage devices and plasma physics. Furthermore, study of plasma parameters, periodic, quasi periodic, chaotic behaviour of plasma and intrinsic noise induced coherency in plasma. The broad area of theoretical research encompasses understanding of electronic, magnetic, transport, thermo-electric, optical and many dynamical properties in a range of low-dimensional quantum systems (2D materials, nanotube, quantum dot, topological insulators, spintronics, nano-junctions and etc) using quantum many-body theory, density functional theory (DFT) and/or molecular dynamics simulations (MD).

The Centre also maintains active collaborations with UCLA (USA), Brunel University (UK), University of Bath (UK), Upsala University (Sweden), Michigan Technological University (USA), Central University of Gujrat, Panjab University, University of Pune, H.P University, NIT Surat, JNCASR.

Academic Programmes offered by the Centre

1. M.Sc. Physics
2. Ph. D. Physics

Faculty Members of the Centre

Dr. Santosh Kumar Mahapatra
Associate Professor and Head of the Department



Area of Specialisation: Experimental Nuclear and Accelerator Physics, Design of Electron and Ion Sources, Plasma Parameters and its Chaotic Behaviour, MOS, MIS and Solar Cell Devices, Plasma Wake Field Accelerator, Irradiation Effects on Thin Film and Soft Materials

Dr. Rupesh S. Devan
Associate Professor



Area of Specialisation : Experimental Condensed Matter Physics

Dr. A. L. Sharma
Assistant Professor



Area of Specialisation: Experimental Condensed Matter Physics, Development of Materials for Energy Storage/Conversion Devices, Nanoscience and Technology

Dr. Kamlesh Yadav
Assistant Professor



Area of Specialisation: Experimental Condensed Matter Physics, synthesis and characterization of thin film, nanomaterials and nanocomposites.

Dr. Ashok Kumar
Assistant Professor



Area of Specialisation: Condensed Matter Physics (Theoretical and Computational Materials Science-Materials Modelling using Density Functional Theory: Properties and Predictions)

Dr. Prakash Parida
Assistant Professor



Area of Specialisation: Theoretical Condensed Matter (Molecular electronics, Spintronics, 2-D materials, Topological Insulators, Nano-Junctions, Quantum Transport, Interacting electrons)

Papers Presented at National/International Conferences

1. Sumandeep Kaur, Ashok Kumar, Sunita Srivastava, K. Tankeshwar, *AIP Conference Proceedings* 1832 050049 (2017).
2. Geeta Sachdeva, Chandra Kumar, K. Tankeshwar, Ashok Kumar, *AIP Conference Proceedings* 1832 090049 (2017).
3. Munish Sharma, Ashok Kumar, Ravindra Pandey, P. K. Ahluwalia *AIP Conference Proceedings* 1832 140036 (2017).
4. Anjna Thakur, Priya Thakur and Kamlesh Yadav, "Thickness dependent optical properties of PEMA and (PEMA)_{0.85}/(ZnO)_{0.15} nanocomposite films deposited by spray pyrolysis technique on ITO substrate", *AIP Conf. Proc.* 1728 (2016) 020412.
5. Priya Thakur, Anjna Thakur, and Kamlesh Yadav, "Study of variation in the band gap with concentration of TiO₂ In (LaMnO₃)_{1-x} / (TiO₂)_x (where x = 0.0,0.1,0.2,0.3 and 0.4) nanocomposites", *AIP Conf. Proc.* 1728 (2016) 020414.
6. Devender Jalandhara, Gurdhir Singh and Kamlesh Yadav, "Effect of sintering temperature on the optical properties of BiFeO₃ nanoparticles", *AIP Conf. Proc.* 1728, 020437 (2016).



7. A.L. Sharma, Effect of MWCNT in Terms of Electrochemical Performance of Prepared Novel Cathode Materials 15th Asian Conference on Solid State Ionics at Indian Institute of Technology (IIT) Patna, India November 27 – 30, 2016.
8. Anil Arya, M. Sadiq and A. L. Sharma, A Comparative Study of Effect of Different Nano filler on Electrochemical Properties of Blend Composites Polymer Electrolytes, 15th Asian Conference on Solid State Ionics at Indian Institute of Technology (IIT) Patna, India November 27 – 30, 2016
9. Anil Arya, M. Sadiq, Manoj K Singh, Sweety Sharma, A. L. Sharma, AC conductivity and dielectric behavior in lithium ion conducting blend polymer electrolyte, Third International Conference on Nanotechnology for Better Living at NIT, Srinagar May 25-29, 2016. (Poster)
10. Jawar Singh, Nitika, Devender Jalandhara, Gurdhir Singh, and Kamlesh Yadav, "Optical Properties of $\text{BiFe}_{1-x}\text{Ag}_x\text{O}_3$ ($x = 0.0, 0.1, 0.2, 0.3, 0.4$ and 0.5) Nanoparticles" in Conference on Recent Advancements in Science, Commerce & Technology 2016 (NCRSCT'16), at MATA SAHIB KAUR GIRLS COLLEGE, Guru Ki Kashi, Damdama Sahib, Talwandi Sabo-151302, District Bathinda (Pb.), April 5-6, 2016.
11. Nitika, Jawar Singh, and Kamlesh Yadav, "Effect of Ca Doping on the Optical Properties of $\text{La}_{1-x}\text{Ca}_x\text{MnO}_3$ ($0.0 \leq x \leq 0.5$) Nanoparticles" in Conference on Recent Advancements in Science, Commerce & Technology 2016 (NCRSCT'16), at Mata Sahib Kaur Girls College, Guru Ki Kashi, Damdama Sahib, Talwandi Sabo-151302, District Bathinda (Pb.), April 5-6, 2016.
12. Gurdhir Singh, Devender Jalandhara, and Kamlesh Yadav, "Effect Of Grain Size On Optical Properties Of Iron Oxide Nanoparticles", AIP Conf. Proc. 1728, 020409 (2016).
13. Anjna Thakur, Priya Thakur, and Kamlesh Yadav, "Morphological, Optical and Thermal Properties of $(\text{TiO}_2)_x$ Embedded $(\text{PVC/PE})_{1-x}$ (Where $x = 0.0, 0.1, 0.2, 0.3, 0.4$ and 0.5) Blend Nanocomposites", Recent Trends in Materials and Devices, Proceedings ICRTMD 2015, Springer Proceedings in Physics, 178, 89-100 (2016).
14. Priya Thakur, Anjna Thakur, and Kamlesh Yadav, "Optical Properties of $(\text{Fe}_2\text{O}_3)_{1-x}/(\text{Cr}_2\text{O}_3)_x$ (Where $x = 0.0, 0.1, 0.2, 0.3, 0.4$ and 0.5) Nanocomposites", Recent Trends in Materials and Devices, Proceedings ICRTMD 2015, Springer Proceedings in Physics, 178, 145-155 (2016).

Lectures/Workshops/Conferences Organised by the Centre

1. Expert Lecture by Prof. P. K. Ahluwalia, Himachal Pradesh University Shimla. Title of the Lecture "Queen of Flatland of Crystals: Graphen".

Invited Lectures Delivered by the Faculty Members

1. Invited talk by Dr S K Mahapatra on PWFA by 12 MeV Ramped Electron Beam, NCNAP, Central University of Jharkhand 4-6 Oct 2016.
2. Invited talk by Dr S K Mahapatra on Design of Electron Beam & applications, AP of IUAC, Central University of Punjab, 4 April 2016
3. Extension Lecture by Dr. A.L. Sharma on "Plasmon's (Condensed Matter Physics) and Comparator and Triggering (Electronics)" at Baba Farid College, Muktsar Road, Bathinda, Punjab, India on 07-04-2017.
4. Extension Lecture by Dr. A.L. Sharma on "multistage amplifier (Electronics)" at Baba Farid College, Muktsar Road, Bathinda, Punjab, India on 18 October 2016.
5. Invited Talk by Dr. A.L. Sharma on "Study and Evaluation of MWCNT Coated Cathode Materials for Energy Storage Applications" in acquaintance program of IUAC at Central University of Punjab, Bathinda, India on 04-04-2016.
6. Invited Talk by Dr. Ashok Kumar on "Elements of Density Functional Theory" in National Workshop at DAV Jalandhar on Oct. 2016.
7. Chaired a technical Session by Dr. Kamlesh Yadav in a conference on Recent Advancements in Science, Commerce & Technology 2016 (NCRSCT'16), held at Mata Sahib Kaur Girls College, Guru Ki Kashi, Damdama Sahib, Talwandi Sabo-151302, District Bathinda (Pb.), April 5-6, 2016.

Awards/Honours for Faculty/Students of the Centre

1. Dr. Achchhe Lal Sharma hold *National Organizing Committee Member* in the 15th Asian Conference on Solid State Ionics (ACSSI2K16), Nov 27-30, 2016, Indian Institute of Technology (IIT) Patna, India.
2. Dr. Kamlesh Yadav Received Best Teacher Award on 8th Foundation Day Celebrations of Central University of Punjab, Bathinda, 28th February 2017.

Orientation/Refresher Course Attended

- 1- Dr. Achchhe Lal Sharma attended 56th Refresher Course from 20th June 2016-9th July 2016 at HRDC, Punjabi University, Patiala.
- 2- Dr. Kamlesh Yadav attended 56th Refresher Course from 20th June 2016-9th July 2016 at HRDC, Punjabi University, Patiala.

Laboratory Facilities

1. The Electronics and Digital Electronics Laboratory
2. The Nuclear Physics Laboratory
3. The Centre also has a Nanomaterials Laboratory

New Equipment/Facility created in Centre during the year:

- | | |
|---|-------------------------------------|
| i. Name of the Equipment/Facility | : Differential Scanning Calorimetry |
| ii. Centre Name | : Centre for Physical Sciences |
| iii. Details of the Equipment/facility | : DSC 3500 Sirius, NETZSCH |
| iv. Beneficiaries of the Equipment/facility | : Dr. A. L. Sharma |



Differential Scanning Calorimetry
(DSC 3500 Sirius, NETZSCH)



A view of the Physical Science Laboratory

Centre for Plant Sciences

The Centre for Plant Sciences (CPS) was established in 2015, since then the centre is running M.Sc. Life Sciences with a specialization in Plant Sciences and a stand alone Ph.D in Plant Sciences. The present program is designed in order to disseminate education to the people of this region and at par with nationally and internationally recognized University and Institutes. The course curriculum is designed strictly according to the CSIR UGC NET examination and these are updated regularly. Centre for Plant Sciences (CPS) is equipped to give degree in M.Sc. Life Sciences (Plant Sciences) and Ph.D. Plant Sciences. The Centre is supported by its own academic and administrative committee, that looks after the students' academic activities, their mentoring and caters the need of the programme. At present, the Centre has 21 M.Sc. students and 23 Ph.D students working on their research projects. The Centre has designated research and teaching labs for Biochemistry and Physiology, Genomics and Tissue culture. Apart from this, the Centre has Walk-in Growth chamber, Cold rooms, Green House facility, open fields for experimentation and upcoming "Semi- arid and Desert

Botanical Garden" in the new campus. The Centre follows "Choice Based Credit system" (CBCS) with strict teaching schedule and rigorous internal evaluation of the research projects especially M.Sc research.

At present, the Centre has 5 externally funded research grants worth of Rs. 1.5 Crores. Centre also has five internationally trained faculty members consisting of one Associate Professor and four Assistant Professors. All the faculty members are experienced and have high impact publications in their account. The Centre is supported by three technical staff members consisting of Technical Assistant, Laboratory Assistant and Laboratory Attendant.

The major thrust areas of the centre are Sustainable agriculture, Genomics, Marine Biology and Metabolic engineering.

Academic Programmes offered by the Centre

1. M.Sc. Life Sciences (Plant Sciences)
2. Ph.D. in Life Sciences (Plant Sciences)

Faculty Members of the Centre

Prof. (Dr.) A.K. Dhawan
Director IQAC and Professor

Area of Specialisation: Plant Tissue and Cell Culture; Biotechnology.



Dr. Sanjeev K. Thakur
Associate Professor and Coordinator of Centre

Area of Specialisation: Stress Biology.



Dr. Felix Bast
Assistant Professor

Area of Specialisation: Molecular Systematics, Computational Phylogenetics, Marine Phycology and Historical Linguistics.



Dr. Pankaj Bhardwaj
Assistant Professor

Area of Specialisation: Molecular Genetics and Genomics



Dr. Vinay Kumar
Assistant Professor

Area of Specialisation: Plant Genetic and Metabolic Engineering Research Activities.



Papers Presented at National/International Conferences

1. Bhardwaj, P., Chuadhary, S., & Thakur, S. (2017, 6 March) presented a paper "Transcriptome Characterization of Himalayan *Rhododendron arboretum*" at Young Investigators Meet, India Biosciences, Department of Biotechnology, Govt. of India. Goa, India.
2. Bast, F. (2016, 10 November) presented a paper "Subgroup structure of Indian Languages revealed using computational linguistics" in International Conference of Linguistic Society of India at IIT-Guwahati, India.
3. Bast, F. (2016, 19 July) presented a paper "Phylogenetic systematics and diversity of Seaweeds from Indian Coast" in International Seaweed Symposium, Copenhagen, Denmark.

Lectures/Workshops/Conferences Organised by the Centre

1. The Centre organised a conference/workshop titled "National workshop on Sanger Sequencing & Application" with Subject field "Plant Genomics" in collaboration with "Thermo Fisher Scientific and CIL on 18th Feb. 2017.
2. Centre for Plant Sciences has initiated a new series of lectures "Chalk Talk series" with an aim to reintroduce chalk & blackboard culture.
3. Dr. Sudesh Yadav, Scientist-F, CIAB, DBT, Mohali, Punjab delivered a talk on Metabolic Engineering Flavonoid Biosynthesis and academic and industrial Perspective on 13th Feb 2017
4. Dr. U.C. Lavania, Prof. Emeritus CSIR. Department of Botany, University of Lucknow delivered a special lecture.
5. Dr. Seshu Lavania, Professor and Head, Department of Botany, University of Lucknow delivered a special lecture.
6. Prof. Ravi Prakash, Prof. Emeritus visited the University and delivered a guest lecture (Three days) on different topics related to Genetics, molecular biology to all Life Sciences students.



Dr. Sudesh Yadav during his talk



Dr. U.C. Lavania delivering special lecture.

Awards/Honours for Faculty/Students of the Centre

1. Dr. Felix Bast had been to two of Indian research stations at Antarctica and started working on the molecular diversity of Antarctic flora.

Laboratory Facilities

The Centre for Plant Sciences has a well equipped State of the art Laboratory serving to needs of the researchers.

Laboratory Equipments

1. Analytical Balance
2. Microplate Reader
3. Millies Water System
4. PCR
5. RFPCR
6. Ultra Centrifuge Machine



Refrigerated Centrifuge



Views of Plant Sciences Laboratories

SCHOOL OF EDUCATION

Centre for Education

The Centre for Education was established in 2013 with an aim of equipping the students with education for the future through curricular inputs having futuristic vision and professional practices to meet the requirements of a future teacher/educator. The Centre assists the students in their personal and professional growth by providing ample opportunities to them. The programs offered in the Centre are M.Ed., M.A (Education) and Ph.D. (Education). The Centre emphasizes the holistic teacher preparation by providing various field based experiences and activities. The Centre for Education is indeed growing as a research Centre for handling new problems in the field of Education.

Academic Programmes offered by the Centre

1. M.Ed.
2. MA Education
3. Ph.D. Education

Faculty Members of the Centre

<p>Prof. S K Bawa Professor, Coordinator of Centre</p> <p>Area of Specialisation: Measurement & Evaluation Women Education</p>	
<p>Dr. Bhamsir Singh Assistant Professor</p> <p>Area of Specialisation: Educational Technology Computer application & Statistics Educational Psychology</p>	
<p>Dr. Jubilee Padmanabhan Assistant Professor</p> <p>Area of Specialisation: Science Education Environmental Education Elementary Education</p>	
<p>Dr. Sesadeba Pany Assistant Professor</p> <p>Area of Specialisation: Teacher Education Measurement and Assessment Curriculum Development</p>	
<p>Dr. Rajesh Kumar Asstt. Professor</p> <p>Area of Specialisation: Hindi Language</p>	

Papers Presented at National/International Conferences

1. Gorakhnath, I. & Padmanabhan, J. (2017, 10 March) presented a paper "Educational Robotics: An Innovative Technological Tool for future ICT Teachers" at *National Conference on Teacher Education: Current Scenarios and Future Possibilities* at Central Institute of Education, University of Delhi.
2. Padmanabhan, J. (2017, 22 March) delivered an Invited Lecture on "Strategies in Classroom Teaching" at Guru Kashi College, Talwandi Sabo, Punjab.
3. Padmanabhan, J. (2016, July) attended an Orientation programme in Himachal Pradesh University, India.
4. Pany, S. & Kanwaljit. (2016, November) presented a paper "Cascade the Empty Vessel of Teaching brain: A Paradigm Shift in Teacher Education" at the International Conference, Ambala, India.
5. Pany, S. (2017, January) presented a paper "Value Education for Women Empowerment" at National seminar on Women Empowerment at Cuttack, Odisha.
6. Pany, S. (2017, 2 March) presented a paper "Research Designs in Social Science Research" in the National Seminar organized by Jan Nayak Ch. Devi Lal P.G. College of Education, Sirsa.
7. Pany, S. (2017, 4 March) presented a paper "Government Policies and Programme in Context of Women Empowerment" in UGC Sponsored National Seminar on Women Empowerment organized by SSD College of Education, Bathinda.
8. Pany, S. (2017, 18 March) presented a paper "Achieving Gross National Happiness through Teacher Education Strategies & Challenges" in UGC Sponsored National Seminar on Taking Happiness Seriously: Deciphering the Maxim of Gross National Happiness through Contemplation and spirituality, organized by DAV College of Education, Abohar.
9. Pany, S. (2017, 24 March) presented a paper "Issues and Challenges for teachers in Value Development among Learners" in the National Seminar organized by GNDU, Amritsar.

Lectures/Workshops/Conferences Organised by the Centre

1. A lecture on 4Es approach of learning was delivered by Prof. S. K. Bawa, Dean School of Education, in the Centre on 26th October, 2016.



Prof. S. K. Bawa Delivering a Lecture



Prof. Meenakshi Delivering a Lecture

2. Extension Lecture on 'Typical behavioral problems of children: their causes and remedies' by Prof. Meenakshi, Punjabi University, Patiala on 1st December, 2016
3. Extension lecture on 'Living wisely' by Prof. Saamdu Chetri, Executive Director, Gross National Happiness Centre, Bhutan on 21st February, 2017.
4. Service Learning Program:

The Centre for Education, under the leadership of Prof. S.K.Bawa, Coordinator of the Centre, took an initiative towards the development of community by starting a service learning program in the village Nandgarh. Nandgarh is one of the five villages adopted by Central University of Punjab, Bathinda. It was a 6 week program from 26th October to 15th December, 2016. The objective of this program was to support the children in their education by providing free coaching to them. Under this program, Ph.D., M.Ed. & M.A. (Education) students of the Centre taught the children of village studying in 2nd to 10th class. In the evening, one hour class daily was taken by students of the Centre in a school situated in the village .



A view of the service learning programme at Nandgarh village

Laboratory Facilities



A view of the Laboratory

SCHOOL OF ENGINEERING & TECHNOLOGY

Centre for Computer Science and Technology

Centre for Computer Science and Technology was established at the Central University of Punjab in 2011. The Centre has well-equipped state of art Software, Research and Cyber Security Laboratories for academics and research. Also, one of the courses of Centre i.e. M.Tech. in Computer Science and Technology has the approval of All India Council for Technical Education (AICTE) according to which a GATE qualified student is getting a scholarship of Rs. 12400 per month. The objective of the programme is to impart advanced computer technology education to bridge the gap between industry and academia.

The unique environment of the centre encourages interdisciplinary research to solve problems beyond the scope of a single discipline. Major thrust areas of the centre include digital image processing, software engineering, wireless networks and their security, and cloud computing.

Digital image processing finds a number of applications in important areas like image forensics, medical image processing, remote sensing, astronomy etc. Processing of images is necessary both for human interpretation and machine perception. Many M.Tech students registered under the supervision of the faculty members of the Centre are working in the areas of digital image processing.

With the recent advances in the Information Technology, many aspects of our lives rely on the Internet and computers, (including communications, finance, medicine, and education), the risks and the crimes have also increased. The Centre for Computer Science and Technology is created to increase the awareness of the associated risks of computer and network use. It also involves protecting the information and systems we rely on every day. Today's networks contain several forms of wireless devices. Mobile ad-hoc network is a relatively new innovation in the field of wireless technology. These networks pose several challenges including security, bandwidth constraint, routing and power. Security is one of the most important aspects of this technology and it needs serious attention. The Centre is focusing on to the solution of problems in the field of ad-hoc networks, network security and information security.

Academic Programmes offered by the Centre

1. M.Tech. in Computer Science and Technology
2. M.Tech. in Computer Science and Technology (Cyber Security)

Faculty Members of the Centre

Prof. (Dr.) A.K. Jain
Professor

Area of Specialisation: Engineering & Technology, Environmental Engineering & Renewal Resources & Development



Dr. Amandeep Kaur
Associate Professor and Coordinator of Centre

Area of Specialisation: Digital image processing and information security.



Er. Meenakshi
Assistant Professor

Area of Specialisation: Neural networks for predicting the protein structure. Structure-function relationship of proteins leading to drug discovery and uncovering of biological information. Mobile adhoc networks, vehicular adhoc networks and cryptography.



Er. Surinder Khurana
Assistant Professor

Area of Specialisation: Network security including security issues related to wireless LAN, wireless sensor networks, botnet & fast-flux network detection and algorithm design and analysis.





Dr. Satwinder Singh
Assistant Professor

Area of Specialisation: Software refactoring and software reengineering of object oriented system. Data mining in software engineering.



Papers Presented at National/International Conferences

1. Singh, M. (2016, 5 October). Associate Professor and Head, Centre of Information and Technology, Thapar University, delivered an Expert lecture on "Network Security".
2. Centre for Computer Science and Technology organized a *Computer Literacy Program*, in pursuance of Digital India move, from 27th June 2016 to 8th July 2016.
3. Centre for Computer Science and technology organized a *National Conference on Computer Engineering Problem Optimisation*, from 27th December 2016 to 28th December 2016.

Lectures/Conference/Workshop organized by the Centre

1. Dr. Maninder Singh (Associate Professor and Head, Centre of Information and Technology Management (CITM), Thapar University, Patiala) has delivered expert lecture on Network Security on Oct 5, 2016.
2. In pursuance of Digital India move Computer Literacy Program Organized by Centre for Computer Science and Technology from 27th June 2016 to 8th July 2016.
3. Centre Organized a National Conference on Computer Engineering Problem Optimisation from 27-28 Dec 2016. Conference has received more than 65 papers across the country.



Computer Literacy Program

Invited Lectures Delivered by the Faculty

1. Dr. Amandeep Kaur delivered a lecture on Research process and software tools that assist in Research, in FDP "Digitization and Research Methodology", organized by DAV college Bathinda on 7 January 2017.
2. Dr. Amandeep Kaur was the Key Note Speaker in Seminar "Role of ICT in Schools" organized by Jan Nayak Ch Devi Lal Vidyapeeth, Sirsa held on 17th December 2016.
3. Dr. Amandeep Kaur delivered a Guest Lecture on 08 March 2016 in Digital Forensic to students of Department of Forensic Sciences, Chandigarh University, Gharuan, Mohali
4. Dr. Satwinder Singh delivered an Expert Talk on "Computing tools to facilitate Multidisciplinary Research" in TEQIP-II Sponsored (Two Weeks Faculty Development Programme) at GNDEC, Ludhiana. (17 May 2016)
5. Dr. Satwinder Singh delivered an Expert talk at DAV Bathinda on Research Methodology for Software Engineering Problems. (7 January 2017)

Laboratory Facilities

Centre for Computer Science and Technology has one Software Laboratory situated in the computer Centre of the University. The Software Laboratory has 32 i7 processor Desktop Computers. All of the desktop computers are connected with the Internet. Subjects related practicals are conducted in this laboratory. Computer Laboratory is also available to other Centre for conducting their practical classes.



Research Laboratory Facility

Centre has a dedicated research lab for the students to pursue their dissertation work. Research Labs have dedicated machines for the research tools like Understand (Software Analysis tool) and MATLAB. There are total 23 systems in the lab issued to students for their research work. All systems have of i7 processor with the different operating system as per the requirement of each student. Research Lab also has a dedicated server machine of teaching learning system MOODLE. Faculty and students use it to promote the E-Learning system. Also it has two workstations (with the configuration: 4GB RAM, 64-bit, 6GB graphics card) and one Online UPS of 5K VA (Volt Amperes).



View of the Cyber Security Laboratory

SCHOOL OF ENVIRONMENT AND EARTH SCIENCES

Centre for Environmental Science and Technology

The Centre for Environment Science and Technology is a teaching and research Centre in the School of Environment and Earth Sciences at Central University of Punjab established from the very inception of the University in 2009. The mission of the Centre is human resource development through excellence in research and teaching in environment sciences and technology. The research based education focuses on seeking solutions to regional environment problems and sustainability. It also aims at community outreach and environment problems and sustainability. It also aims at community outreach and environment conservation. The major research areas of the Centre are Environment Pollution Monitoring & Abatement, Environment Nanotechnology, Biodiversity Conservation, Remote Sensing & GIS, and non-Conventional Energy. The Centre follows an interdisciplinary research approach.

Academic Programmes offered by the Centre

1. Ph.D. in Environmental Science and Technology
2. M.Sc. Environmental Science and Technology

Faculty Members of the Centre

Prof. (Dr.) R. K. Kohli

Vice Chancellor

FNA, FACs, FNASc, FNAAS, JC Boss National fellow,
Certified Sr. Ecologist, ESA, USA.

Member Scientist of International Union of Forest Research Organisations (IUFRO) task force at global level on "biological invasions in forests"



Prof. (Dr.) V. K. Garg

Professor, COC and Dean, School of Environment and Earth Science.

Area of Specialisation: Pollution Monitoring and Abatement, Pesticide pollution, Heavy Metal and radionuclide pollution, Radio-ecology Environmental Chemistry, Solid Waste Management



Dr. Sunil Mittal

Associate Professor

Area of Specialisation: Bioherbicide development, water purification and management technique, heavy metal analysis in soil and water, heavy metal stress analysis on plant, biosensor.



Dr. Yogalakshmi K. N.

Assistant Professor

Area of Specialisation: Membrane bioreactors for wastewater treatment, advanced biological processes for wastewater treatment, energy recovery from wastewater, biological nutrient removal, pollutant removal from ground water, environmental microbiology and solid waste management.



Dr. Dhanya M.S.

Assistant Professor

Area of Specialisation: Environmental microbiology, Solid waste management, Bioplastics, Bioenergy, Bioremediation of soil xenobiotics, Organophosphate pesticide residue assessment, Soil microbial ecology and Environmental Conservation



Dr. Puneeta Pandey

Assistant Professor

Area of Specialisation: Urban heat island aerosols interaction; assessment of heavy metals and organochlorine pesticides in water and soil, Wetland dynamics, land degradation assessment using remote sensing and GIS



Papers Presented at National/International Conferences

1. Dhanya, M. S. (2017, 13 December) presented a paper "Polyhydroxyalkanoate Production Potential of Bacteria from Chlorpyrifos Contaminated Soil in Talwandi Sabo Block of Bathinda District, Punjab in The Clean Up India 2016" at International Conference on Contaminated Site Remediation organized by Tamil Nadu Agricultural University, India and CRC Care and University of Newcastle, Australia.

Lectures/Workshops/Conferences Organised by the Centre

1. **Biodiversity day celebration:** The Centre for Environmental Science and Technology, Community College collaboration with Punjab Biodiversity Board organized a one day Seminar on Biodiversity as part of International Day for Biodiversity Celebrations on June 27, 2016.
2. **Environmental Day celebration:** On the occasion of the Environmental Day an awareness campaign and plantation drive was organized by the Centre at nearby villages of Bathinda.

Other Events

1. Industrial Visit to Vedanta Unit, Talwandi Sabo

A visit to Talwandi Sabo Power Limited (TSPL), a 1980 (3x660) MW thermal power plant at Banawala village in Mansa district, Punjab was organized for Second Year M.Sc. Environmental Sciences and Technology (Batch 2015-16). This company is one of the first few supercritical plants with ISO 9001:2008; ISO 14001:2004 & OHSAS 18001:2007 certification, a subsidiary of Vedanta Limited implementing the largest Greenfield Power Project in Punjab, India, with all consents and approvals in place.

2. Industrial visit to NFL Unit, Bathinda

The students of the centre also visited National Fertilizer Ltd, unit at Bathinda.



Glimpses of a visit to NFL Unit

Invited Lecture/Talks/Chairmanship of Committees/Other Contributions

1. Dhanya M.S (2017). Polyhydroxyalkanoate Production Potential of Bacteria from Chlorpyrifos Contaminated Soil in Talwandi Sabo Block of Bathinda District, Punjab in The Clean Up India 2016 - International Conference on Contaminated Site Remediation organized by Tamil Nadu Agricultural University, India and CRC Care and University of Newcastle, Australia held on 13th December-15th December 2016.
2. Prof. R. K. Kohli, Delivered Convocation Address at JCV Vidyapeeth, Sirsa on 11 April 2016
3. Prof. R. K. Kohli, Chief Guest: 4th Convocation of Khalsa Institute of Management and Technology, Ludhiana on 23 April 2016
4. Prof. R. K. Kohli, Chief Guest at Valedictory Function, at UGC-Human Resource Development Centre, GNDU Amritsar
5. Prof. R. K. Kohli, Visited USA for IUFRO's Global Task Force (comprising 19 members) Workshop on Biological Invasions in Forests, from 16th to 22nd July 2016 at Shepherdstown, WV, Washington, USA
6. Prof. R. K. Kohli, Member of Assessment Committee to select Scientific Committee/Panel Members of Food Safety and Standards Authority (FSSAI), Ministry of Health and Family Welfare of India, Government of India, New Delhi.
7. Prof. R. K. Kohli, Chief Guest: Inaugural function of short term training program titled "Solid Waste Management in Indian Cities- Issues and Concerns" to be organized by Civil Engg. Deptt. of Guru Nanak Dev Engg. College, Ludhiana on August 23, 2016.
8. Prof. R. K. Kohli, Chairman, NAAC Peer Team, Davengree University, Bangalore from 7th to 9th November 2016.
9. Prof. R. K. Kohli, Chief Guest: Annual Day Function, DAV School, Bathinda on 29 November 2016
10. Prof. R. K. Kohli, Chief Guest: Inauguration of INSPIRE Programme at Vidya Bharti School, Mansa, Punjab
11. Prof. R. K. Kohli, Delivered lecture at Baba Farid Group of Institutions on 24 December 2016.
12. Prof. R. K. Kohli, Chief Guest: Faculty Development Programme at DAV College, Bathinda on 2 January 2017
13. Prof. R. K. Kohli, Member of Expert Committee for selections in the field of Botany from 18th to 20th January 2017.



Laboratory Facilities

The Centre has three laboratories (AL037, AL051 and AL078) equipped with modern equipments for analysis of physical, chemical and biological parameters for water, wastewater, soil and solid waste. The Centre also has work station with softwares for carrying out research in the field of remote sensing.

1. **Laboratory - AL-037:** The research work carried out in this lab is mainly on adsorption studies, water and soil pollution monitoring/assessment and biosensor development.
2. **Laboratory - AL-051:** The research on Environmental nanotechnology, Membrane Technologies, Bioreactors, Microbial fuel cells are mainly conducted in this laboratory.
3. **Laboratory AL-078:** The major research carried out in this laboratory is in the fields of soil quality analysis, bioremediation, environmental microbiology, solid waste management for bioenergy such as bioethanol, biogas and value added products like bioplastic production, soil microbial ecology
4. **GIS work station:** The research is mainly on wetland dynamics, Land degradation, Urban Heat Island (UHI), Site Suitability Analysis.



View of Research Laboratories

Laboratory Equipments

TGA, Microplate reader, Flame photometer, Viscosity meter, Spray drier, Microwave digester, Nitrogen estimation apparatus, BOD, CUD, pH meter, Conductivity meter.

Centre for Geography and Geology

Centre for Geography and Geology under the School of Environment and Earth Science was established in the year 2016. The main aim of the Center is to enable students at the forefront of education and research internationally and to enhance the experiences and professional development of students. The concept of smart class is highly endorsed in the Center where lectures are delivered and teaching using ICT multimedia and green/ white board, use of 3D models, animations, seminar report presentations, surprise test quiz, mini projects that involves an extensive field work are basic features of the Center. In addition to enhance the potential of student, the Centre has initiated a discussion forum "Central University of Punjab-Geographical and Geological Research Forum".

The courses under this centre are designed such that the students may get well acquainted with blend of traditional basic of earth sciences with the emerging techniques of geological importance so that the students are equipped with both theoretical knowledges and practical applications of the subjects. It covers the foundation for the study of fundamental geologic methods and problems, both in the laboratory and in the field in different aspects of Geology including the

instruction in geomorphology, sedimentology, hydrogeology, geochemistry, stratigraphy, mineralogy, petrology, geostatistics, geophysics, remote sensing, environmental geology, economic geology, geophysical principles and geoinformatics.

Now the Centre for Geography and Geology is set to pursue and strengthen research in land use & land cover dynamics, land degradation, urban planning, environment geography, isotope geochemistry, low temperature geochemistry, earth surface processes, applied paleontology, biogeography and vertebrate paleontology. This Centre aims to create a collegial, collaborative and inspiring environment for faculty and students, resilient and well-funded Centre of excellence in emerging areas of Geography and Geology.

Academic Programme offered by the Centre

1. M. A. / M.Sc. Geography
2. M.Sc. Geology
3. Ph.D. Geography
4. Ph.D. Geology

Faculty Members of the Centre

Dr. Kiran K. Singh

Assistant Professor and Officiating in-Charge

Area of Specialisation: Environmental geography, land use/land cover dynamics, urban environment, Remote sensing and Geographical Information System.



Dr. Jitendra Kumar Pattanaik

Assistant Professor

Area of Specialisation: application of cosmogenic radionuclides such as ^{10}Be and ^{26}Al to understand the earth surface processes and exposure dating understanding the continental weathering and CO_2 consumption rate using major, trace elements and sr isotopes on river water.



Dr. L.T. Sasang Guite

Assistant Professor

Area of Specialisation: Social geography, planning and development geography, remote sensing and geographical information system.



Dr. K. Milan Kumar Sharma

Assistant Professor

Area of Specialisation: Applied paleontology, paleobiogeography, sedimentology, stratigraphy, Remote Sensing.





Papers Presented at National/International Conferences

1. Singh, K.K. (2017) presented a paper "Geospatial Technology in Assessment of Urban Environment Quality of Bathinda: a study of Bathinda city" at Xth IGU International Thematic Conference on "Urbanization, Health & Well Being and Sustainable Development Goals" organised by Osmania University, Hyderabad.
2. Pattanaik J. K., Singh A., Nayak K., Shah S. S., Semwal P., Jaiswal M. K., Banerjee A., Nainwal H.C., Shankar R. (2016, 27 August) delivered an oral presentation "Chronology of relict lake deposits in the upper Alakananda basin. Implication to paleoclimate and variability of chemical weathering intensity." in the 35th International Geological Congress (IGC) 2016, under the theme (T4)- Climate Change Studies, Session – 17, T4.17 - Understanding Tropical Climate Change from geological perspectives through multi-dimensional approach, held at CTICC, Cape Town, South Africa.
3. Guite, L.T.S. (2017, 14 February) presented a paper "Preparation of Geomorphic Profile and Profile Analysis. Workshop on Techniques of Geological, Geomorphological Mapping and Sampling Process for Geoscience Research." organized by Centre for Geography and Geology, Central University of Punjab, Bathinda.
4. Guite, L.T.S. (2017, 18 March) presented a paper "Assessment of Urban Sprawling in Bathinda City" in the 38th Indian Geographers Meet 2017 and National Conference on Sustainable Earth Resource Development organized by School of Earth Sciences, Banasthali University, Rajasthan.
5. Guite, L.T.S. (2017, 24 March) presented a paper "Application of Remote Sensing in Disaster management. NSS workshop camp." organized by Punjabi University, Guru Kashi Campus, Damdama Sahib, Talwandi Sabo.
6. Guite, L.T.S. (2016, 18 November) delivered an oral presentation "Lithostratigraphy and tectonic structures of the Paleogene belts in Parwanoo-Subathu sector of the Shimla Hills, Himachal Pradesh, India" at International conference on Emergence and Evolution of the Indian Foreland Basin, Organised by Department of Geology Panjab University, Chandigarh.
7. Guite, L.T.S. (2017, 18 March) delivered an oral presentation "A case study on the manifestation of geological structures in the regional geomorphology at the Parwanoo-Dharampur-Solan-Subathu sections of Shimla Hills, Himachal Pradesh" at *Proceeding of 38th Indian Geographers Meet and National Conference on Sustainable Earth Resource Development*, organised by Banasthali University.

Lectures/Workshops/Conferences Organised by the Centre

1. The centre organised a talk entitled "Tectonic structures and Associated Geomorphic features: Case study on Palaeogene-Neogene Geology of Himachal Pradesh" at Workshop cum training on the "Techniques of Geological, Geomorphological mapping and sampling process for Geoscience research" organised by Centre for Geography and Geology, CUPB, during 13th to 17th February, 2017.
2. Five Days workshop cum training program under the topic "Techniques of geological, geomorphological mapping and sampling process for geoscience research" was organized by Centre for Geography and Geology during 13-03-2017 to 17-03-2017.
3. The special lectures series was associated with two days field visits program in which the participants were deciphered certain geomorphic features and practical their mapping processes in field. Thus, one day visit to Suratgarh and Kali Bangan area of Rajasthan educated the students in identification of desert landforms, sampling and mapping techniques in desert areas. Another one day field visit made at Saketi fossil park, Saketi Himachal Pradesh gave the informations about the lithological and fossil records of Himalayas and formation processes of Himalayas. The workshop was full of information and helpful for the students in their project work and thesis work by getting information about various field and lab techniques.

Invited Lectures Delivered by the Faculty

1. Pattanaik J. K. (2016). Applications of cosmogenic radionuclides (CRN) ¹⁰Be and ²⁶Al in Earth system science. Invited talk on in the *iThemba Lab*, Johannesburg, South Africa on 30th August, 2016.

Awards

1. Dr. Kiran Kumari Singh, Assistant Professor and Coordinator of Centre has been awarded with the merit certificate by the Vice Chancellor for her commendable contribution in Competitive Examination Cell



Dr. Kiran Kumari Singh during distribution of the merit certificate

Laboratory Facilities

The Centre for Geography and Geology has the state of the art laboratory with various geographical equipment. The laboratory is also having the software for GIS and Remote Sensing being used by the students of the Centre.



A view of the Geography and Geology Laboratory

List of Equipments:

S. No.	Name of the Equipment/Facility	Qty	Centre Name	Details of the Equipment/facility	Beneficiaries of the Equipment/facility	Images of Equipment/ Instruments
1	Ultrasonic Cleaning Bath "MAC" MSW-269(SPL)	01	Geography and Geology	Model No : UCB-60 Serial No : 1216032 Company: Macro Scientific Works Pvt. Ltd. Date of Purchase :- 20/02/2017	M.Sc. students for practical and dissertation Ph.D. students for research work Faculty research work	
2	Ultrasonic Cleaning Bath "MAC" MSW-269	01	Geography and Geology	Model No : UCB-200 Serial No : 1216033 Company: Macro Scientific Works Pvt. Ltd. Date of Purchase :- 20/02/2017	M.Sc. students for practical and dissertation Ph.D. students for research work Faculty research work	

3	Computers	08	Geography and Geology	Model No : Dell 9020 MT Serial No :6D789F2, 2QB89F2,6D8F9F2,2Q1D9 F2, 2PPC9F2, 6D6D9F2, 6D679F2, 6D8D9F2 Company: Ingram Micro India Pvt. Ltd. Date of Purchase :- 26/11/2016	M.Sc. students for practical and dissertation Ph.D. students for research work Faculty research work	
4	GARMAN GPS	01	Geography and Geology	Model No : ETREX 20X Company: Asim Navigation India Pvt. Ltd. Invoice no. & date:- ANIPL- 2016-17-RI-0907 (14/02/2017)	M.Sc. students for practical and dissertation Ph.D. students for research work Faculty research work	
5	BRUNTON COMPASS	01	Geography and Geology	Model No : F-5008-030 Company: Asim Navigation India Pvt. Ltd. Invoice no. & date:- ANIPL- 2016-17-RI-0907 (14/02/2017)	M.Sc. students for practical and dissertation Ph.D. students for research work Faculty research work	
6	GEO LENS DOUBLE LENS	01	Geography and Geology	Model No : MG22181 Company: Asim Navigation India Pvt. Ltd. Invoice no. & date: ANIPL- 2016-17-RI-0907 (14/02/2017)	M.Sc. students for practical and dissertation Ph.D. students for research work Faculty research work	
7	GEOLOGICAL HAMMERS & ERC	05	Geography and Geology	Model No : E3-22P,E3- 24BLC, B3-4LB, ERC- 12C,ERC-9C Company: Asim Navigation India Pvt. Ltd. Invoice no. & date: ANIPL- 2016-17-RI-0907 (14/02/2017)	M.Sc. students for practical and dissertation Ph.D. students for research work Faculty research work	
8	Table top tracing(30*1 8)"inch	04	Geography and Geology	Company:- Royal Furniture, Bathinda Invoice no:-621 Date of Purchase : 29/04/16	M.Sc. students for practical and dissertation Ph.D. students for research work Faculty research work	

9	SLIDE HOLDER CABINET with ALUMINIUM TRAY(31)	01	Geography and Geology	Company:- SHAKUN SCIENTIFIC TRADERS, DHERADUN Invoice no: 823 Date of Purchase: 07-03-2017	M.Sc. students for practical and dissertation Ph.D. students for research work Faculty research work	
10	SARTING TRAY OF BRASS(2 BLACK+1 WHITE)	03	Geography and Geology	Invoice no: 823 Date of Purchase: 07-03-2017 Company: SHAKUN SCIENTIFIC TRADERS, DHERADUN	M.Sc. students for practical and dissertation Ph.D. students for research work Faculty research work	
11	ERDAS Software	05	Geography and Geology	Date of purchase: 29.11.2016 Order no: CUPB/SPO/16-17?CGG-2(ii)/Po0203/2438-42	M.Sc. students for practical and dissertation Ph.D. students for research work Faculty research work	
12	Specimens rocks (Igneous, Metamorphic, Sedimentary, salt, Thin section	37 pc	Geography and Geology	Invoice no: RM/55/282 Date of Purchase: 13-03-2017 Company:- Hindusthan Minerals & Naturals History Specimens Supply Co.	M.Sc. students for practical and dissertation Ph.D. students for research work Faculty research work	

SCHOOL OF GLOBAL RELATIONS

Centre for South and Central Asian Studies

The Centre being the founding pillar under the School of Global Relations. It is a unique and innovative in its focus and is committed to cutting edge research. The Centre seeks to promote, conduct and disseminate interdisciplinary studies in the key areas of South and Central Asian history and Archaeology, Culture and society, polity, economy, geopolitics, and the environment. The historical and contemporary connections between the two regions alongside multiple forms of exchange among them always attract scholars to explore the region. With a firm emphasis on research based learning and knowledge creation, the Centre brings all aspects relating to the region under the academic purview. The Centre is in the process of expansion with the experienced five faculties having a commendable publication record and research experience. Over the years, the Centre has received research grants of 20 lakh rupees. The Centre is devoted to promoting and strengthening inter-regional and intra-regional ties among South and Central Asian region.

Academic Programmes offered by the Centre

1. M. A. Political Science
2. M. A. History
3. Ph.D. South and Central Asian Studies



Faculty Members of the Centre

<p>Dr. Bawa Singh Assistant Professor and Officiating-in-Charge</p> <p>Area of Specialisation: Geopolitics of South and Central Asia, Indian foreign policy and maritime security.</p>	
<p>Dr. Nishtha Kaushiki Assistant Professor</p> <p>Area of Specialisation: Foreign policy and great power politics.</p>	
<p>Dr. Sudheer S. Verma Assistant Professor</p> <p>Area of Specialisation: International relations, climate change politics.</p>	
<p>Dr. Vikas Rathee Assistant Professor</p> <p>Area of Specialization: Mughal History (Medival Period)</p>	
<p>Dr. Ashwani Kumar Assistant Professor</p> <p>Area of Specialization: Ancient Indian History, Economic History, Archaeology Areas of Interest: Economic History, Gender Studies, Art and Archaeology</p>	

Papers Presented at National/International Conferences

1. Dr. Nishtha Kaushiki presented a Paper entitled "CPEC and China's Strategic Engagements With Pakistan Challenges and Options for India presented in international conference on 'Changing World Order: India and China in Contemporary Times' organised by Central University of Punjab in collaboration with JNU and BHU (14-15 April, 2017), New Delhi.
2. Dr. Sudheer Singh Verma presented paper entitled "The Climate Change Politics: the case study of South Korea in international conference on 'India-Korea Relations: Forging a Multidimensional Partnership in the 21st Century' organised by Researchers' Association for the Study of Korea (RASK) in Collaboration with Center for East Asian Studies, School of International Studies, JNU at Convention Center Jawaharlal Nehru University from 18/04/2016 to 19 April 2016.
3. Dr. Sudheer Singh Verma presented a paper entitled, "India-Central Asia Relations: Renewing Attempts to Shape Indian Geopolitical Reality under Modi Regime" in National Conference on 'Changing Dynamics of India's Foreign Policy under Modi's Regime' organised by Department of Political Science Shaheed Bhagat Singh College University of Delhi, Sheikh Sarai, Phase II, New Delhi-110017, 24 October to 25 October 2016.
4. Dr. Vikas Rathee, presented a paper entitled, "New Questions and Approaches for Historians of South Asia" Hebrew University of Jerusalem (Mount Scopus Campus), May 23, 2017.
5. Dr. Vikas Rathee. "The Evolution of Hindi Literary Traditions in late-Seventeenth Century Deccan," for the conference *Maratha-Mughal Relations Through North-South Historical Linkage* on occasion of the '350th Anniversary of Visit of Chhatrapati Shivaji Maharaj in Agra' at Department of History and Culture, Dr. Bhimrao Ambedkar University, Agra (UP) in association with Dept of History, Bhimrao Ambedkar Marathwada University

Aurangabad; Indian Council of Historical Research (ICHR); and, Aurangabad Historical Society, February 19-21, 2017.

Workshop/Conference/Lectures organised by the Centre

1. Prof. Tosh Minohara, Kobe University (Japan) delivered a lecture on "Challenging the global order: The Era of Great Power Competition and What the Future Holds for Asia" on 16th January 2017.
2. Prof. M.M. Puri delivered a lecture on "China and India in Asia" on 23rd March, 2017.
3. Ambassador Ashok Sajjanhar delivered a lecture on "India and Centre Asia" on 24.05.2017.
4. Prof. Jamshad Ali Khan delivered a lecture on "SAARC and Its challenges in the Contemporary Age" on 5th June, 2017.
5. A Two days international conference Title: "Changing World Order: India and China in Contemporary Time" on *International Relations by the CSAS* in collaboration with JNU and BHU was organized by the Centre.

Lectures organised by the Centre

1. Prof. Tosh Minohara. (2017, 16th January). Challenging the global order: The Era of Great Power Competition and What the Future Holds for Asia. Kobe University (Japan).
2. Prof. M.M. Puri. (2017, 23rd March). China and India in Asia.
3. Ambassador Ashok Sajjanhar. (2017, 5th June). "India and Centre Asia" on 24.05.2017.
4. Prof. Jamshad Ali Khan. (2017, 5th June). SAARC and Its challenges in the Contemporary Age.

Seminar/ Conference/ Workshop

1. A Two days international conference Title: "Changing World Order: India and China in Contemporary Time" on *International Relations by the CSAS* in collaboration with JNU and BHU co-organized by the Centre.

Invited Lectures Delivered by the Faculty

1. Bawa Singh. (2017, 30 March). Invited Lecture on, "Indian Foreign Policy", invited by the Department of Political Science, Baba Farid College,
2. Vikas Rathee. (2017, 27 October). Invited talk, *Aurangzeb's Accession*, Lovely Professional University, Jalandhar.
3. Vikas Rathee. (2017, 14 April). Public address titled 'My Discovery of Ambedkar' on Ambedkar Day, April 14, 2017, Central University of Punjab

SCHOOL OF HEALTH SCIENCES

Centre for Human Genetics and Molecular Medicine

The Centre for Human Genetics and Molecular Medicine within the School of Health Sciences has been started with an aim to conduct multidisciplinary research in the field of Human Genetics. Research output from this centre will be having direct application in prediction, prevention and therapeutics of human genetic diseases, cancers and other ailments. At present the Centre is in infancy but it is the vision of the Centre to be a premier research unit in the country conducting and promoting groundbreaking research in human genetics. The centre has established state-of-the-art equipment facilities with a mission to offer molecular diagnostic, genetic and proteome profile of various genetic disorders. The centre is also gearing up to carry out prenatal diagnosis and newborn screening in the long run. We are also aiming to provide diagnostic services for congenital malformations and genetic disorders at the chromosomal, biochemical and molecular level. Counselling will be offered to the affected individuals and also to their family members. The main aim of the Centre is to prevent morbidity and mortality due to the genetic disorders and adult onset disorders. Currently different labs at this centre are working on some thrust areas like:

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- Cancer biology and biomarker studies.
- Structural and functional analysis of various proteins in human diseases.
- Identification and characterizing modifier genes involved in disease onset and severity of various genetic disorders.
- Identifying the susceptibility genes involved in the pathogenesis of the common chronic diseases.
- Estimation of the risk conferred by the genomic variations in different ethnic populations.

Prof. (Dr.) Anjana Munshi
Dean School of Health Sciences and Coordinator of Centre



Area of Specialization: Epidemiology and genetics of Stroke and its subtypes, Pharmacogenetics studies in stroke; Epilepsy genetics; Pharmacogenetics studies in epilepsy; Hemoglobinopathies and modifier genes in thalassemia.

Dr. Sandeep Singh
Assistant Professor



Area of Specialisation: Mechanisms of carcinogenesis: role of environmental and genetic factors during carcinogenesis; Role of mitochondrial miRNA in cancer progression and cell death; Anticancer compound screening; Targeting mitochondria for cancer treatment.

Dr. Preeti Khetrpal
Assistant Professor



Area of Specialisation: Reproductive and developmental genetics; Intellectual Property Rights (IPRs).

Dr. Harish Chander
Assistant Professor



Area of Specialisation: Cancer biology; Breast cancer research; Cancer epigenetics.

Dr. Sabyasachi Senapati
Assistant Professor



Area of Specialisation: Complex disease genetics (Celiac disease, COPD); Systems genetics; Population genetics; Pharmacogenomics.

Dr. Neeraj Kumar
Assistant Professor (Resigned in October 2016)



Area of Specialisation: Genetics of Human neurodegenerative disorder Adrenoleukodystrophy; Molecular mechanisms of aging by using *Caenorhabditis elegans* as model system; Mechanisms of micro RNA mediated gene regulation in dietary restriction.

Papers Presented at National/International Conferences

1. Anjana Munshi delivered an Invited talk on "Novel Targets of Tumor Suppressor p53 in Breast Cancer" at National Conference Challenges in Drug Design and Development, JNCMD College of Pharmacy, Sirsa.
2. Anjana Munshi gave a presentation on "Investigation of structure function relationship of non-coding RNA at AFF3 locus in Rheumatoid Arthritis" organized by Indian Society of Human Genetics, IISC Bangalore on 2 April 2017.
3. Anjana Munshi gave a presentation on "Effect of Genomic alterations on susceptibility and trastuzumab-therapy of HER2, positive breast cancer" organized by Indian Society of Human Genetics, IISC Bangalore on 2 April 2017.

Lectures/Workshops/Conferences Organised by the Centre

1. A Special lecture on "Genomic Medicine" and Workshop on "Molecular Modelling and Development Genetics" on Subject field: Life Sciences by Centre for Human Genetics and Molecular Medicine sponsored by Central University of Punjab, Bathinda

Three special lectures and a one-day workshop was organized by the Centre for Human Genetics & Molecular Medicine at Central University Campus on 24-25th March 2017. Objective of this event was to give M.Sc. and PhD students an exposure to recent updates in the field of human genomics. Special lectures were given on the topic Cancer biology, personalized medicine and computational modelling by Dr. Parvinder Sandhu, Prof. Vasudha Sambyal and Dr. Sudeep Chakraborty respectively. One day hands-on workshop was conducted in the Human Genetics and Molecular Medicine laboratories. A total of 35 students from six different centres attended this workshop. Dr. Kaustuv Datta and Dr. Surajit Sarkar from Delhi University were the resource persons for this programme.



A Special Lecture on "Genomic Medicine"

Invited Lectures Delivered by the Faculty

1. "Primordial Dwarfism: What we should know" on 26th Nov, 2016 in a CME on growth disorders at PGIMER, Chandigarh.

Awards and Honours for Faculty/Students of the Centre

1. Dr. Sandeep Singh, Assistant Professor from the Centre for Human Genetics and Molecular Medicine received the CUPB Research Award and certificate of commendation for research publication with CIF more than 15 and for research publication with more than 10 Impact factor.

Laboratory Facilities

The Centre for Human Genetics and Molecular Medicine has two research laboratories giving emphasis on Genetics research (single gene and multifactorial diseases) and Cancer biology. The laboratories are equipped with cell culture facility, Work stations, MUSE cell analyzer, flow cytometer, Qubit-fluorometer, Gradient PCR machines, Water Purification system and Bench top Refrigerated Centrifuges.

New Equipment/Facility created in Centre during the year

- | | | | |
|----|---|---|---------------------------------------|
| 1. | Name of the Equipment/Facility | : | Turbo-Blotter |
| a. | Details of the Equipment/facility | : | BIO-RAD Trans-Blot Turbo Cat# 1704150 |
| b. | Beneficiaries of the Equipment/facility | : | University students and Faculty |
| 2. | Name of the Equipment/Facility | : | Ultra Low Deep Freezer |
| a. | Details of the Equipment/facility | : | Haier, -86°C ULT Freezer DW-86L828J |
| b. | Beneficiaries of the Equipment/facility | : | Department students and Faculty |



Ultra-Low Deep Freezer



Turbo-Blotter

SCHOOL OF LANGUAGES, LITERATURE AND CULTURE

Centre for Languages and Comparative Literature

The Centre for Languages and Comparative Literature (CLCL) offers opportunities for postgraduate and Ph.D. level studies in English, Punjabi, Hindi, and comparative analysis of their literature and cultures. The centre has planned the curriculum and its research activity on updated Indian as well as Western theoretical models that can be applied to study and understand linguistic, literary and cultural creative processes. The courses have been planned in such a way that an integrated as well as independent understanding of these three segments (Language, Literature and Culture) is made possible.

The Centre attempts to negotiate the boundaries and initiate dialogue between different languages, literatures, cultures and countries through the study of their literature, language, film, art, history, and socio-political contexts. The distinctive feature of this Centre is that it provides an opportunity to and helps develop competence of students, scholars and researchers to study a particular language's creative process in the perspective of world literature.

Academic Programmes offered by the Centre

1. M.A. English
2. M.A. Punjabi
3. M.A. Hindi
4. Ph.D. English
5. Ph.D. Punjabi
6. Ph.D. Comparative Literature

Faculty Members of the Centre

Dr. Alpna Bainsi
Associate Professor & Coordinator of the Centre

Area of Specialisation: Drama, Film Studies, Subjectivity, Translation



Dr. Zameerpal Kaur
Associate Professor

Area of Specialisation: Literary theories, Indian Poetics, Ecocriticism: Ecology and environment in literature, Animal Studies, Religious Environmentalism, Ancient Indian Literature, Punjabi Poetry, Punjabi folklore



Dr. Rajinder Kumar
Assistant Professor

Area of Specialisation: Contemporary discourses (Gender and Dalit Discourse), Tribal Literature, Regional Literature and Culture studies; Hindi fiction and Regional Novels, sociolinguistics study of different regions.



Dr. Amandeep Singh
Assistant Professor

Area of Specialisation: Diasporic Fiction, Ecocriticism



Dr. Ramanpreet Kaur
Assistant Professor

Area of Specialisation: Punjabi Language and Linguistics (Grammatical and Semantic studies), Medieval Punjabi Literature, Gurbani Studies



Dr. Dinesh Babu P.
Assistant Professor

Area of Specialisation: American Literature, African American Literature, Literary Criticism



Dr. Shahila Zafar
Assistant Professor

Area of Specialisation: Second Language Acquisition, Psycholinguistics English Language Teaching, Language Learning and Technology,



Papers Presented at National/International Conferences

1. Zafar, S. (2016, 16 February) presented a paper titled 'Words under scanner: The limiting of literary voices in India' at National Seminar on Art under Scanner: Challenges to Artistic Expression at Devaki Devi Jain Memorial College for Women, Ludhiana.
2. Zafar, S. (2016, 18 November) presented a paper titled 'A Survey of Ph.D. Theses on the Factors Influencing Second Language Acquisition' at the International Conference on Language and Literature through the Ages at SRM University, Ghaziabad.
3. Kaur, R. (2017, 7 December) presented a paper titled "Prof Sahib Singh Di Vartak: Parkirti Te Partakhan (Nibandkari De Vishesh Parsang Vich", at 6th Vishav Punjabi Sahit Conference on Punjabi Vartak: Praptiyan te Sambhavnayan organized by Department of Literary Punjabi Studies, Punjabi University, Patiala.
4. Kaur, R. (2016, 5 December) presented a paper titled "Dr.Harkirat Singh Di Gurbani Viyakhyakari" at the National Seminar on Sri Guru Granth Sahib Di Viakhyakari Te Viakhyakar, organized by Department of Sri Guru Granth Sahib Studies, Punjabi University, Patiala.
5. Kaur, S. & Kaur, R. (2016, 24 August) presented a paper titled "Gracing the Age Old Disgraced Luna: A New Interpretation of the Figure of Luna in Epic Verse Play *Luna*" at the National Conference on Epic in India: Exploring Variations, Transformation and Mutations" Organized by Department of Comparative Literature, University of Hyderabad.

Conferences/Seminars attended by Faculty of the Centre

1. Refresher Course was attended by Dr. Shahila Zafar on Information Technology at Punjabi University, Patiala December 1, 2016- December 21, 2016.
2. National Seminar on Art under Scanner: Challenges to Artistic Expression at Devaki Devi Jain Memorial College for Women, Ludhiana, was attended by Dr. Shahila Zafar on February 16, 2017.
3. International Conference attended by Dr. Shahila Zafar on Language and Literature through the Ages at SRM University, Ghaziabad on 18-20 November, 2016.
4. Neurizon by Dr. Shahila Zafar 2016 at Max Planck Institute of Biophysical Chemistry, Gottingen on May 31- June 3, 2016.

Lectures/Workshops/Conferences Organised by the Centre

The Centre organised a Lecture by Prof. Ravi Kumar, (Department of Hindi, Punjabi University, Patiala) on 8th December 2017 at 10 a.m. in the Seminar Hall of CUPB



Prof. Ravi Kumar delivering the lecture

Laboratory Facilities

An internet enabled language laboratory for the teaching and learning of different languages with the required infrastructure like modern computer systems along with headsets/mikes and language teaching software has been setup. The laboratory has been set up in the Centre for Languages and Comparative Literature to improve the communication skills of students and to accelerate the language learning process. The Communication and Soft Skills Development classes are held in the evening to improve the technical and academic writing, reading, pronunciation and communication skills of the students. These language tutorials are open for students of all the schools and centres wishing to opt for it.

SCHOOL OF LEGAL STUDIES AND GOVERNANCE

Centre for Law

Previously known as 'Centre for Environmental Law' started its working in 2011. In 2015, it has been renamed as Centre for Law under the School of Legal Studies and Governance was established with an objective to impart qualitative legal education offering specialization in Environmental Law, Human Rights and Corporate Law to keep pace with needs of society.

Academic Programmes offered by the Centre

1. Ph.D. in Law
2. LL.M. in Environmental Law, Human Rights and Corporate Law

Faculty Members of the Centre

Dr. Tarun Arora
Associate Professor and Coordinator of the Centre

Area of Specialization: Constitutional Law, Environmental Law.



Dr. Deepak Kumar Chauhan
Associate Professor

Area of Specialisation: Constitutional Law, Criminal Law & Environmental Law.



Dr. Puneet Pathak
Assistant Professor

Area of Specialisation: Human Rights and Constitutional Law.



Dr. Bukhwinder Kaur
Assistant Professor

Area of Specialisation: Criminal Law, Family Law, Law of Contract.



Dr. Amit Kashyap
Assistant Professor

Area of Specialisation: Human Rights and Constitutional Law.



Dr. Surender Mehra
Assistant Professor

Area of Specialisation: Competition Laws; Juvenile Delinquency, Plea Bargaining.



Papers Presented at National/International Conferences

1. Kaur, S. (2017, 10 March) presented a paper titled "Farmers Suicides, Human Rights and the Agrarian Crisis in India" in ICSSR Sponsored National Seminar on "Agricultural Crisis and Farmers' Distress in Punjab" organised by Department of Economics, DAV College, Bathinda.
2. Kashyap, A. (2017, 4 March) presented a paper titled "Problems Relating to NRI Sham Marriages—Do's and Don'ts" in UGC Sponsored National Seminar on "Women Sensitisation for Promoting Solutions—A Strategy for inclusive Growth" organised by SSD Girls' College, Bathinda.
3. Kashyap, A. (2017, 10 March) presented a paper titled "Farmers Suicides, Human Rights and the Agrarian Crisis in India" in ICSSR Sponsored National Seminar on "Agricultural Crisis and Farmers' Distress in Punjab" and organised by Department of Economics, DAV College, Bathinda.
4. Kashyap, A. (2017, 17 March) presented a paper titled "The potential Impact of Brexit on Competition Law in India" in the ICSSR Sponsored National Seminar on "Brexit and India: Analysing the Implications" and organised by Department of Economics, Central University of Punjab, Bathinda.
5. Kashyap, A. (2017, 17 March) presented a paper titled "Brexit's Impact on Competition Policy in India and Practical Approach towards Achieving Economic Justice" in the ICSSR Sponsored National Seminar on "Brexit and India: Analysing the Implications" and organised by Department of Economics, Central University of Punjab, Bathinda.
6. Kashyap, A. (2017, 29 March) presented a paper titled "Women's Equality and Gender Justice in India: A Critical Introspection" in the ICSSR Sponsored National Seminar on "Crime, Society and the State" organised by Rajwade College of Law, affiliate to Panjab University, Chandigarh.
7. Kashyap, A. (2016, 23 December) was the Co-Convener and Participated in Two Days Legal Awareness Programme about Women Related Laws organised by Centre for Law, Central University of Punjab, Bathinda.
8. Kashyap, A. (2016, 27 August) participated in Two Days Legal Awareness Programme about Women Related Laws organised by Centre for Law, Central University of Punjab, Bathinda.
9. Kashyap, A. (2016, 9 December) participated in a National Seminar on Recent Trends in Food Processing organised by Central University of Punjab, Bathinda and Indian Institute of Crop Processing Technology (IICPT), Thanjavur.
10. Pathak, P. (2017, 4 March) presented a paper titled "Promotion of Human Rights and Duties Education" in the UGC Sponsored National Seminar on Human Rights and Duties Education organized by Department of Political Science, Guru Nanak Dev University Amritsar.
11. Pathak, P. (2017, 4 March) presented a paper titled "Gender Justice and India's Obligation under International Instruments" in the UGC Sponsored National Seminar on Women Sensitization for Promoting Solutions—A Strategy for inclusive Growth organized by SSD Girls' College, Bathinda.
12. Pathak, P. (2017, 10 March) presented a paper titled "Farmers Suicides, Human Rights and Agrarian Crisis in India"



in ICSSR Sponsored National Seminar on "Agricultural Crisis and Farmers' Distress in Punjab" organized by DAV College, Bathinda.

13. Presented a paper "UN Role of the protection of Women Right" in national Seminar on "Women Sensitisation for Promoting Solutions—A Strategy for inclusive Growth" organised by Department of Commerce, SSD Girls' College, Bathinda on dated March 4, 2017.
14. Presented a paper "Farmers Suicides, Human Rights and the Agrarian Crisis in India" in national Seminar on "Agricultural Crisis and Farmers' Distress in Punjab" organised by Department of Economics, DAV College, Bathinda on dated March 10, 2017.
16. Presented a paper "An Appraisal of Sexual harassment of women at workplace prevention, prohibition and redressal Act, 2013" in national Seminar on "Crime, Society and the State" organised by Rayat College of Law, affiliate to Panjab University, Chandigarh on dated March 29, 2017.

Lectures/Workshops/Conferences Organised by the Centre

1. Dr. Tarun Arora, 13th National Youth Parliament Competition, 2016 on September 9, 2016 at City Campus, Mansa Road, Central University of Punjab, Bathinda, funded by the Ministry of Parliamentary Affairs.
2. Dr. Tarun Arora, 'National Unity Week' Programme was organized to commemorate the birth anniversary of S. Vallabh Bhai Patel on 31-10.2016 to 5-11.2016.
3. Dr. Tarun Arora, 'Unity in Diversity- Bharat Darshan' Programme on the occasion of eve of Foundation Day, 26 February 2017.
4. Dr. Puneet Pathak organized a Two-Day Awareness Programme about Women related Laws in SSD Girls College, Bathinda on 23th and 24th December 2016, Funded by National Commission for Women, New Delhi. (Trained Approx. 140 Participants, Target Group: Girls students & School teachers)
6. Dr. Puneet Pathak organized a Two-Day Awareness Programme about Women related Laws on 27 & 28 August 2016, Funded by National Commission for Women, New Delhi. (Trained Approx. 135 Participants, Target Group: Women Representatives of Panchayat, Bathinda)

Invited Lectures Delivered by the Faculty

1. Dr. Tarun Arora, Keynote Speech on 'Geographical Indications: International and National Perspectives with Special Reference to India' at UGC Sponsored National Workshop organized by University Law College, University of Rajasthan, Jaipur on 23 - 24 January, 2017.
2. Dr. Tarun Arora, Keynote Address on 'Roots of Law: Juridical Perspectives' in National Conference on 'The New Generation Laws' organized by University Institute of Legal Studies, Chandigarh University, Chandigarh on 25 February, 2017.
3. Dr. Tarun Arora, Key speech on 'Constitutional Aspects of Women Sensitization: Ground Realities and Opportunities' in Valedictory Session of National Seminar on 'Women Sensitization for Promising Solutions: A Strategy for Inclusive Growth' on 4 March, 2017.
4. Dr. Tarun Arora, as a Resource Person delivered 3 Lectures in Workshop of Moot Court Skills at Department of Law, Punjabi University, Patiala on March 15, 2017: Moot Court Basic Level, Moot Court Advance Level, Moot Court Applied Level
6. Dr. Tarun Arora, Chaired a Technical Session at National Seminar on 'Constitutional Aspects of Women Sensitization: Ground Realities and Opportunities' in Valedictory Session of National Seminar on 'Women Sensitization for Promising Solutions: A Strategy for Inclusive Growth' on 4 March, 2017.
6. Dr. Tarun Arora, Adjudicated 13th National Youth Parliament Competition of Jadhavpur University, Jadhavpur as Group coordinator appointed by Ministry of Parliamentary Affairs, dated 23 August, 2016.
7. Dr. Tarun Arora, Adjudicated 13th National Youth Parliament Competition of A.N.D College, Kalkajit, New Delhi as Group coordinator appointed by Ministry of Parliamentary Affairs, dated 2 September, 2016.
8. Dr. Tarun Arora, Adjudicated 13th National Youth Parliament Competition of B.P.S. Mahila Kalan Vishwavidyala, Khanpur Kalan District Sonapat as Group coordinator appointed by Ministry of Parliamentary Affairs, dated 23



August, 2016.

9. Dr. Tarun Arora, Adjudicated 13th National Youth Parliament Competition of Dr. B.R.Ambedkar College, Yamuna Vihar, Delhi as Group coordinator appointed by Ministry of Parliamentary Affairs, dated 5 September, 2016.
10. Dr. Tarun Arora, Adjudicated 13th National Youth Parliament Competition of Sir Choturam University of Science and Technology, Murthal, Sonapat as Group coordinator appointed by Ministry of Parliamentary Affairs, dated 10 September, 2016.
11. Dr. Tarun Arora, Adjudicated 13th National Youth Parliament Competition of MITS, Aurangabad as Group coordinator appointed by Ministry of Parliamentary Affairs, dated 12 September, 2016.
12. Dr. Tarun Arora, Adjudicated 13th National Youth Parliament Competition of Shivaji University, Kolhapur as Group coordinator appointed by Ministry of Parliamentary Affairs, dated 14 September 2016.
13. Dr. Puneet Pathak, delivered Special lecture in Guru Nanak College for Girls, Sri Muktsar Sahib on 12 April, 2016 on the topic "Women Related Laws and Gender Equality", organized by Women Anti-Harassment Cell, Guru Nanak College, Sri Muktsar Sahib, Punjab.
14. Dr. Puneet Pathak, delivered a Special lecture as Resource Person in Mahatma Gandhi State Institute of Public Administration on the topic "Human Rights of Other Vulnerable Group" in a training programme on Human Rights funded by NHRC on 26 September 2016.
15. Dr. Sukhwinder Kaur, Lecture delivered on "Human Right and disadvantage Group" for certificate course in human rights and duties (UGC: HRE Scheme) on 30th April, 2016 at Central University of Punjab, Bathinda

SCHOOL OF SOCIAL SCIENCES

Centre for Economic Studies

Established in the academic year 2011-12 under the ambit of the School of Social Sciences, the Centre for Economic Studies has been actively engaged in teaching and research activities. The Centre has been playing a unique role in the universe where the ethos of sciences, technology and management prevails. The Centre was established with a mission to enable young aspirants to understand and analyze the theoretical as well as empirical issues in various branches of Economics. The Centre specifically lays focus on various aspects of socio-economic development at regional, national and global levels to bring students face to face with real-life situations, and represent them as a future of dynamic world. Committed to innovative and quality-based research and teaching, the centre is in the process of expansion with more teaching and research programmes. The key assignment of the Centre is to offer educational opportunities to students in order to prepare them to become accomplished citizens, and professionals capable of critical thinking and independent analysis.

Vision: To be a globally networked leading Centre of Excellence in the Economic Sciences, impart value-loaded quality teaching, conduct world class quality research with the wider dissemination of the same, provide consultancy to industries and government, and address various socio-economic problems of region in particular and the nation in general.

Mission: To attain excellence in teaching and research in the areas of economic sciences thereby preparing professional leaders to think critically, read deeply, communicate effectively, and to address the emerging global challenges, and to deal with socio-economic-cultural-political realities.

Goals: The primary objectives of the Centre are:

- To offer quality education thereby maintaining the highest academic standard in line with the international standard of education.
- To offer core, applied, and interdisciplinary courses to meet local, regional, and national aspirations, and development needs of the globe.

Established in the academic year 2011-12 under the ambit of the School of Social Sciences, the Centre for Economic Studies has been actively engaged in teaching and research activities. The Centre has been playing a unique role in the universe where the ethos of sciences, technology and management prevails. The Centre was established with a mission to enable young aspirants to understand and analyze the theoretical as well as empirical issues in various branches of Economics. The Centre specifically lays focus on various aspects of socio-economic development at regional, national and global levels to bring students face to face with real-life situations, and represent them as a future of dynamic world. Committed to innovative and quality-based research and teaching, the centre is in the process of expansion with more teaching and research programmes. The key assignment of the Centre is to offer educational opportunities to students in order to prepare them to become accomplished citizens, and professionals capable of critical thinking and independent analysis.

vision: To be a globally networked leading Centre of Excellence in the Economic Sciences, impart value-loaded quality teaching, conduct world class quality research with the wider dissemination of the same, provide consultancy to industries and government, and address various socio-economic problems of region in particular and the nation in general.

Mission: To attain excellence in teaching and research in the areas of economic sciences thereby preparing professional leaders to think critically, read deeply, communicate effectively, and to address the emerging global challenges, and to deal with socio-economic-cultural-political realities.

Goals: The primary objectives of the Centre are:

- To offer quality education thereby maintaining the highest academic standard in line with the international

Dr. Pabitra Kumar Mishra
Associate Professor and Coordinator of the Centre

Area of Specialisation: Quantitative Economics and Development Economics;
Development Economics and Financial Economics.



Dr. Sandeep Kaur Bhatia
Assistant Professor

Area of Specialisation: International Economics, Environmental Degradation and
Political Economy.



Dr. Naresh Kumar Singla
Assistant Professor

Area of Specialisation: Agricultural Marketing, Agri-Business, Food Supply Chains etc.



Dr. Jainendra Kumar Verma
Assistant Professor

Area of Specialisation: Industrial Economics and Entrepreneurship.



Dr. Jajati Keshari Parida
Assistant Professor

Area of Specialisation: Migration, Employment, and Regional Development.





Papers Presented at National/International Conferences

1. Parida, J. K. (2017, 22 March) presented a paper titled "Migration and the Left behind Elderly in Kerala"
2. At the 2nd International Conference on Migration and Diasporas: Emerging Diversities and Development Challenges, New Delhi, India.
3. Parida, J. K. (2017, 22 March) presented a paper titled "The Good and the Bad in Emigration and Remittance flows: The Kerala Experience" at the 2nd International Conference on Migration and Diasporas: Emerging Diversities and Development Challenges, New Delhi, India.
4. Parida, J. K. (2016, 26 December) presented a paper titled "Economic Growth and Human Development in India: Are they causally connected?" at the 53rd Annual Conference of the Indian Econometric Society (TIES) held in the National Institute for Scientific and Educational research, Bhubaneswar.
5. Parida, J. K. (2016, 29 April) presented a paper titled "Employment Potentials of Migrant workers in Meghalaya: An empirical Exploration" at the Seminar, Labour Markets in Eastern Himalayas and North-East India: Changing patterns and Emerging Issues, organised by the Tata Institute of Social Sciences, Guwahati Campus, Assam, India.
6. Parida, J. K. (2017, April) delivered a lecture on Time Series Modelling (with E-views), GIRI Institute of Development Studies, Lucknow, UP, India.
7. Singla, N. (2017, 17 February) presented a paper titled "Impact of Liberalization and WTO on Agricultural Trade in India" at a UGC sponsored National Seminar on "Agricultural and Rural Diversification in Punjab" at GNDU, Amritsar.
8. Singla, N. (2017, 10 March) invited as Resource person in ICSSR sponsored National Seminar on 'Agrarian Crises and Farmers Distress in Punjab' DAV College, Bathinda.

Lectures/Workshops/Conferences Organised by the Centre

1. Dr. Sandeep Kaur organised a special lecture on 'Globalization, Demonetization and its Impact in India' by Prof. (Dr.) Paramjit Nanda, Professor & Head, Punjab School of Economics, Guru Nanak Dev University, Amritsar Punjab on 18 Jan 2017.
2. Dr. Sandeep Kaur organised two days ICSSR Sponsored National Seminar on "Brexit and India: Analysing the Implications" on 17-18 March 2017.

Centre for Sociology

The Centre for Sociology was established in the year 2015 with an objective to conduct teaching and research in interdisciplinary areas from a sociological perspective. The core thematic concern of the Centre includes local, national and global problems. Extending these issues the thrust will be on social structure and social stratification, rural and urban sociology, agrarian relationships, migration and Diaspora studies, social change in the context of development and modernisation, problems of the marginalized social groups such as the scheduled castes, the scheduled tribes, minorities and social movements. The centre also aims to excel in the emerging areas of studies like human rights, social justice, gender studies and social exclusion. The Centre will emphasize on training students in social science methodology and in the techniques of social research, both qualitative and quantitative. The centre also aims to provide consultancy services on demand in areas of social survey, community development, social intervention and policy framing. The Centre presently offers two programs which are Master of Arts in Sociology and Doctor of Philosophy.

Academic Programmes offered by the Centre

1. M.A. Sociology
2. Ph.D. Sociology

Faculty Members of the Centre as on 31.03.2017

Dr. Vinod Arya
Assistant Professor and Officiating-in-Charge

Specialization: Human Rights, Social Change and Social Exclusion.



Dr. Aditya Ranjan Kapoor:
Assistant Professor

Specialization: Sociology of Muslim communities, Sociology of Religion and Sociology of Everyday life.



Dr. Sumedha Dutta
Assistant Professor

Specialization: Political Sociology, Sociology of Development, Sociology of Religion and Sociological Theories.



Papers Presented at National/International Conferences

1. Arya, V. (2017, 16 March) presented a paper titled "Student Mobilization and University Campuses", in National Seminar on 'Public Sphere and Education: Possibilities and Challenges for the Educational Policy' at National University of Educational Planning and Administration, New Delhi.
2. Arya, V. (2017, 29 March) presented a paper titled "Constructing Ambedkarism Through Social Media: Dimensions and Discourses", in National Seminar on 'Modernity, Nation and Democracy in Contemporary India: Ambedkar's Vision' organized by Dr. Ambedkar Chair, Centre for the Study of Social Systems, School of Social Sciences, Jawaharlal Nehru University, New Delhi.
3. Arya, V. (2017, January) actively participated in the program 'Sarokar' by Rajya Sabha TV on the topic "Supreme Court verdict on Caste & Religion".
4. Arya, V. (2016, April) participated as panelist in the program Chadhte Suraj by Doordarshan Punjabi Channel on the topic "Babasaheb Dr. Ambedkar's Birth Anniversary".
5. Arya, V. (2016, 30 April) delivered a Guest lecture on the topic "Nature and Classification of Human Rights" in the Certificate Course in Human Rights and Duties (UGC: HRE Scheme) at Central University of Punjab, Bathinda.
6. Arya, V. (2016, 28 September) delivered a lecture on the topic "Understanding Bhagat Singh in the Contemporary Era" in a program organized by Central University of Punjab, Bathinda.
7. Dutta, S. (2017) presented a paper titled "Religious Associations as Civil Society? The Case of India", at Institute Fur Asien-und Afrikawissenschaften, Humboldt University, Berlin, Germany.
8. Dutta, S. (2017, 9 January) presented a paper titled "Beginning with Polanyi: Global Capitalism Vs. Civil Society Movements in Neo-liberal India" in an International Conference, *A Great Transformation? Global Perspectives on Contemporary Capitalisms*, at Johannes Kepler University, Linz, Austria.
9. Dutta, S. (2017) delivered an invited talk on "Religious Associations as Civil Society? The Case of India", at Institute Fur Asien-und Afrikawissenschaften, Humboldt University, Berlin, Germany.
10. Dutta, S. (2016, 27 December) presented a paper titled "Religion and Welfare in the Indian Scenario: A Study of Ramakrishna Mission and Salesians of Don Bosco" at the 42nd All India Sociological Conference, held at Tezpur University, Assam.
11. Dutta, S. (2016, 27 December) presented a paper titled "A double movement? Global Capitalism vs. Civil Society Movements in Neo-liberal India", at the 42nd All India Sociological Conference, held at Tezpur University, Assam.



12. Kapoor, A.R. (2017, 22 February) presented a paper titled "The Contestation Within: Reflections on Dalit-Muslim Political Alliance" in National Conference on Dr. B.R. Ambedkar's Perspective on State, Society and Economy at University of Hyderabad, Hyderabad.
13. Kapoor, A.R. (2016, 27 December) presented a paper titled "Religious: Methodological and Conceptual Challenges" in the 42nd All India Sociological Conference at Tezpur University, Assam.

RESEARCH ACTIVITIES, OUTCOME AND RESEARCH HIGHLIGHTS

Centre for Animal Sciences

The Centre for Animal Sciences which has been created recently, was originally a part of the Centre for Biosciences (Established in 2009). Is well-equipped with teaching and research laboratories. The Centre has vibrant and young faculty with national and international experience and expertise in frontier areas of basic and advanced research in animal biology. Faculty members cover wide areas of research specialisation from Neurosciences to Cancer Biology to Vascular Biology to Entomology. The quality of the faculty members is evidenced by their high impact publications. The research programs of the faculties are supported by Grants from National and International Funding Agencies accounting to an amount of more than Rs. 3 Crore.

Salient Research Highlights of the Centre

The Centre for Animal Sciences is involved in active research in the areas of Over-expression of a multifunctional enzyme APE1 enhanced neuronal cell survival via reduction in oxidative stress and protection of mitochondrial OXPHOS capacity (ATP production); Surveying lncRNAs associated with lung cancer, with particular focus on the functions that either facilitate or inhibit the progression of lung cancer and the pathways involved; AMN-department regulation of GnRH release could be involved in the pathophysiology of fertility and could hold therapeutic potential for treating PCOS; and Cloning, characterization and transmission

Research thrust areas

- 1) Neurosciences
- 2) Hormone-dependent development and plasticity of the adult brain
- 3) DNA damage and repair
- 4) Cancer Biology
- 5) Basic and molecular entomology
- 6) Insect vectors of human diseases
- 7) Detection & Identification of Potential Biomarkers from Cancer and Cardiovascular diseases
- 8) Vascular Biology

Publications

1. Bhakat, K. K., Sengupta, S., Adeniyi, V. F., Roychoudhury, S., Nath, S., Bellot, L. J. ... Luxon, B. A. (2016). Regulation of limited N-terminal proteolysis of APE1 in tumor via acetylation and its role in cell proliferation. *Oncotarget*, 7(16), 22590–22604. <https://doi.org/10.18632/oncotarget.8026>
2. Chaitanya, R. K., Shashank, K., & Sridevi, P. (2016). Oxidative Stress in Invertebrate Systems. In R. Ahmad (Ed.), *Free Radicals and Diseases*. InTech. <https://doi.org/10.5772/64573>
3. Gill, I., Kaur, S., Kaur, N., Dhiman, M., & Mantha, A. K. (2017). Phytochemical Ginkgolide B Attenuates Amyloid β 1-42 Induced Oxidative Damage and Altered Cellular Responses in Human Neuroblastoma SH-SY5Y Cells. *Journal of Alzheimer's disease*, 60(s1), S25–S40. <https://doi.org/10.3233/JAD-161086>

4. Hegde, M. L., Dutta, A., Yang, C., Mantha, A. K., Hegde, P. M., Pandey, A., Mitra, S. (2016). Scaffold attachment factor A (SAF-A) and Ku temporally regulate repair of radiation-induced clustered genome lesions. *Oncotarget*, 7(34), 54430–54444. <https://doi.org/10.18632/oncotarget.9914>
5. Jongbloets, B. C., Lemstra, S., Schellino, R., Broekhoven, M. H., Parkash, J., Hellemons, A. J. C. G. M., ... Pasterkamp, R. J. (2017). Stage-specific functions of Semaphorin7A during adult hippocampal neurogenesis rely on distinct receptors. *Nature Communications*, 8, 14666. <https://doi.org/10.1038/ncomms14666>
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8. Kumar, S., & Chaitanya, RK. (2016). Antioxidants as hope to future therapeutic agent. In *Antioxidants in health and disease prevention*. Anubhav Publishing House.
9. Kushwaha, P. P., Rapalli, K. C., & Kumar, S. (2016). Geminin a multi task protein involved in cancer pathophysiology and developmental process: A review. *Biochimie*, 131, 115–127. <https://doi.org/10.1016/j.biochi.2016.09.022>
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11. Mittal, S., Kaur, H., Gautam, N., & Mantha, A. K. (2017). Biosensors for breast cancer diagnosis: A review of bioreceptors, biotransducers and signal amplification strategies. *Biosensors and Bioelectronics*, 88, 217–231. <https://doi.org/10.1016/j.bios.2016.08.028>
12. Rao, V. V., Ningshen, T. J., Chaitanya, R. K., Senthilkumaran, B., & Dutta-Gupta, A. (2016). Cloning and characterization of a riboflavin-binding hexamerin from the larval fat body of a lepidopteran stored grain pest, *Corcyra cephalonica*. *Comparative Biochemistry and Physiology. Part B, Biochemistry & Molecular Biology*, 194–195, 58–64. <https://doi.org/10.1016/j.cbpb.2016.01.008>
13. Sarkar, B., Kulharia, M., & Mantha, A. K. (2017). Understanding human thiol dioxygenase enzymes: structure to function, and biology to pathology. *International Journal of Experimental Pathology*, 98(2), 52–66. <https://doi.org/10.1111/iep.12222>
14. Vij, A., Randhawa, R., Parkash, J., & Changotra, H. (2016). Investigating regulatory signatures of human autophagy related gene 5 (ATG5) through functional in silico analysis. *Meta Gene*, 9, 237–248. <https://doi.org/10.1016/j.mgene.2016.07.012>
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Research Projects Funded by Outside Agencies, Operational in the Centre

1. Dr. Jyoti Prakash: Neural-glial-endothelial tripartite interactions: Unravel the basic cell-cell regulatory mechanisms involved in the central control of reproduction. SERB-DST, Rs. 43.15 Lakhs (2017-2019).
2. Dr. Jyoti Prakash: Role for Semaphorins and its Receptors in the Control of Sexual Brain Development and Adult Brain Plasticity. UGC, Rs. 10 Lakhs (2016-2018).
3. Dr. Krishna R. Chaitanya: Elucidation of the role of midgut peritrophins during malaria parasite transmission in the vector, *Anopheles stephensi*. Basic Research Grant. UGC, Rs. 10 Lakhs (2016-2018).

Centre for Biochemistry and Microbial Sciences

Salient Research Highlights of the Centre

The Centre has internationally trained faculty with extensive research experience. One of the main focuses of the research is understanding molecular mechanisms of cancer. We are currently studying specific biomacromolecules involved in regulating cancer. Another main focus of the research is to understand immunological responses induced by inflammation and human pathogens. The studies on chemotherapy drug induced toxicity and various associated signalling mechanisms are also undergoing which will be of high benefit to the society. The research is funded mainly by agencies such as DST and DBT.

Areas of Research

1. Signaling pathways during inflammation and oxidative stress in various human diseases
2. Mechanism involved in the chemotherapeutic drugs induced toxicity
3. Understanding immuno-biology of clinically relevant diseases associated with an abnormal T cell effector immune response
4. Molecular and Cellular Biology of Gastro-intestinal Cancer
5. Development of novel plant natural products as anti-cancer drugs
6. Plant growth promoting bacteria and their role in enhancing biomass, heavy metal remediation and soil health
7. Synthetic System Biology and Bioprocess Engineering

Publications

1. Dhawi, F., Datta, R., & Ramakrishna, W. (2016). Mycorrhiza and heavy metal resistant bacteria enhance growth, nutrient uptake and alter metabolic profile of sorghum grown in marginal soil. *Chemosphere*, 157, 33–41. <https://doi.org/10.1016/j.chemosphere.2016.04.112>
2. Dhawi, F., Datta, R., & Ramakrishna, W. (2017). Proteomics provides insights into biological pathways altered by plant growth promoting bacteria and arbuscular mycorrhiza in sorghum grown in marginal soil. *Biochimica et Biophysica Acta*, 1865(2), 243–251. <https://doi.org/10.1016/j.bbapap.2016.11.015>
3. Gill, I., Kaur, S., Kaur, N., Dhiman, M., & Mantha, A. K. (2017). Phytochemical Ginkgolide B Attenuates Amyloid β 1-42 Induced Oxidative Damage and Altered Cellular Responses in Human Neuroblastoma SH-SY5Y Cells. *Journal of Alzheimer's disease*, 60(s1), S25–S40. <https://doi.org/10.3233/JAD-161086>
4. Kaur, N., Sarkar, B., Gill, I., Kaur, S., Mittal, S., Dhiman, M., Mantha, A. K. (2017). Indian Herbs and their Therapeutic Potential against Alzheimer's disease and Other Neurological Disorders. In T. Farooqui & A. A. Farooqui (Eds.), *Neuroprotective Effects of Phytochemicals in Neurological Disorders* (pp. 79–112). John Wiley & Sons, Inc. <https://doi.org/10.1002/9781119155195.ch4>
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6. Mondeel, T. D. G. A., Rehman, S., Zhang, Y., Verma, M., Dürre, P., Barberis, M., & Westerhoff, H. V. (2016). Maps for when the living gets tough: Maneuvering through a hostile energy landscape. *IFAC-PapersOnLine*, 49(26), 364–370. <https://doi.org/10.1016/j.ifacol.2017.03.002>
7. Rahman, N., Dhadi, S. R., Deshpande, A., & Ramakrishna, W. (2016). Rice callus suspension culture inhibits growth of cell lines of multiple cancer types and induces apoptosis in lung cancer cell line. *BMC Complementary and Alternative Medicine*, 16(1). <https://doi.org/10.1186/s12906-016-1423-3>
8. Ramakrishna, W., & Kumari, A. (2017). Plant Tolerance to Combined Stress: An Overview. In *Plant Tolerance to Individual and Concurrent Stresses* (pp. 83–90). Springer, New Delhi. https://doi.org/10.1007/978-81-322-3706-8_6
9. Sawaya, M. R., Verma, M., Balendiran, V., Rath, N. P., Cascio, D., & Balendiran, G. K. (2016). Characterization of WY 14,643 and its Complex with Aldose Reductase. *Scientific Reports*, 6. <https://doi.org/10.1038/srep34394>
10. Tripathi, C. D. P., Kushawaha, P. K., Sangwan, R. S., Mandal, C., Misra-Bhattacharya, S., & Dube, A. (2017)

Withania somnifera chemotype NMITLI 101R significantly increases the efficacy of antileishmanial drugs by generating strong IFN- γ and IL-12 mediated immune responses in *Leishmania donovani* infected hamsters. *Phytomedicine*, 24, 07–09. <https://doi.org/10.1016/j.phymed.2016.11.012>

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12. Kumar S, Hussain SR, Waseem M, Mahdi F, Bansal C, Ahmad MK. (2016) D allele frequency in insertion/deletion polymorphism of the angiotensin converting enzyme (ACE) gene is associated with development of breast cancer risk in Indian women. *Current Proteomics*, 13:4.
13. Waseem M, Hussain SR, Kumar S, Serajuddin S, Mahdi F, Sonkar KS, Bansal C, Ahmad AK. (2016) Association of *MTHFR* (C677T) gene polymorphism with breast cancer in north india. *Biomarkers in Cancer*, 8:111-117. doi:10.4137/BIC.S40446. (PMCID PMC5040218)
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16. Kumar S. (2016) Biological/Biosimilar Drugs: A new hope for better and low cost treatment. *JOJ Case Stud*, 1(3) : 555563.
17. Kumar S. (2016) Geminin as an emerging anticancer drug target. *JOJ Case Stud*, 1(1) : 555554.
18. Kumar S. (2016) Novel Wnt and Notch signaling natural inhibitors as double edged sword against cancer war: an approach towards computer based drug design. *Cancer Therapy & Oncology*, 1(4): 555570. DOI: 10.19080/CTOIJ.2016.01.555570
19. Kumar S and Chaitanya RK (2016). Antioxidants as hope to future therapeutic agents. *In: Role of antioxidants in health and disease prevention*. Agrawal B and Pandey A. (Ed.). Anubhav Publishing House, Allahabad, 211006. 27-33. ISBN:978-93-80134-75-8.
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21. Kumar S and Chaitanya RK (2016). Antioxidants as hope to future therapeutic agents. *In: Role of antioxidants in health and disease prevention*. Agrawal B and Pandey A. (Ed.). Anubhav Publishing House, Allahabad, 211006. 27-33. ISBN:978-93-80134-75-8.
22. Singh P, Bast F, Kumar S and Saini KC. (2017). Influence of insulin and metformin on prostate cancer, *In: Horizons of Cancer Research*. Hiroto S. Watanabe (Ed). Nova Science Publishers, Inc, USA. Pp 183-193. Vol (64). ISBN: 978-1-53610-512-4.
23. Singh P, Bast F, Kumar S and Kundu P. (2017). Health promoting activity of myricetin: A natural flavonoid, *In: Horizons of Cancer Research*. Hiroto S. Watanabe (Ed). Nova Science Publishers, Inc, USA. Pp 1-11. Vol (65). ISBN: 978-1-53610-944-3.
24. Singh P, Kumar S and Bast F. (2017). Natural compounds are smart players in context to anticancer potential of receptor tyrosine kinases: An *in silico* and *in vitro* advancement, *In: Translational bioinformatics and its application*. Dong-Qing Wei, Yilong Ma, William C.S. Cho Qin Xu and Fengfeng Zhou (Eds). Shanghai JIAO Tong University Press, Springer, Pp. 177-202. DOI: 10.1007/978-94-024-1045-7_8.
25. Kushwaha P.P., & Kumar S. (2017). Advances in Biochemistry of Medicinal Plants. *In: Biochemistry and Therapeutic Uses of Medicinal Plants*. Abbas Ali Mahdi, Y. K. Sharma, Murtaza Abid & M.M Abid Ali Khan (Ed.). Discovery Publishing House Pvt. Ltd., New Delhi, India. Pp. 41-54. ISBN: 978-93-5056-866-8.
26. Kushwaha P.P., Neog P.R., & Kumar S. (2017). Phytochemical and pharmacological profile of *Kanchnar guggulu*:



- A polyherbal formulation. In: *Phytochemistry and Pharmacology of Medicinal Herbs*. Abbas Ali Mahdi, Murtaza Abid & M.M Abid Ali Khan (Ed.). Lenin Media Private Limited, Delhi, India. Pp. 166-204. ISBN: 978-93-85995-46-0.
27. Kushwaha P.P., Singh P., & Kumar S. (2017). Phytochemical and pharmacological profile of Sanjivani Vati A polyherbal formulation. In: *Phytochemistry and Pharmacology of Medicinal Herbs*. Abbas Ali Mahdi, Murtaza Abid & M.M Abid Ali Khan (Ed.). Lenin Media Private Limited, Delhi, India. Pp. 205-243. ISBN: 978-93-85995-46-0.
 28. Kushwaha PP, Kumar A and Kumar S. Pharmacological and phytochemical profile of Divya Sarvakalp Kwath: An ayurvedic product, In: *Phytochemistry and Pharmacology of Medicinal Herbs*. Mahdi AA, Abid M and Khan MMAA (Eds.), ISBN: 978-93-85995-46-0, pp. 105-1024, 2017.
 29. Kumar S, Behra MR and Kushwaha PP. Phytochemical and pharmacological profile of Shakti immune drop: A polyherbal formulation, In: *Phytochemistry and Pharmacology of Medicinal Herbs*. Mahdi AA, Abid M and Khan MMAA (Eds.), ISBN: 978-93-85995-46-0, pp. 125-165, 2017.
 30. Sharma AK, Tripathi MK and Kumar S. Multidimensional efficacy of *Asparagus racemosus* Wild: A Medicinal Herb, In: *Phytochemistry and Pharmacology of Medicinal Herbs*. Mahdi AA, Abid M and Khan MMAA (Eds.), ISBN: 978-93-85995-46-0, pp. 244-270, 2017.
 31. Kumar S, Waseem M, Sharma AK and Pandey AK. *Serenoa repens* Hook f. and *Prunus domestica* L.: Medicinal plant used in the management of prostate cancer, In: *Phytochemistry and Pharmacology of Medicinal Herbs*. Mahdi AA, Abid M and Khan MMAA (Eds.), ISBN: 978-93-85995-46-0, pp. 285-306, 2017.

Research Projects Funded by Outside Agencies, Operational in the Centre

1. Somesh Baranwal: Role of Integrin binding protein, kindlin in colon cancer progression. Department of Biotechnology, Rs. 88 Lakhs (2015-2020).
2. Somesh Baranwal: Role of Nischarin in regulation of intestinal apical epithelial junction. Department of Science and Technology, Rs. 50 Lakhs (2017-2020).
3. Somesh Baranwal: Identification and characterization of functional significance of gastric cancer stem cells UGC-FRP Scheme, Rs. 10 Lakhs (2017-2019).
4. Pramod Kushawaha: Functional characterization of the guanylate binding proteins- interferon- γ - inducible 65 KD GTPases in host immune response to Leishmania pathogenesis. DST INSPIRE, Rs. 35 Lakhs (2014-2019).
5. Monisha Dhiman: Chemotherapeutic Drug Induced Cardiomyocyte Toxicity: Evaluation of Ethno-Botanical Plants to Minimize the Cardiac Damage. DST Fast Track, Rs. 21.6 Lakhs (2013-2017).
6. Shashank Kumar: Effect of *Withania somnifera* phytoconstituents on miRNA expression profile in breast cells. Therapeutic and Cytoprotective role. DST New Delhi, Rs. 50 Lakhs (2017-2021).
7. Shashank Kumar: Identification and validation of novel notch signaling pathway inhibitors as potential anticancer agents of natural origin. UGC, Rs. 10 Lakhs (2017-2019).
8. Manju Jain: Investigating the role of thymus in mediating host immune- modulation in Visceral Leishmaniasis. DST-SERB Fast Track, Rs. 30.3 Lakhs (2014-2017).

Centre for Chemical Sciences

Salient Research Highlights of the Centre

The faculty members in the Centre for Chemical Sciences are involved in quality research work in the following areas of Chemical Sciences:

1. Bioinorganic Chemistry and Health Sciences:

Serum transferrin (Tf) is a blood plasma protein that controls iron levels in body fluids, thereby protecting against iron catalyzed free radical formation that causes cancer, arthritis, liver, and heart diseases. Tf is primary responsible to transport and distribution of iron from gut to the bone marrow and other tissues for the synthesis of hemoglobin and other



iron containing proteins. Abnormal level of Tf in blood can cause anemia, hemosiderosis (iron deposition in heart and liver) and heart failure. Increased level of non transfer in bound iron in blood can also cause the iron overloaded diseases (hemo-chromatosis and β -thalassaemia) in the diabetic patients but the molecular mechanism involving iron toxicity in diabetic patients is not fully understood. Tf is the target of chelation therapy used to treat individuals with iron overload diseases such as thalassaemia and hemo-chromatosis. Tf is therefore important for the human health and to cure disease. To augment our understanding of iron delivery at target sites in health and disease and to understand the link between diabetes and iron metabolic disorder diseases, we are investigating the mechanism of iron release from holo Tf at cellular pH conditions under a highly crowded cellular environment and glycaemic conditions identical to those found in diabetic patients (blood plasma glucose level > 10 mM).

1. Green Chemistry and Catalysis

The development of new and benign strategies for the construction of biologically and industrially important molecules is an important pursuit from the viewpoint of *Sustainable Chemistry*. In this context, we are focussing on the utilization of various tools of Green Chemistry such as Ionic Liquids, Microwave-Assisted Organic synthesis, tandem/Multicomponent systems, value addition of renewable precursors etc. We are also exploring C-H bond activation strategies for the direct functionalization of diverse heterocycles which are central to the discovery of compounds with novel or improved pharmacological properties.

2. Inorganic Nanomaterial Chemistry

Developmental strategies for the rational synthesis of new metal semiconductor multifunctional nanomaterials including the quantum regime. These nanomaterials can be used in new technologies with the potential to address critical social needs such as better tools for disease diagnosis and treatment and platforms for sustainable energy.

3. Inorganic and Organometallic Chemistry

The center also focuses on the field of metal hydrides and their applications in hydrogenation, hydrogen storage, H_2 evolution with solar energy, water splitting, superatom nanoclusters etc., besides synthesis of novel boranes, catalatoranes, and metallaheteroboranes.

4. Environmental and Supramolecular Chemistry

Resolution of local environmental issues through innovative research in the field of environmental monitoring, drinking water treatment technologies and designing of novel chemosensors for environmental organic analytes. nZVI immobilized on various organic and inorganic immobilizers namely, Cellulose, Fuller's Earth and Activated Charcoal investigated for heavy metal (Cr (VI) and As (III & V)) adsorption efficiency and mechanism. Selective detection of toluene in presence of other Polynuclear aromatic hydrocarbons (PAH) achieved with detection limit of 1 nM (Published)

5. Soil Arsenic Adsorption and Transport Behaviour in Bathinda Distt.: There are elevated levels of arsenic in the soil samples from Goniana region (mean 9.58 mg kg⁻¹) as compared to Talwandi Sabo block (mean 3.38 mg kg⁻¹). Statistical analysis of the soil arsenic content and its adsorption strongly correlated with soil physicochemical parameters, namely, Mn, Fe, total/available phosphorus, and organic matter.

Publications

1. Devan, R. S., Ma, Y.-R., More, M. A., Khare, R. T., Antad, V. V., Patil, R. A., Schmidt-Mende, L. (2016). Promising field electron emission performance of vertically aligned one dimensional (1D) brookite (β) TiO₂ nanorods. *RSC Advances*, 6(101), 98722–98729. <https://doi.org/10.1039/C6RA20747B>
2. Dhayal, R. S., Lin, Y.-R., Liao, J.-H., Chen, Y.-J., Liu, Y.-C., Chiang, M.-H., Liu, C. W. (2016). [Ag₂₀{S₂P(OR)₂}₁₂]: A Superatom Complex with a Chiral Metallic Core and High Potential for Isomerism. *Chemistry - A European Journal*, 22(29), 9943–9947. <https://doi.org/10.1002/chem.201602275>



3. Dhayal, R. S., van Zyl, W. E., & Liu, C. W. (2016). Polyhydrido Copper Clusters: Synthetic Advances, Structural Diversity, and Nanocluster-to-Nanoparticle Conversion. *Accounts of Chemical Research*, 49(1), 86–95. <https://doi.org/10.1021/acs.accounts.5b00375>
4. Haldar, K. K., Muley, V. Y., Datar, S., & Patra, A. (2017). Structural and electronic investigation of metal semiconductor hybrid tetrapod hetero-structures. *Gold Bulletin*, 50(2), 105–110. <https://doi.org/10.1007/s13404-017-0198-8>
5. Haldar, K. K., & Sen, T. (2016). Shell thickness matters! Energy transfer and rectification study of Au/ZnO core/shell nanoparticles. *Journal of Colloid and Interface Science*, 484, 263–269. <https://doi.org/10.1016/j.jcis.2016.09.006>
6. Kumar, B., Kumar, R., Skvortsova, I., & Kumar, V. (2017). Mechanisms of Tubulin Binding Ligands to Target Cancer Cells: Updates on their Therapeutic Potential and Clinical Trials. *Current Cancer Drug Targets*, 17(4), 357–375. <https://doi.org/10.2174/1568009616666160928110818>
7. Kumar, R. (2016). Analysis of the pH-dependent thermodynamic stability, local motions, and microsecond folding kinetics of carbonmonoxycytochrome c. *Archives of Biochemistry and Biophysics*, 606, 16–25. <https://doi.org/10.1016/j.abb.2016.07.010>
8. Kumar, R., Arora, M., Jain, A. K., & Babu, J. N. (2017). 1,3-Bis(cyanomethoxy)calix[4]arene capped CdSe quantum dots for the fluorogenic sensing of fluorene. *RSC Advances*, 7(23), 14015–14020. <https://doi.org/10.1039/C7RA00596B>
9. Sreeramulu, V., Haldar, K. K., Patra, A., & Rao, D. N. (2014). Nonlinear Optical Switching and Enhanced Nonlinear Optical Response of Au–CdSe Heteronanostructures. *The Journal of Physical Chemistry C*, 118(5), 30333–30341. <https://doi.org/10.1021/jp5118739>

Research Projects Funded by Outside Agencies, Operational in the Centre

1. Dr. Rajesh Kumar: The mechanism of reductive release of iron from serum transferrin. ICMR, Rs. 40 Lakhs (2015-2018).
2. Dr. Rajesh Kumar: Kinetic and Thermodynamic Studies of the Effects of Synergistic and Nonsynergistic Anions on Blood Plasma Transferrin. DST-SERB, Rs. 53 Lakhs (2015-2018).
3. Dr. Rajesh Kumar: The Role of Macromolecular Crowding on Structure, Function, Stability and Folding of Serum Transferrin. DBT, Rs. 25 Lakhs (2016-2018).
4. Dr. Rajesh Kumar: Direct C-H bond functionalization of heteroarenes via dehydrative and dehydrogenative coupling strategies. DST, Rs. 16.59 Lakhs (2014-2017).
5. Dr. Rajendra Singh Dayal: Nanosized Copper polyhydrides and H₂ evolution under Solar energy. DST-SERB, Rs. 27.4 Lakhs (2016-2019).
6. Dr. Rajendra Singh Dayal: Ligand exchange to develop nanoclusters. UGC, Rs. 10 Lakhs (2016-2017).
7. Dr. Rajendra Singh Dayal: Role of boron passivated 1D NiO in energy storage applications. UGC-DAE-CSR, Rs. 13.08 Lakhs (2017-2020).
8. Dr. Krishna Kanta Haldar: Interfacial Charge Carrier Dynamics in Metal-semiconductor Heterostructure. UGC, Rs. 10 Lakhs (2016-2018).

Centre for Computational Sciences

Salient Research Highlights of the Centre

1. Full-dimensional quantum dynamics of small systems
2. QM/MM mixed dynamics
3. Surface-molecule scattering
4. Ground and excited state electronic structure studies of organic and inorganic molecules
5. Rational design of small molecules targeting Factor VIII and membrane interaction for novel treatment of thrombosis.

6. Design of novel ligands to modulate Frizzled-Wingless interaction.
7. Small molecule design for disrupting Traf6-CD40 interaction.
8. Study of FactorVIII and membrane interaction by molecular dynamics simulation.
9. Elucidation of mechanism of GPBP and SAP interaction.
10. Polarizable and Fixed charge force field development
11. Capacitive energy storage by ionic liquids in nanoporous electrodes
12. Graphene based membranes for molecular separation
13. Protein (G Protein-Coupled Receptor), Membrane, and Drug Modeling
14. CPU-GPU Hybrid Computing

Publications

Solvent-free synthesis of 5-(aryl/alkyl) amino-1, 2, 4-triazines and α -arylamino-2, 2'-bipyridines with greener prospects

1. Dmitry S Kopchuk, Nikolay V Chepchugov, Igor S Kovalev, Sougata Santra, Matiur Rahman, Kousik Giri, Grigory V Zyryanov, Adinath Majee, Valery N Charushin, Oleg N Chupakhin, 2017 Journal RSC Advances
Extended cavity pyrene-based iptycenes for the turn-off fluorescence detection of RDX and common nitroaromatic explosives
2. Valery N. Charushin^{ab} and Oleg N. Chupakhin^{ab} Albert F. Khasanov,^a Dmitry S. Kopchuk,^{ab} Igor S. Kovalev,^a Olga S. Taniya,^a Kousik Giri,^c Pavel A. Slepukhin,^{ab} Sougata Santra,^{*a} Matiur Rahman,^a Adinath Majee, 2017/2/6 Journal New J. Chem
—Azaanthracenes via Inverse Electron-Demand DielsAlder Reaction
3. DS Kopchuk, NV Chepchugov, OS Taniya, AF Khasanov, K Giri, IS Kovalev, S Santra, GV Zyryanov, A Majee, VL Rusinov, ON Chupakhin, 2017/2
Solvent-free synthesis of (poly) thiacalix [n] arenes: the evaluation of possible mechanism based on semi-preparative HPLC separation and mass-spectrometric investigation of the reaction products
4. Igor S Kovalev, Matiur Rahman, Leila K Sadiava, Dmitry E Pavlyuk, Kousik Giri, Sougata Santra, Dmitry S Kopchuk, Grigory V Zyryanov, Adinath Majee, Oleg N Chupakhin, Valery N Charushina 2017 Journal Organic Chemistry
5. Rational design of drug-like compounds targeting *Mycobacterium marinum* Melf protein Renu Dharra, Sakshi Talwar, Yogesh Singh, Rani Gupta, Jeffrey D. Cirillo, Amit K. Pandey, Mahesh Kulharia , Promod K. Mehta, Published: September 5, 2017
Antioxidant, Xanthine Oxidase and Monoamine Oxidase Inhibitory Potential of Coumarins: A Review
6. Priyanka Dhiman, Neelam Malik, Anurag Khatkar, Mahesh Kulharia Current Organic Chemistry 2017/2/1
Understanding human thiol dioxygenase enzymes: structure to function, and biology to pathology
7. Bsarkar, Mahesh Kulharia, AK Mantha - International Journal of 2017 - Wiley Online Library
8. Confined Water: Structure, Dynamics and Thermodynamics S. Chakraborty, Hemant Kumar, C. Dasgupta, and P. K. Maiti, Acc. Chem. Res. 2017, 50, 2139.

Research Projects Funded by Outside Agencies, Operational in the Centre

1. Koushik Giri: DST & UGC, Rs. 26,00,000/-
2. Mahesh Kulharia: DBT, Rs. 42,15,000/-
3. Sudip Chakraborty: DST, Rs. 30,00,000/-

Centre for Mathematics and Statistics

Ballent Research Highlights of the Centre

The Centre for Mathematics & Statistics is actively engaged in research. The Centre offers facilities for intensive training and research in the basic areas of Mathematics (including Applied Mathematics) and Statistics. Research interests in mathematics include numerical analysis, partial differential equations, mathematical biology, mathematical physics, mechanics, etc. Research interests in statistics include regression models, sampling design, and design of experiments.

Research Highlights

1. To solve scientific problems representing some real physical phenomena from ocean engineering, plasma physics, optics, general relativity, etc.
2. Study of first-order hyperbolic systems of partial differential equations used in traffic and nozzle flow, geophysics, asteroid impacts, etc.
3. Finsler and Lagrange's metrics having applications in general relativity, superstring theory and also suitable to describe some biological models like protein structure, coral reef ecology, etc.
4. Estimation of parameters of future lifetime distributions helps insurance companies in their business.
5. Study the connections of copulas to regression models and their applications in real life data.

Publications

1. Baby, S. A., & Shanker, G. (2016). On Randers-conformal change of Finsler space with special (α, β) metrics. *International Journal of Contemporary Mathematical Sciences*, 11, 415–423. <https://doi.org/10.12988/ijcms.2016.6846>
2. Gauree Shanker, & Sruthy Asha Baby. (2016). On the Riemannian and Ricci Curvature of Finsler spaces with a special α -metric. *International Journal of Mathematical Combinatorics*, 4, 61–69.
3. Gupta, R. K., & Singh, M. (2017a). Nonclassical symmetries and similarity solutions of variable coefficient coupled KdV system using compatibility method. *Nonlinear Dynamics*, 87(3), 1543–1552. <https://doi.org/10.1007/s11071-016-3132-3>
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7. Savescu, M., Kara, A. H., Kumar, S., Krishnan, E. V., Zaka Ullah, M., Moshokoa, S. P., Biswas, A. (2017). Embedded Solitons and Conservation Law with $\chi^{(2)}$ and $\chi^{(3)}$ Nonlinear Susceptibilities. *Acta Physica Polonica A*, 131(1), 297–303. <https://doi.org/10.12693/APhysPolA.131.297>
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17. Singla, K., & Gupta, R. K. (2017c). On invariant analysis of space-time fractional nonlinear systems of partial differential equations. II. *Journal of Mathematical Physics*, 58(5), 051503. <https://doi.org/10.1063/1.4982804>
18. Singla, K., & Gupta, R. K. (2017d). Space–time fractional nonlinear partial differential equations: symmetry analysis and conservation laws. *Nonlinear Dynamics*, 89(1), 321–331. <https://doi.org/10.1007/s11071-017-3456-7>

Research Projects Funded by Outside Agencies, Operational in the Centre

1. Dr. Rajesh Kumar Gupta: Applications of Group Theoretic Techniques to Some Nonlinear Systems from Mathematical Physics. Council for Scientific and Industrial Research (CSIR), New Delhi, Rs. 16.96 Lakhs (2016-2019).
2. Dr. Rajesh Kumar Gupta: Lie Symmetry Analysis and Exact Solutions of Some Einstein Field Equations. National Board of Higher Mathematics (NBHM), Department of Atomic Energy, Mumbai, Rs. 14.14 Lakhs (2016-2019).

Centre for Pharmaceutical Sciences and Natural Products

Salient Research Highlights of the Centre

The center is currently engaged in developing small novel dual inhibitors as anticancer agents pertaining to inhibit Epidermal Growth Factor Receptors, Histone Deacetylases and Topoisomerase 1 and 2 which are most frequently overexpressed in many forms of cancers. Further studies on small molecule heterocyclics as novel potential drug candidates and hybrid/multi-targeted pharmacophoric drug approaches to withhold the issue of resistance emergence in DNA damaging chemotherapy, project studies of design and development of DNA repair enzyme inhibitors are also carried out. The center is also working on the synthesis of small molecules using green chemistry approach and also on the designing of the small molecule for Colchicine binding sites. In spite of working in the field of cancer, it is also working on development of small molecule for Alzheimer and other neurodegenerative diseases by targeting the monoamine oxidase inhibitors. Diabetes mellitus is the most prevalent disease around the world; the center focuses on the development of synthetic sugar substitute inspired from nature. Centre is also working on the chemical investigation of novel anticancer/anti-diabetic secondary metabolites from natural resources. In short center is poised to meet the challenges and demand for world class medicinal chemist to carry out the drug design and discovery. The programmes in medicinal chemistry have been initiated to increase capacity building and to produce innovative medicinal chemists with modern broad based knowledge. Presently research is being carried out in discovery of anticancer, antidiabetic and antigout agents utilizing natural products or synthetic and/or semi-synthetic approaches.

Publications

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3. Cholia, R. P., Kumari, S., Kumar, S., Kaur, M., Kaur, M., Kumar, R., Mantha, A. K. (2017). An in vitro study ascertaining the role of H₂O₂ and glucose oxidase in modulation of antioxidant potential and cancer cell survival mechanisms in glioblastoma U-87 MG cells. *Metabolic Brain Disease*. <https://doi.org/10.1007/s11011-017-0057-6>
4. Dandriyal, J., Singla, R., Kumar, M., & Jaitak, V. (2016). Recent developments of C-4 substituted coumarin



- derivatives as anticancer agents. *European Journal of Medicinal Chemistry*, 119, 141–168. <https://doi.org/10.1016/j.ejmech.2016.03.087>
5. Darpan, Joshi, G., Amrutkar, S. M., Baviskar, A. T., Kler, H., Singh, S., Kumar, R. (2016). Synthesis and biological evaluation of new 2, 5-dimethylthiophene/furan based N-acetyl pyrazolines as selective topoisomerase II inhibitors. *RSC Advances*, 6(18), 14880–14892. <https://doi.org/10.1039/C5RA25705K>
 6. Deep, A., Kumar, P., Narasimhan, B., Lim, S. M., Ramasamy, K., Mishra, R. K., & Mani, V. (2016). 2-Azetidinone Derivatives: Synthesis, Antimicrobial, Anticancer Evaluation and Gsar Studies. *Acta Poloniae Pharmaceutica*, 73(1), 65–78.
 7. Deep, A., Kumar, P., Narasimhan, B., Ramasamy, K., Lim, S. M., Mani, V., & Mishra, R. K. (2016). Synthesis, antimicrobial, anticancer evaluation and QSAR studies of thiazolidin-4-one derivatives. *Acta Poloniae Pharmaceutica - Drug Research*, 73(1), 93–106.
 8. Gill, B. S., Sharma, P., Kumar, R., & Kumar, S. (2016). Misconstrued versatility of *Ganoderma lucidum*: a key player in multi-targeted cellular signaling. *Tumour Biology: The Journal of the International Society for Oncodevelopmental Biology and Medicine*, 37(3), 2789–2804. <https://doi.org/10.1007/s13277-015-4709-z>
 9. Joshi, G., Nayyar, H., Kalra, S., Sharma, P., Munshi, A., Singh, S., & Kumar, R. (n.d.). Pyrimidine containing epidermal growth factor receptor kinase inhibitors: Synthesis and biological evaluation. *Chemical Biology & Drug Design*, n/a-n/a. <https://doi.org/10.1111/cbdd.13027>
 10. Kaur, R., Kumar, B., Ranjan Dwivedi, A., & Kumar, V. (2016). Regioselective alkylation of 1, 2, 4-triazole using ionic liquids under microwave conditions. *Green Processing and Synthesis*, 5. <https://doi.org/10.1515/gps-2015-0138>
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 18. Selvam, C., Thilagavathi, R., Narasimhan, B., Kumar, P., Jordan, B. C., & Ranganna, K. (2016). Computer-aided design of negative allosteric modulators of metabotropic glutamate receptor 5 (mGluR5): Comparative molecular field analysis of aryl ether derivatives. *Bioorganic & Medicinal Chemistry Letters*, 26(4), 1140–1144. <https://doi.org/10.1016/j.bmcl.2016.01.051>
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344–356. <https://doi.org/10.2174/1568009616666161216094026>

20. Singla, R., & Jaitak, V. (2016). Synthesis of rebaudioside A from stevioside and their interaction model with hTAS2R4 bitter taste receptor. *Phytochemistry*, 125, 106–111. <https://doi.org/10.1016/j.phytochem.2016.03.004>

Research Projects Funded by Outside Agencies, Operational in the Centre

1. Dr. Vinod: Spatial distribution of Uranium and associated Quality parameters in groundwater/drinking water resources of South Eastern districts of Punjab (co-PI). BRNS, Rs. 26.97 Lakhs (2016-2019).
2. Dr. Vinod: Targeting Cancer Stem Cells through One Drug Multi-Target Approach (microtubule inhibition, vascular disruption and anti-angiogenesis). DST Extramural, Rs. 30 Lakhs (2016-2019).
3. Dr. Pradeep Kumar: Synthesis of pyridine based anti-Methicillin resistant *Staphylococcus aureus* agents. UGC, Rs. 10 Lakhs (2016-2018).

Centre for Physical Sciences

Ballent Research Highlights of the Centre

The Centre for Physical Sciences (CPS) came into existence in 2013 and there has been no looking back since then. The Centre is actively engaged in the development of students' career in Physics. The CPS is running M.Sc. and Ph. D. in Physics. The programs have balanced semester-based course structure with flexible seamless curricula and promote exploration, innovation and research. Taking into account the current social needs and technological requirements of the country, research is being carried out in various frontier areas like Material Science, Energy Devices, Theoretical Physics, Nuclear Physics, Accelerator Physics. Thin-films, Nonlinear Dynamics, Multiferroics etc., The CPS is striving to be recognized as a Centre of Excellence in education and research at national as well as at the international level.

Centre has involved in a wide variety of topics in experimental and theoretical aspects of design of electron & ion source, interactions of electron/ion with thin films, design of DC magnetron sputtering plasma, fabrication of MOS/MIS structure and its electrical properties, development of 2D materials, energetic materials for utilizations in efficient renewable/electric/magnetic energy storage devices and plasma physics. Furthermore, study of plasma parameters, periodic, quasi periodic, chaotic behaviour of plasma and intrinsic noise induced coherency in plasma. The broad area of theoretical research encompasses understanding of electronic, magnetic, transport, thermo-electric, optical and many dynamical properties in a range of low-dimensional quantum systems (2D materials, nanotube, quantum dot, topological insulators, spintronics, nano-junctions and etc) using quantum many-body theory, density functional theory (DFT) and/or molecular dynamics simulations (MD).

Publications

1. Neha Bhardwaj, Anurag Gaur and Kamlesh Yadav, (2017) "Effect of doping on optical properties in $\text{BiMn}_{1-x}(\text{TE})_x\text{O}_3$ (where $x = 0.0, 0.1$ and $\text{TE} = \text{Cr, Fe, Co, Zn}$) nanoparticles synthesized by microwave and sol-gel methods", *Applied Physics A* 123, 429.
2. Kamlesh Yadav, M. P. Singh, F.S. Razavi and G. D. Varma, "Effect of Ti^{4+} Doping on Magnetic Properties of Charge Ordered $\text{Bi}_{0.3}\text{Ca}_{0.7}\text{MnO}_3$ ", *Mater. Res. Express* 4 (2017) 076102.
3. Ajay Kumar and Kamlesh Yadav, (2017) "Optical Properties of Nanocrystallites Films of $\alpha\text{-Fe}_2\text{O}_3$ and $\alpha\text{-Fe}_{2-x}\text{Cr}_x\text{O}_3$ ($0.0 \leq x \leq 0.9$) Deposited on Glass Substrates", *Mater. Res. Express* 4 075003.
4. Arya A and Sharma, A. L.,*. (2017). Polymer electrolytes for lithium ion batteries: a critical study, *Ionics*, 23, 497-540.
5. Agnihotri, Sand Sharma, A. L.,*. (2017). Optimization of concentration of MWCNT in terms of performance of prepared novel cathode material for energy storage, *J Integr Sci Technol*, 5(1), 23-26
6. Sharma P K, Sharma A K, Sadiq M and Sharma, A. L.,*. (2017). Effect of Nano filler on PEO based polymer electrolytes for energy storage devices applications, *Int. Res. Adv.*4(1), 1-4.
7. Swaroop, R., Ahluwalia, P. K., Tankeshwar, K., & Kumar, A. (2017). Ultra-narrow blue phosphorene nanoribbons



- for tunable optoelectronics. *RSC Advances*, 7(5), 2992–3002. <https://doi.org/10.1039/C6RA26253H>
8. Saraf, D., Kumar, A., Kanhere, D., & Kshirsagar, A. (2017). Size dependent tunnel diode effects in gold tipped CdSe nanodumbbells. *The Journal of Chemical Physics*, 146(5), 054703. <https://doi.org/10.1063/1.4975102>
 9. Jamdagni, P., Kumar, A., Sharma, M., Thakur, A., & Ahluwalia, P. K. (2017). Electronic properties and STM images of vacancy clusters and chains in functionalized silicene and germanene. *Physica E: Low-Dimensional Systems and Nanostructures*, 85(Supplement C), 65–73. <https://doi.org/10.1016/j.physe.2016.08.015>
 10. Kapoor P, Kumar J, Kumar A, Kumar A, Ahluwalia P. K., (2017) "Electronic, Mechanical and Dielectric Properties of Two-Dimensional Atomic Layers of Noble Metals" *Journal of Electronic Materials* 46 651
 11. Gopikishan, S., Banerjee, I., Bogle, K. A., Das, A. K., Pathak, A. P., & Mahapatra, S. K. (2016). Paschen curve approach to investigate electron density and deposition rate of Cu in magnetron sputtering system. *Radiation Effects and Defects in Solids*, 171(11–12), 999–1005.
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 13. Agnihotri, S, Rattan Sand Sharma, A. L.,*. (2016). Development of Novel Cathode Materials Based on MWCNT for Energy Storage/Conversion Devices, *Recent Trends in Materials and Devices*, 178, 347-355.
 14. Sadiq M, Arya A and Sharma, A. L.,*. (2016). Dielectric Study of Polymer Nanocomposite Films for Energy Storage Applications, *Recent Trends in Materials and Devices*, 178, 389-396.
 15. Sharma P K, Sharma A K, Sadiq M and Sharma, A. L.,*. (2016). Correlation of Microscopic Interaction with Electrical Conductivity in Polymer Separator of Energy Storage Devices, *Recent Trends in Materials and Devices*, 178, 397-406.
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 17. Arya A, Sharma S, Kumar D, Sadiq M and Sharma, A. L.,*. (2016). Structural and Dielectric Behavior of Blend Polymer Electrolyte based on PEO-PAN+LiPF₆, *Asian Journal of Engineering and Applied Technology*. 5(1), 4-7.
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 21. Sharma, M., Kumar, A., & Ahluwalia, P. K. (2016). Optical fingerprints and electron transport properties of DNA bases adsorbed on monolayer MoS₂. *RSC Advances*, 6(65), 60223–60230. <https://doi.org/10.1039/C6RA10008B>
 22. Kaur, S., Kumar, A., Srivastava, S., & Tankeshwar, K. (2016). Electronic structure engineering of various structural phases of phosphorene. *Physical Chemistry Chemical Physics*, 18(27), 18312–18322. <https://doi.org/10.1039/C6CP01252C>
 23. Sansar Chand, Reena Rani, and Kamlesh Yadav, "Effect of Concentration of Ti Doping on Optical Properties of Zn_{1-x}Ti_xO (where x=0.0, 0.1, 0.3, 0.5, 0.7 and 0.9) Thin Films Deposited by Spray Pyrolysis", *Asian Journal of Engineering and Applied Technology* 5, 12-16 (2016).
 24. Devender Jalandhara, Gurdhir Singh, Anjna Thakur and Kamlesh Yadav, "Structural and Optical Properties of Multiferroics BiFeO₃ Nanoparticles Synthesized by Sol Gel Method" *International Journal of Surface Engineering & Materials Technology* 6, 5-7 (2016).
 25. Priya Thakur, Anjna Thakur and Kamlesh Yadav, "Synthesis and Optical Properties of (Cr₂O₃)(1-x)/(Fe₂O₃)x (Where x = 0.0, 0.1, 0.2, 0.3, 0.4., 0.5 and 0.6) Nanocomposite", *International Journal of Surface Engineering & Materials Technology* 6, 12-15 (2016).

Research Projects Funded by Outside Agencies, Operational in the Centre

1. Dr. Santosh Kumar Mahapatra: Diagnosis of plasma in ECR ion sources. DST-SERB, Rs. 50,50,649 Lakhs (2015-2018).
2. Dr. Santosh Kumar Mahapatra: Development of mesoscopic solid state solar cells. BRNS, Rs. 28.59 Lakhs (2015-2018).

Centre for Plant Sciences

Salient Research Highlights of the Centre

Centre is focusing on sustainable agriculture in order to deal with abiotic stresses viz. Cold, drought and heat tolerance in crop plants, Heavy metal tolerance using Plant growth promoting Bacteria and hyper accumulators using system biology approach.

Another area is conservation strategies for Himalayan trees species e.g Taxus wallichiana and Ulmus wallichiana by DNA markers and geospatial technologies.

One of our faculties, Dr. Felix Bast participated in 36th Indian Scientific Expedition to Antarctica. Dr. Felix Bast had been working on molecular phylogenetics, phylogeography and evolution of land and marine plants. His present target taxa includes Mosses, Seaweeds, Freshwater algae, Photobionts of lichens, Terrestrial algae, ferns and higher trees. He has described two new species of marine algae.

Publications

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2. Bast, F. (2016a). Crux of time management for students. *Resonance*, 21(1), 71–88. <https://doi.org/10.1007/s12045-016-0296-6>
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8. Bhushan, S., Mehra, R., Rani, P., & Bast, F. (2016). DB IndAlgae: An On-Line Resource of Marine Algae from India Identified on the Basis of Molecular and Morphological Features. *Current Science*, 111(4), 723. <https://doi.org/10.18520/cs/v111/i4/723-726>
9. Choudhary, K. K., & Agrawal, S. B. (2017). Effect of UV-B Radiation on Leguminous Plants. In *Sustainable Agriculture Reviews* (pp. 115–162). Springer, Cham. https://doi.org/10.1007/978-3-319-48006-0_5
10. Choudhary, K. K., Chaudhary, N., Agrawal, S. B., & Agrawal, M. (2017). Reactive oxygen species: generation, damage and quenching in plants during stress. In V. P. Singh, S. Singh, D. K. Tripathi, S. M. Prasad, & D. K. Chauhan (Eds.), *Revisiting the Role of Reactive Oxygen Species (ROS) in Plants: ROS Boon or Bane for Plants?* (pp. 1–44). West Sussex, U. K.: John Wiley and Sons Limited.
11. Gargi, M., Thakur, S., Anand, S. S., Choudhary, S., & Bhardwaj, P. (2017). Development and characterization of genomic microsatellite markers in Tinospora cordifolia. *Journal of Genetics*. <https://doi.org/10.1007/s12041-017-0777-8>
12. Gill, B. S., Kumar, S., & Navgeet. (2016). Ganoderic Acid A Targeting β -Catenin in Wnt Signaling Pathway: In

- Silico and In Vitro Study. *Interdisciplinary Sciences: Computational Life Sciences*.
<https://doi.org/10.1007/s12539-016-0182-7>
13. Gill, B. S., Naveet, & Kumar, S. (2016). Ganoderic acid targeting multiple receptors in cancer: in silico and in vitro study. *Tumor Biology*, 37(10), 14271–14290. <https://doi.org/10.1007/s13277-016-5291-8>
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 15. Gill, B. S., Sharma, P., Kumar, S., & Naveet. (2016). Chemical composition and antiproliferative, antioxidant, and proapoptotic effects of fruiting body extracts of the lingzhi or reishi medicinal mushroom, *ganoderma lucidum* (Agaricomycetes), from India. *International Journal of Medicinal Mushrooms*, 18(7), 599–607.
 16. Joshi, R., Rana, A., Kumar, V., Kumar, D., Padwad, Y. S., Yadav, S. K., & Gulati, A. (2017). Anthocyanins enriched purple tea exhibits antioxidant, immunostimulatory and anticancer activities. *Journal of Food Science and Technology*, 54(7), 1953–1963. <https://doi.org/10.1007/s13197-017-2631-7>
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 19. Rehman, W., Majeed, A., Rani, P., Saini, K., Najar, R., Mehra, R., Bast, F. (2016). Carrageenan based hydrogels and composites: A systematic investigation reporting their multidimensional essence. In *Natural Polymers: Derivatives, Blends and Composites, Volume I* (pp. 65–80).
 20. Singh, B., Rani, M., Singh, J., Moudgil, L., Sharma, P., Kumar, S., Kaura, A. (2016). Identifying the preferred interaction mode of naringin with gold nanoparticles through experimental, DFT and TDDFT techniques: insight into their sensing and biological applications. *RSC Advances*, 6(83), 79470–79484. <https://doi.org/10.1039/C6RA12076H>
 21. Singh, P., Singh, R. S., Rani, A., & Bast, F. (2016). Homology modeling of chemokine CCR7, molecular docking and in vitro studies evidenced plausible immunotherapeutic anticancer natural compounds. *Medicinal Chemistry Research*, 25(10), 2410–2424. <https://doi.org/10.1007/s00044-016-1647-2>
 22. Yadav, R., Juneja, S., Singh, P., & Kumar, S. (2017). Drought and Heat Tolerance in Chickpea: Transcriptome and Morphophysiological Changes under Individual and Combined Stress. In *Plant Tolerance to Individual and Concurrent Stresses* (pp. 91–109). Springer, New Delhi. https://doi.org/10.1007/978-81-322-3706-8_7

Research Projects Funded by Outside Agencies, Operational in the Centre

1. Dr. Pankaj Bhardwaj: Conservation strategies for *Taxus wallichiana* and *Ulmus wallichiana* by DNA markers and geospatial technologies. National Mission on Himalayan Studies, MoEF, Rs. 35 Lakhs (2016-2019).
2. Dr. Pankaj Bhardwaj: Transcriptomic investigations of active gene networks in hyper-accumulator plant species in response to heavy metal toxicity. Rs. 19 Lakhs (2015-2018).
3. Dr. Vinay Kumar: Deep Sequencing for identification and differential expression analysis of reproductive organ(s) enriched transcripts after fertilization in chickpea. Rs. 10 Lakhs.
4. Dr. Felix Bast: Chemical and Phylogenetic Diversity of Seaweeds in Indian Subcontinent. DST, Rs.35 Lakhs (2012-2017).
5. Dr. Felix Bast: Phylogenetic selection of target taxa for anti-proliferative and anti-metastatic marine. Natural Products from Seaweeds of Indian Coast. Ministry of Earth Sciences-Drugs from the Sea Program, Rs. 40 Lakhs (2015-2018).
6. Dr. Felix Bast: Tracing Evolutionary Legacy of Indian Languages using Computational Phylogenetics. ICSSR Major Research Project, Rs. 7 Lakhs (2024-2016).

Centre for Education

Salient Research Highlights of the Centre

Department of Education is providing opportunities for promotion of research for all faculty members and scholars to create, share and disseminate knowledge in order to practice the theoretical concerns of Education in general and teaching-learning, in particular.

Research Thrust Areas

1. Mathematics Education -TPACK, Mathematical Skills, Art & Vedic Mathematics techniques, Cooperative learning in Mathematics.
2. Special Education: Mind Games, Executive functions
3. Educational Robotics: Engagement, HOTS
4. Cultural Intelligence: Cross cultural adjustment
5. Evaluation in Education

Publications

1. Singh, N., & Pany, S. (2016). Continuous and comprehensive evaluation: A paradigm shift in evaluation. *Online International Interdisciplinary Research Journal*, 6, 139-147.
2. Kaur, K., & Pany, S. (2016). Creative teaching: the need of the hour. *Scholarly Research Journal for Humanity Science & English Language*, 3(15), 3598-3606.
3. Sandeep, & Pany, S. (2016). Dilemma over values vs .needs among youth: An uncertain future. *Pedagogy of Learning*, 2(4), 10-16.
4. Kaur, K., & Pany, S. (2016). Foreign students cross cultural adjustment and academic achievement in India - A critical analysis. *Educational Quest- An International Journal of Education and Applied Social Sciences*, 7(3), 357-361.
5. Sandeep, Dhillon, S.S. (2016). Place of Ancient Indian Value System in Modern Indian Context. A critical study. *International Journal of Applied Research*. ISSN: 2394-5869. 2(6), 172-175.
6. Sundar, S., Dhillon, S.S. (2016). E-Learning perspectives in 21st Century. *International Journal of Humanities and Social Science Research*. ISSN: 2455-2070. 2(9), 71-73.
7. Sandeep, Dhillon, S.S. (2016). Environmental awareness in Indian religious scriptures. *International Journal of Humanities and Social Science Research*. ISSN: 2455-2070. 2(10), 1-4.
8. Kaur, Ranjit., Singh, Gurpreet., Dhillon, S.S. (2017). Effect of self- learning modules and constructivist approach on academic performance of secondary school students: A comparative study. *International Journal of Humanities and Social Science Research*. ISSN: 2455-2070.3(1), 61-63.
9. Kaur, A. & Padmanabhan, J. (2017). Children with Specific Learning Disorder: Identification and Interventions, *Educational Quest: An Int. J. of Education and Applied Social Sciences*. 8 (1), 1-7.
10. Padmanabhan, J. (2016). Does integrated approach to ESD affect critical thinking on sustainable development? *Educational Quest: An Int. J. of Education and Applied Social Sciences*, 7(3).
11. Padmanabhan, J. (2016). *Education for sustainable development- How to integrate in school education*, New Delhi, Atlantic Publishers & Distributors (P) Ltd.: First edition (2016).

Research Projects Funded by Outside Agencies, Operational in the Centre

1. Dr. Sesadeba Pany: Continuous and Comprehensive Evaluation in Upper Primary Schools of Punjab: An Evaluative Study. ICSSR, Rs. 8 Lakhs (2017-2018).

in Rajasthan. BRNS, Rs. 24.49 Lakhs.

2. Dr. Yogalakshmi K.N: Spatial distribution of uranium and associated water quality parameters in groundwater drinking water resources of five districts of Punjab (Fazilka, Muktsar, Mohali, Sangrur and Patiala). BRNS, Rs. 24.49 Lakhs.
3. Dr. Sunil Mittal: Environmental monitoring and assessment of climate change of tourism affected Himalayan regions of Shimla and Chamba (HP). MoEF & CC, Rs. 32.21 Lakhs.
4. Dr. Puneeta Pandey (Co-PI): Conservation Strategies for *Taxus wallichiana* and *Ulmus wallichiana* by DNA markers and geospatial technology. National Mission on Himalayan Studies, Rs. 34,94,600 Lakhs.
5. Dr. Hardeep Kaur (Post Doctoral Fellow): Development of protein based biosensors for monitoring Arsenic and Cadmium in drinking water. DST-KIRAN, Rs. 30 Lakhs.
6. Dr. Puneeta Pandey: Assessment of organochlorine pesticide residues in groundwater and soil of Bathinda district, Punjab. UGC, Rs. 6 Lakhs.

Centre for Geography and Geology

Publications

1. Guite, L. T. S. (2016a). Addressing 'Regions' in pursuit of Sustainable Development Goals. *International Journal of Advanced Research*, 4(6), 175–177.
2. Guite, L. T. S. (2016b). Resettlement and Rehabilitation of Conflict Induced - Internally Displaced Persons: A Study of Rural Empowerment Programme in Assam. *Asian Journal of Multidisciplinary Studies*, 4(8).
3. Guite, L. T. S. (2016c). Temporal Analysis of Forest Cover Change: East Khasi Hills Meghalaya, India: Using Remote Sensing and GIS. *International Journal of Science and Research*, 5(7).
4. Guite, L. T. S., & Bora, A. (n.d.). Impact of River Bank Erosion on Land Cover in Lower Subansiri River Flood Plain. *International Journal of Scientific and Research Publications*, 6(5).
5. Sharma, K. M., Patnaik, R., & Singh, N. P. (2016). Clay mineralogy of the Late Miocene Baripada Beds (Mayurbhanj District, Orissa): Palaeoclimatic implications. *International Journal of Applied Research*, 2(7), 217–223.
6. Singh, A. K., Gagan, Pattanaik, J. K., & Jaiswal, M. K. (2016). Late Quaternary evolution of Tista River terraces in Darjeeling-Sikkim-Tibet wedge: Implications to climate and tectonics. *Quaternary International*. Retrieved from <http://agris.fao.org/agris-search/search.do?recordID=US201700082445>
7. Singh, A. K., Jaiswal, M. K., Pattanaik, J. K., & Dev, M. (2016). Luminescence chronology of alluvial fan in North Bengal, India: Implications to tectonics and climate. *Geochronometria*, 43(1). <https://doi.org/10.1515/geochr-2015-0037>

Research Projects Funded by Outside Agencies, Operational in the Centre

1. Dr. K. Milankumar Sharma: Palaeoenvironmental, Palaeoclimatic and Palaeobiogeographic Reconstruction of Early and Middle Triassic Deposits of Damodor and Satpura Basins using Palaeontological, Sedimentological and Stable Isotope Proxies. DST-SERB, Rs. 37,18,600 Lakhs (2017-2020).
2. Dr. K. Milankumar Sharma: Studies of the micro-vertebrates faunal diversity of Late Triassic Tiki Formation, Madhya Pradesh, India: An implication on global palaeobiogeography. UGC, 6 Lakhs (Financial Sanction awaiting).

Centre for South and Central Asian Studies

Publication

1. Singh, Bawa and Ahmad, Parvaiz. (2017) The Emerging China, Pakistan, and Russia Strategic Triangle: India's

- New Gordian Knot. *Jadavpur Journal of International Relations* (Sage), Vol. 21 (1), pp. 61-83.
2. Singh, Bawa and Ahmad, Parvaiz. (2017). Sino-Pakistan Friendship: Changing South Asian Geopolitics and India's Post-Obama Options. *South Asia Research* (Sage), Vol. 37 (2), pp. 133-146.
 3. Singh, Bawa. (2017). Peace-making in Afghanistan: Heart of Asia is in Question? *SADF*, No. 28, pp.1-14, ISSN 2406-5633.
 4. Singh, Bawa. (2017). Conciliation Concert of Afghanistan: Only an Afghanistan Led Peace-Talk is the Solution. *SADF*, No. 76, pp. 1-5. ISSN 2406-5617
 5. Singh, Bawa. (2016). Changing Dynamics of Look East to Act East: A Review of Reciprocation. *The Indian Journal of Political Science*, Vol. LXXVII (4), pp. 545-552.
 6. Singh, Bawa; Amandeep Kaur. (2016). India and Kazakhstan - Evolving Economic Relations. *International Journal of Central Asian Studies*, Vol. 20, pp. 19-40.
 7. Singh, Bawa and Bhupinder Singh (2016). 1857 Revolt, Loyalty and Rewards: Punjabization of the British Indian Army, *Political Economy Journal of India*, 25 (3), pp. 60-68
 8. Singh, Bawa. (2016). Connect Central Asia Policy and Indian Outfoxing. *The Journal Of central Asian Studies*, Vol. XXII, pp.23-34.
 9. Singh, Bawa. (2016). Look East to Act East- A Paradigmatic Shift: Vietnam's Vantage. *FPCR Journal*, 2016(3), pp. 65-73.
 10. Singh, Bawa. (2016). India's Neighbourhood Policy: Geopolitical Fault Line of Its Nepal Policy in the Post-2015 Constitution. *Journal of International and Area Studies*, 23 (1), pp. 59-76.
 11. Singh, Bawa and Shah, Shahbaz. (2016). China's Strategic Foray in the Post- Monarchy Nepal: Implications for India. *Mision Juridica*, 9 (10), pp. 55-76.
 12. Singh, Bawa and Mubarak, Mudasir. (2016). Security Syndrome in the Central Asia: Russia A Potential Shield. *The IUP Journal of International Relations*, X (3), pp. 17-36.
 13. Singh, Bawa. (2016). Nepal's Constitutional Contagious Conflict of 2015: India's Neighbourhood Policy-A Panacea. *World Focus*, XXXVII (8), pp. 114-120.
 14. Singh, Bawa. (2016). Modifying India's Economic Diplomacy: Looking Place for Its Trade in Central Asia. *World Focus*, XXXVII (4). Pp. 96-103.
 15. Singh, Bawa. (2016). Geopolitics of Counter-Terrorism in Afghanistan: SCO's Strategy in Question. *World Focus*, XXXVII, (2), pp. 97-103.
 16. Singh, Bawa and Ahmad Parvaiz. (2017). Xi-Jinping's Vision of South Asia: An Appraisal of Problems and Potentials for India. In Kochher, Geeta (Ed.) *China's Foreign Relations and Security Dimensions*. (Routledge). (ISBN: 978-0-8153-6872-4)
 17. Kaur, M. & Kaushiki, N. (2017). Gender Issues in Education: A Social-Realistic Perspective. In K.M. Baharul Islam and Mohd Anas Raushan (Eds), *Educational Policy Reforms-National Perspectives* (1st ed., pp. 25-35). Bloomsbury Publishers, New Delhi.
 18. Kaushiki, N., Mohiudin, G., Ramzan, H. & Kaur, M. (2017) Contextualizing Chinese Strategic Foresight in International Relations: Examining One Belt One Road Policy. In *Handbook of International Relations: Issues of Human Rights and Foreign Policy*. Vol I (1st ed., pp.120-137). ABS Books, New Delhi.

Online Articles

1. Singh, Bawa. (2017, July 28). Will Panamagate Politically Paralyze Pakistan? International Public Policy Review, ISSN: 2424984X, (Singapore). Available at, <http://ippreview.com/index.php /Blog/single/id/515.html>
2. Singh, Bawa. (2017, July 26). China, India and the Panchsheel Agreement. International Public Policy Review, ISSN: 2424984X (Singapore). Available at, <http://ippreview.com/index.php /Blog/single/id/513.html>
3. Singh, Bawa. (2017, June 29). Punjab Government Needs to Focus Challenges Ahead. The Dialogue (New Delhi). Available at, <http://www.thedialogue.co/punjab-government-needs-focus-challenges-ahead/>
4. Singh, Bawa. (2017, June 16). Will Remapping of SCO Conciliate India and Pakistan? The Dialogue (New Delhi) Available at, <http://www.thedialogue.co/will-remapping-sco-conciliate-india-pakistan/>
5. Singh, Bawa. (2017, June 18). Why SCO matters for India? The Rising Kashmir. Available at, <http://www.risingkashmir.com/news/why-sco-matters-for-india>
6. Singh, Bawa. (2017, May 31). Moon Jae-in's Election: Hope for the Korean Peninsula? International Public Policy Review, ISSN: 2424984X (Singapore). Available at, <http://www.ippreview.com/index.php /Blog / single /id/454.html>
7. Singh, Bawa. (2017, May 15). The Pakistan Factor in India-Turkey Relations. International Public Policy Review, ISSN: 2424984X (Singapore). Available at, <http://ippreview.com/index.php /Blog/single /id/437.html>
8. Singh, Bawa. (2017, May 13). Will Remapping of SCO Conciliate India and Pakistan? The Dialogue (New Delhi) Available at, <http://www.thedialogue.co/will-remapping-sco-conciliate-india-pakistan/>
9. Singh, Bawa. (2017, May 07). Rohingya Refugee Crisis Requires a Regional Solution. (The Bangladesh Post) Available at, <http://www.thebangladeshpost.com/op-ed/1614>.
10. Singh, Bawa. (2017, May 5). Rohingya refugee crisis: Humanitarian challenge requires a regional solution. South Asia Monitor (New Delhi). <http://southasiamonitor.org/news/rohingya-refugee-crisis-humanitarian-challenge-requires-a-regional-solution/sl/23272>.
11. Singh, Bawa. (2017, April 27) Is Syrian Crisis Will Lead to Third World War? (Modern Diplomacy). Available at, http://moderndiplomacy.eu/index.php?option=com_k2&view=item&id=2506%3Ais-syrian-crisis-will-lead-to-third-world-war&Itemid=139#.WQXrmdIhxhEI.linkedin
12. Singh, Bawa. (2017, April 13). Pivot of India's Act East Asia Policy, Malaysia Needs to Focus on the Marginalized Indian Diaspora. The Dialogue (New Delhi). Available at
13. Singh, Bawa. (2017, April 19). Withering Away of India's Central Asia Policy. The Asian Institute of Diplomacy and International Affairs (Kathmandu). <http://www.aidiaasia.org/blogPage-bWlakQ==>
14. Singh, Bawa. (2017, March 26). Geopolitical Expansion of SCO: Will it be a Next SAARC? The Asian Institute of Diplomacy and International Affairs (Kathmandu). <http://www.aidiaasia.org/blogPage-bWIZIA==#>
15. Singh, Bawa (2017, February 14). India's Act East policy: Need to rediscover Southeast Asia through better connectivity and cooperation. South Asia Monitor (New Delhi). <http://southasiamonitor.org /news /india-s-act-east-policy-need-to-rediscover-southeast-asia-through-better-connectivity-and-cooperation/sl/22101>
16. Singh, Bawa. (2017, June 23) Has Trump Trapped Middle East In A Regional War? – Analysis. Eurasia Review, ISSN 2330-717X (Oregon -USA). Available at, <http://www.eurasiareview.com/?s=bawa+singh>.
17. Singh, Bawa. (2017, March 9). The Dragon, Dalai Lama And Mongolia: What Diplomatic Role Should India Play . Eurasia Review ISSN 2330-717X (Oregon-USA). Available at <http://www.eurasiareview.com/09032017-the-dragon-dalai-lama-and-mongolia-what-diplomatic-role-should-india-play-analysis/>
18. Rathee, Vikas. (2017). Review of Audrey Truschke, *Aurangzeb: The Man and the Myth*, Delhi: Penguin Random House India. *The Book Review*, vol. XLI, no.7, pp.5-6.
19. Rathee, Vikas. (2017). Review of Lloyd I. & Susanne Hoeber Rudolph, *Romanticism's Child: An Intellectual History of James Tod's Influence on Indian History and Historiography*, Delhi: Oxford University Press. *The Book Review*, vol. XLI, no.6, 2017, pp.15-16.

Centre for Human Genetics and Molecular Medicine

Salient Research Highlights of the Centre

Research output from this centre will have direct application in prediction, prevention and therapeutics of human genetic diseases, cancers and other ailments. At present the Centre is in infancy but it is the vision of the Centre to be a premier research unit in the country conducting and promoting ground breaking research*in human genetics. The centre has established state-of-the-art equipment facilities with a mission to offer molecular diagnostic, genetic and proteome profile of various genetic disorders. The centre is also gearing up to carry out prenatal diagnosis and new born screening in the long run. We are also aiming to provide diagnostic services for congenital malformations and genetic disorders at the chromosomal, biochemical and molecular level. Counselling will be offered to the affected individuals and also their family members. Our aim is to prevent morbidity and mortality due to the genetic disorders and adult onset disorders. Currently different labs at this centre are working on some thrust areas like:

1. Cancer biology and biomarker studies.
2. Structural and functional analysis of various proteins in human diseases.
3. Identification and characterizing modifier genes involved in disease onset and severity of various genetic disorders.
4. Identifying the susceptibility genes involved in the pathogenesis of the common chronic diseases.
5. Estimation of the risk confers by the genomic variations in different ethnic populations.
6. Development of chimeric biomolecules as therapeutics.

Publications

1. Das, S., Kaul, S., Jyothy, A., & Munshi, A. (2016). Association of APOE (E2, E3 and E4) gene variants and lipid levels in ischemic stroke, its subtypes and hemorrhagic stroke in a South Indian population. *Neuroscience Letters*, 628, 136–141. <https://doi.org/10.1016/j.neulet.2016.06.032>
2. Joshi, G., Nayyar, H., Kalra, S., Sharma, P., Munshi, A., Singh, S., & Kumar, R. (2017). Pyrimidine containing epidermal growth factor receptor kinase inhibitors: Synthesis and biological evaluation. *Chemical Biology & Drug Design*. <https://doi.org/10.1111/cbdd.13027>
3. Joshi, G., Nayyar, H., Kalra, S., Sharma, P., Munshi, A., Singh, S., & Kumar, R. (n.d.). Pyrimidine containing epidermal growth factor receptor kinase inhibitors: Synthesis and biological evaluation. *Chemical Biology & Drug Design*, n/a-n/a. <https://doi.org/10.1111/cbdd.13027>
4. Khetarpal, P., Das, S., Panigrahi, I., & Munshi, A. (2016). Primordial dwarfism: overview of clinical and genetic aspects. *Molecular Genetics and Genomics: MGG*, 291(1), 1–15. <https://doi.org/10.1007/s00438-015-1110-y>
5. Kumar, R., & Singh, S. (2017). *Topoisomerase inhibitors: classification, mechanisms of action and adverse effects*. <http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=1540032>
6. Munshi, A., Mohan, V., & Ahuja, Y. R. (2016). Non-Coding RNAs: A Dynamic and Complex Network of Gene Regulation. *Journal of Pharmacogenomics & Pharmacoproteomics*, 7(1), 2–11.
7. Panigrahi, I., Kalra, J., Goyada, P., Khetarpal, P., & Munshi, A. (2016). Mutational analysis in gaucher disease: implications in Genetic counseling and Management. *Journal of Genetic Disorders & Genetic Reports*, 5(1), 1–5.
8. Qi, J., Singh, S., Hua, W. K., CAI, Q., Chao, S. W., Li, L., Kuo, Y. H. (2015). HDAC8 Inhibition Specifically Targets Inv (16) Acute Myeloid Leukemic Stem Cells by Restoring p53 Acetylation. *Cell Stem Cell*, 17(5), 597–610. <https://doi.org/10.1016/j.stem.2015.08.004>
9. Singla, H., Kalra, S., Khetarpal, P., Kumar, V., & Munshi, A. (2017). Role of Genomic Alterations in HER2 Positive Breast Carcinoma: Focus on Susceptibility and Trastuzumab-therapy. *Current Cancer Drug Targets*, 17(4), 344–356. <https://doi.org/10.2174/1568009616666161216094026>

Research Projects Funded by Outside Agencies, Operational in the Centre

1. Dr. Anjana Munshi: *In silico* screening of all functional genes in the human genome for the detection of deleterious SNPs for association studies. ICMR, Rs. 39 Lakhs (2015-2018).
2. Dr. Sandeep Singh: Functional evaluation of presence of miRNAs inside the mitochondria of breast cancer cell lines. ICMR, Rs. 42 Lakhs (2014-2017).
3. Dr. Harish Chander: Transcriptional regulation of Formin Binding Protein 17 (FBP17) in Breast Cancer. DST-SERB, Rs. 33.10 Lakhs (2016-2019).

Centre for Languages and Comparative Literature

Salient Research Highlights of the Centre

1. Literary Theory with special focus on theories of Subjectivity, Drama and Theatre, Translation and Film Studies.
2. Punjabi Language and Linguistics (Grammatical and Textual Studies), Literary Theory and Punjabi Criticism Indian Philosophy
3. 19th Century American and African American Literature, 20th Century American and African American Literature (Fiction).
4. Applied Linguistics, Second Language Acquisition, Language Learning and Technology, English Language Teaching.
5. Contemporary discourses (Gender and Dalit Discourse), Tribal Literature, Regional Literature and Culture studies.
6. Ecocriticism- Study of Environment and Literature, Indian Literary Theories, Ancient Indian Literature, Punjabi Poetry and Folklore

Publications

1. Feleciya, J. N., & Zafar, S. (2016). The Role of Learning Strategies in Fostering Learner Autonomy: A Conceptual Analysis. *LangLit*, 2(3), 647–651.
2. Gora, D. K., & Sen, R. K. (2016). Murdahiya: A Saga of Dalit Experience. *The Literati*, 18–24.
3. Kaur, R. (2016). Malwai Sabhyacharak Shabdawli De Kosh Vigiyank Adhyan Dian Sambhavnavan. In T. Sharma (Ed.), *Malwa Region: Political, Economic and Socio-Cultural Aspects: Problems and Solutions* (pp. 72–77) Unistar Books.
4. Kaur, R. (2017a). Gurbani De Viakhya-Shastar Di Parkirti. *Goshti*, 3, 145–154.
5. Kaur, R. (2017b). Punjabi Bhasa Vigiyank Adhyan-Rujhaan Ate Paath Vigiyank Adhyan Vidhi. *Goshti*, 4, 10–22.
6. Kaur, R., & Kaur, S. (2016). Vishvikarn Ate Punjabi Bhasa Da Adhiyapan: Dash ate Disha. In K. Kaur (Ed.), *Vishvikarn Da Punjabi Samaj, Sabhyachar, Bhasa ate Sahit Te Parbhav* (pp. 65–77).
7. Kaur, R., Sen, R. K., & Kaur, R. (2017). History and Tradition of Regional Novel: A Review of Regional Novels in Hindi and Punjabi Literature. *The Criterion: An International Journal in English*, 8(1), 922–931.
8. Nancy, & Sen, R. K. (2017). Quest for Female Identity: Exploration in the selected novels of Shashi Deshpande. *The Criterion: An International Journal in English*, 8(1), 172–177.
9. Saranraj, L., Khan, Z. A., & Zafar, S. (2016). Influence of Motivational Factors and Gender Differences on Learning English as a Second Language: A Case of Engineering Students from Rural Background. *Indian Journal of Science and Technology*, 9(44). <https://doi.org/10.17485/ijst/2016/v9i44/99721>
10. Saranraj, L., Zafar, S., & Khan, Z. A. (2016). Language Learning Strategies—A Reappraisal. *International Journal of English: Literature, Language and Skills*, 4(4), 134–138.
11. Sen, R. K. (2016a). Bagri Boli Mein Kavya Srijan: Vinod Swami ki Preet Kameri ka Vishleshanpark Adhyayan. *SarhadEPatrika*, 11(1), 53–60.
12. Sen, R. K. (2016b). Hashiye ki Bhashayen: Bagri Bhasa ka Parichyatmak Adhyayan. *Hashiy Ki Awaz*, (8), 30–32.
13. Sen, R. K. (2016c). Hindi Upnyas 'Maila Anchal' aur Punjabi Upnyas 'Kothe Khadak Singh' mein anchalik jeevan ka bahuayami tulnatmak adhyayan. *Bhashiki*, 64, 59–65.
14. Sen, R. K., & Leena. (2017). Handbook of International Relations, Issues of Human Rights and Foreign Policy. In

Swati Chakraborty (Ed.), *A Literary View of Violation of Human Rights of Dalits and Women* (pp. 15–30). New Delhi: ABS Books.

15. Zafar, S. (2016). The Color Purple as a Neo-Slave Narrative. In D. Das (Ed.), *Alice Walker's Color Purple: Critical Perspectives*. (pp. 92–101). Pencraft International.
16. Zafar, S., Khan, Z. A., & Meenakshi, K. (2017). Extraversion-Introversion Tendencies and their Relationship with ESL Proficiency: A Study of Chinese Students in Vellore, India. *Pertanika Journal of Social Sciences and Humanities*, 25(2). [http://www.pertanika.upm.edu.my/Pertanika%20PAPERS/JSSH%20Vol.%2025%20\(2\)%20Jun.%202017/12%20JSSH-1447-2015-3rdProof.pdf](http://www.pertanika.upm.edu.my/Pertanika%20PAPERS/JSSH%20Vol.%2025%20(2)%20Jun.%202017/12%20JSSH-1447-2015-3rdProof.pdf)

Research Projects Funded by Outside Agencies, Operational in the Centre

1. Dr. Rajinder Kumar and Dr. Alpana Saini: Sociolinguistic Study of the Bagri People. ICSSR, Rs. 6 Lakhs (2016-2018).

Centre for Law

Salient Research Highlight of the Centre

The centre for law is actively engaged in research. The centre offers intensive training and research in the area of law, specially in the field of human rights. Corporate law and Embedded law.

Research intenses in law includes: Human Rights and Environmental Protection, Residue burning and Environmental Pollution Transnational Environmental Crime, Right to sanitation and Drinking Water, Corporate Social Responsibility. After of dominons postion under compition law, National Green Tribunal, Mergen and Amalgamation of companies. Anti competition agreements, Women Empowerment, Street Child, Commission Rights, Rights to Education etc.

Publications

1. Dr. Amit Kashyap, (2016), What the International Community can do Ratchet up the Progress on Girl Education, Book Chapter Published in *Girl Education in India Still Miles to Cover*, Kalpaz Publication, Gyan Books Pvt. Ltd., Delhi, Vol. 3, pp.193-212.
2. Dr. Amit Kashyap, (2016), A Critical Jurisprudential Appraisal of Law and Justice in Crime of Honour Killings and Role of Khap Panchayats in India, Book Chapter Published in *Khap Panchayat: Women and Honour Killing*, Kalpaz Publication, Gyan Books Pvt. Ltd., Delhi, Vol. 3, pp.177-194.
3. Dr. Amit Kashyap, (2016), Khap Panchayats: Killing for Honour or for the Ego, Book Chapter Published in *Khap Panchayat: Women and Honour Killing*, Kalpaz Publication, Gyan Books Pvt. Ltd., Delhi, Vol. 3, pp.207-222.
4. Dr. Amit Kashyap, (2017), Role of Governor in the Governance of State: A Comparative Study of India and USA, Article published in *International Journal of Public Law*, Vol. 4, Issue-1, pp.1-30.
5. Dr. Amit Kashyap, (2017), Food Security and Sustainability in India: Its Impacts and Challenges, Article published in *International Journal of Public Law*, Vol. 4, Issue-1, pp.31-46.
6. Dr. Amit Kashyap, (2017), Global Warming - Are We Responsible?, Article published in *International Journal of Public Law*, Vol. 4, Issue-1, pp.47-60.
7. Puneet Pathak, Acceptability of Judicial Activism in India Perspective, *International Journal of Law & Legal Jurisprudence Studies*, Vol. 03, Issue. 03, 2016. ISSN: 2348- 8212
8. Puneet Pathak, Redressal Mechanism of Human Rights Violation: International Perspective, *Journal of Legal Studies & Research*, Vol. 02, Issue. 03, 2016. ISSN: 2455-2437
9. Puneet Pathak, Social Justice under Indian Constitution, *International Journal of Legal Development & Allied Issues*, Vol. 02, Issue. 03, 2016. ISSN: 2454-1273

10. Puneet Pathak, International Environmental Crime: A growing concern of International Environmental Governance, *US China Law Review*, Vol. 13 No. 05, May 2016. ISSN 1930-2061
11. Puneet Pathak, Vertika Shrivastava, Post Modern Critique of Human Rights, *ARS- Journal of Applied Research and Social Science (International Journal Impact factor: 1.739) Vol. 03 Issue. 09 May, 2016. ISSN: 2350-1472*
12. Puneet Pathak, Role of UNEP in Global Environmental Governance, *Journal GSD- Green & Sustainable Development (International Journal) Vol. 03 Issue. 09 May, 2016. ISSN: 2350-1464*
13. Singh, R., Kumar, D., (2016). *SJIF The Pros and Cons of International Nuclear. Liability Regimes and the Way Forward*,(4/26), 3088-3094.
14. Singh, R., Kumar, D., (2017). *SJIF Fundamental Right to Clean and Safe Drinking Water in India. Legal Provisions and Judicial*,(4),5075-5082
15. Dr. Sukhwinder Kaur, 'Law Relating to Dowry in India', in edited book named Domestic Violence against women, ISBN No. 978-93-83338-54-2, 2016.

Research Projects Funded by Outside Agencies, Operational in the Centre

1. Impact of Laws and Policies to prevent and regulate Pollution from Agriculture Residue Burning: A study of Bathinda District in Punjab. UGC, Rs. 6 lakhs.
2. Socio-Legal & Other Challenges for the Prevention of Drug Abuse in India: Existing Approaches & Agenda of Reforms. NISD, Rs. 151305/
3. NCRI Project for Research on Rural Development. NCRI, Rs. 3,00,000/ (Per Year).

Centre for Economic Studies

Salient Research Highlight of the Centre

1. Issues related to the Linkages between financial sector and real sector in India
2. Issues related to migration, poverty, employment and regional development
3. Analysing the linkages between emerging agricultural markets and the farmers in India
4. Issues related to entrepreneurship development in India
5. Socio-economic implications of environmental degradation
6. The empirical relationship between international economics and development

Publications

1. Chauhan, R. K., Mohanty, S. K., Subramanian, S., Parida, J. K., & Padhi, B. (2016). Regional Estimates of Poverty and Inequality in India, 1993-2012. *Social Indicators Research*, 127(3), 1249–1296.
2. Kaur, M., & Singla, N. (2016). An Economic Analysis of Kinnow Cultivation and Marketing in Fazilka District of Punjab. *Indian Journal of Economics and Development*, 12(4), 711–718.
3. Mehrotra, S., & Parida, J. K. (2017). Why is the Labour Force Participation of Women Declining in India? *World Development*, 98(Supplement C), 360–380. <https://doi.org/10.1016/j.worlddev.2017.05.003>
4. Mishra, P. K. (2017). Socio-Economic Impacts of Climate Change in Odisha: Issues, Challenges and Policy Options. *Journal of Climate Change*, 3(1), 93–107.
5. Mishra, P. K., Mishra, S. K., & Sahoo, F. K. (2016). Empirical Evidence on Regional Disparities Across Indian States. *Orissa Economic Journal*, 48(1), 107–122.
6. Parida, J. K. (2016). MGNREGS, Rural Employment and Distress Migration: A study in Odisha. *Journal of Social and Economic Development*, 18(1), 17–39.
7. Parida, J. K. (2017). Rural-Urban Migration, Urbanization and Wage Differentials in Urban India. In J. Kankesu, E.

- Wilson, & R. Verma (Eds.), *Internal Migration, Urbanisation and Poverty in Asia: Dynamics and Interrelationships*. Manila: Asian Development Bank & Springer.
8. Parida, J. K., & Raman, R. K. (2017). India: Rising trends of international and internal migrations. In A. Triandafyllidou & E. Elgar (Eds.), *Migration and Globalization Handbook*. United Kingdom.
 9. Pavneet, & Singla, N. (2016). Water Crisis and its impact on Punjab Agriculture. In S. K. Arora, T. Sharma, & S. Kapila (Eds.), *Political, Economic and Socio-Cultural Aspects: problems and Solutions* (pp. 255–262). Chandigarh: Unistar Books Pvt. Ltd.
 10. Sanitha, V. P., & Singla, N. (2016). Structural Transformations in Kerala's Economy: Is There any Role of Agriculture Sector? *Journal of Regional Development and Planning*, 5(2), 45–58.
 11. Singla, N. (2017). Supermarkets and Small Farmers: A Case Study of Reliance Fresh in Punjab. In G. Mani, P. K. Joshi, & M. K. Ashok (Eds.), *Financing Agriculture Value Chains in India* (1st ed., p. 298). Singapore: Springer

Centre for Sociology

Ballent Research Highlights of the Centre

Centre for Sociology has dynamically participated and contributed in the 'Unnat Bharat Abhiyan'. The programme was launched under the aegis of Ministry of Human Resource and Development. Dr. Vinod Arya and Dr. Aditya Ranjan Kapoor are actively working as the committee members for the aforesaid team at Central University of Punjab. Moreover, Dr. Sumedha Dutta and all the four students of M.A. (2015-17) batch are empanelled in the Unnat Bharat Abhiyan team for conducting field visits and research. In addition to the above, faculty and the students of the centre are also continuously engaged and trying to contribute their best in another developmental programme namely 'Community Development'. In both of the above mentioned programme; field visits have been made to Ghudda, Jhumba, BahoYatri, Nandgarh, Mann and other villages and initial village profile and primary data has been collected from the field to analyse and understand comprehensively the status of development in the rural areas of Bathinda in particular and Punjab in general. Moreover, the students have researched under the supervision of the faculty members of the centre on the topics of agrarian relationships, drug abuse, and gender inequality and women empowerment; under their Master's project work. The faculty members of the centre are continuously engaging with following teaching and research areas like local, national and global problems, social structure and social stratification, rural and urban sociology, agrarian relationships, migration and Diaspora studies, social change in the context of development and modernisation, problems of the marginalized social groups and social movements. The centre also aims to excel in the emerging areas of studies like human rights, social justice, gender studies and social exclusion.

Publications

1. Dutta, S. (2016a). The Politics of Power Vs. The Politics of Identity: Understanding the Dynamics of Statehood Demands in Assam. *IGPP-VMF: Papers in South Asian Governance, Policies and Politics*, 2.
2. Dutta, S. (2016b). Urban Living and Quality Time with Family. *Research Journal Social Sciences*, 24(1 & 2), 154–176.
3. Dutta, S. (2017). Mapping the Plight of the Urban Poor in the Era of LPG. In A. Kumar, S. P. Das, & A. K. Das (Eds.), *Chronic Poverty in India: Issues, Policies and Challenges* (pp. 420–440). New Delhi: Vitasta Publishing.

RESEARCH HIGHLIGHTS OF CUPB

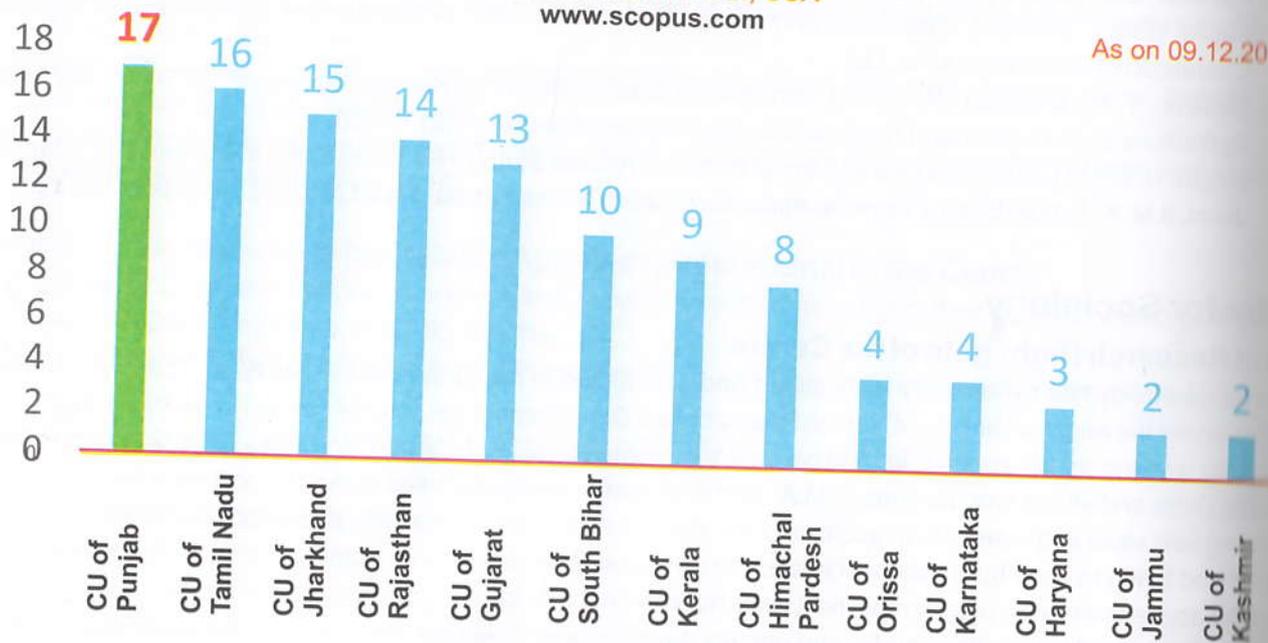
The University rating in terms of Research Gate scores, *h*-index and citation index in comparison with other Central Universities in the country.

Relative *h*-index of New Central Universities

Source: Elsevier Inc., USA

www.scopus.com

As on 09.12.2016

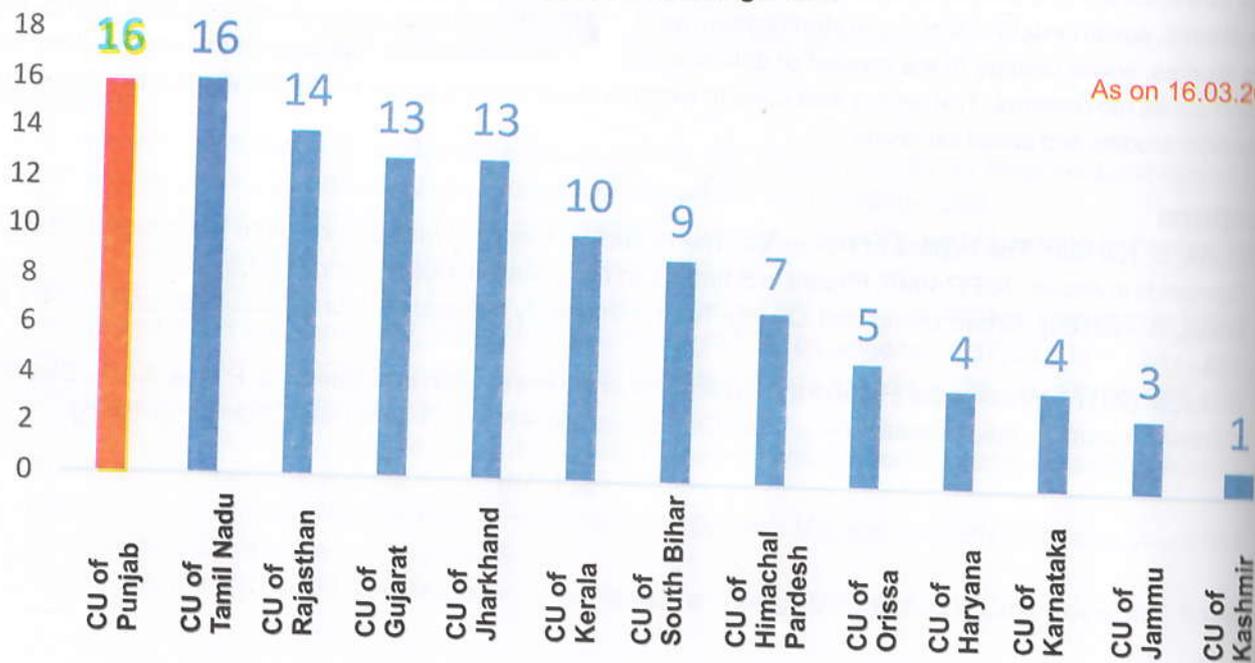


Relative *h*-index of New Central Universities

Source: Thomson Reuters Corporation, USA

www.webofknowledge.com

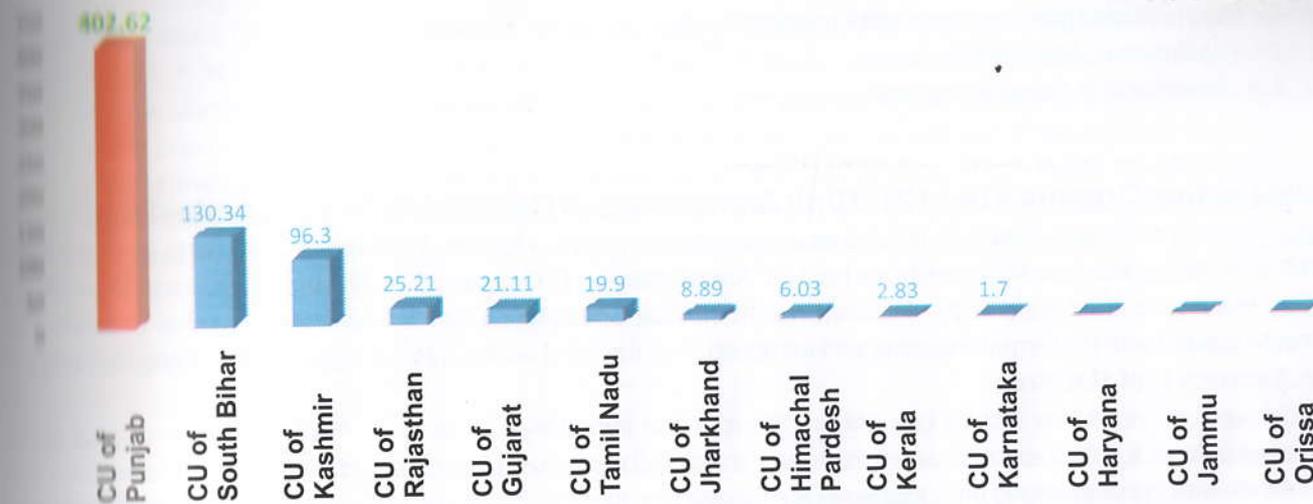
As on 16.03.2016





Relative Ranking Impact Points of New Central Universities of India as per Research Gate, USA

As on 20-9-2016



Impact Points are calculated based on which journals a researcher has published work in. This list shows institutions based on the sum of the impact points of publications attributed to them.

SC/ ST/OBC AND MINORITIES CELL

Members of the Cell

- | | |
|--|-------------|
| 1) Dr. Dhanya Subramaniam, Assistant Professor | Chairperson |
| 2) Dr. Yogalakshmi, Assistant Professor | |
| 3) Ms. Shweta Arora, Deputy Registrar | |

Special Lecture Organised on 125th Birth Anniversary of Baba Sahib Dr. B. R. Ambedkar

Central University of Punjab, Bathinda organized a special lecture on 7th October, 2016 the Bharat Ratna awardee Baba Sahib Dr. B. R. Ambedkar in order to celebrate his 125th Anniversary on 7th October 2016. The programme was marked by a lecture by Honorable chief guest Prof. Kuldeep Agnihotri, Vice Chancellor, Central University Himachal Pradesh. The programme started with the formal welcome and introduction of the chief orator, by Vice Chancellor, Central University of Punjab, Bathinda, Prof. R.K. Kohli.

Prof. Kuldeep Agnihotri in his lecture brought out the role and importance of Dr. B. R. Ambedkar not only as a social reformer but also as a prominent economist, historian and a well recognized law maker. He also laid stress on complete acquaintance with the unabridged personality of Dr. Ambedkar, without which he can't be understood as a whole. He went further to tell that Dr. B. R. Ambedkar enunciated the drive for better education, struggle against atrocities by making the masses aware about its importance in the long run. His struggle was not against an individual but against the mindset of people. He pronounced class division to be the root cause of the weakening of any society especially the Indian society which has suffered its consequences for a long time. In his book "ShudraKaunHai", Baba Sahib by tracing the history of the castes referred to the people of these castes as being the ones who have been struggling against atrocities for a long time. Adding to this he said that Baba Ambedkar suffered a lot because of the indiscrimination meted out to him for being the part of the lower caste. Dr. Agnihotri described caste discrimination as the cancer of society which has a bad impact on every sections of the society.

After this Prof. R. K. Kohli announced naming of the Central University of Punjab Auditorium as "Dr. B. R. Ambedkar Hall". The chief guest was felicitated by Prof. Kohli. Dr. Dhanya M. S. presented vote of thanks on behalf of Central University of Punjab. The programme was graced by the presence of Dean of Academic Affairs, Registrar, Deans of all the Schools, Teaching and Non-teaching staff and the students of university.

INTERNAL QUALITY ASSURANCE CELL

As per the guidelines of NAAC (National Assessment and Accreditation Council), IQACs are established for performance evaluation and quality up-gradation. Quality enhancement is a continuous process, and IQAC has to become a part of an institution's quality enhancement system. These are not just another hierarchical structure or a record-keeping exercise in the institution. It will be a facilitative and participative system of the institution for planning interventionist strategies to remove deficiencies and enhance quality.

As per the above directions of NAAC, Central University of Punjab has established its IQAC with Professor A. K. Dhawan as Director. IQAC at the University works for overall quality enhancement in various areas such as curriculum development, teaching-learning and evaluation process, infrastructure resources, student support systems and governance structure.

1. NIRF Ranking

The information regarding the Academic, Research & Development and Administrative activities of the University were collected, compiled and filed on 21-12-2016 for NIRF ranking of the university. As per NIRF portal, university ranks between 'Rank-band: 115-120'.

Details of the NAAC Ranking

A team of eight (8) eminent academicians, researchers and administrators under the chairmanship of Prof. Harish Padh, Vice – Chancellor, Sardar Patel University visited CUPB from April 26-30, 2016 for its NAAC accreditation. Prof. R. K. Kohli, Vice Chancellor, CUPB and Prof. A. K. Dhawan, Director, IQAC arranged the interaction of the faculty, students and administrative officers of the university with the NAAC team. The CoCs of different Centres made presentations about the programmes being run under their centres and R&D activities as well as other promotional activities being taken by the centres before the NAAC team. Prof. Padh, the chairperson of the NAAC team shared with the university authorities that he along with his team members are impressed with the progress made by the university in such a short time of its establishment. In the very first cycle, the NAAC awarded "A" grade to the university.

3. Composition of IQAC:

Members

	Prof. R.K. Kohli Vice-Chancellor, (Chairman, IQAC)
	Prof. Gurmail Singh Vice-Chancellor, Akal University, Talwandi Sabo
	Prof. P. Ramarao Dean, School of Basic and Applied Sciences
	Dr. Jagdeep Singh Registrar, CUPB
	Prof. S. K. Baw Professor and Co-ordinator of Centre for Education
	Dr. Anjana Munshi Professor, Center for Human Genetics
	Dr. Deepak Chauhan Associate Professor, Center for Environmental Law

8		Dr. Sunil Mittal Associate Professor, Center for EVST
9		Ms. Shweta Arora Deputy Registrar
10		Mr. Nitin Singal Indotech Engineering Products, Bathinda
11		Sh. Dinesh Sood, General Manager, HR Department, National Fertilizers Limited, Bathinda (Punjab)
12		Mr. Kovid Kumar Student (w.e.f. October 21, 2016)
13		Prof. A.K. Dhawan Director, IQAC

Activities of IQAC:

- IQAC participated in preparing the Annual Quality Assurance Report which is to be submitted to NAAC yearly.
- Submitted updated report of University's Handbook to Association of Indian Universities (AIU)
- Submitted information w.r.t. National Survey on Resources Devoted to Scientific and Technological (S&T) Activities 2015-16
- Provided the basic information for finalizing the agenda for the Visitor's Conference
- Facilitated the registration of CUPB on National Digital Library portal
- Facilitating the university to provide information to MHRD and UGC as and when required
- Participated in survey being carried out for India Internationalisation of Higher Education in India by Department of Science and Technology, Government of India.

CERTIFICATE COURSE IN HUMAN RIGHTS AND DUTIES

Guest Lecture/Academic & Extension Activities under the CCHRD from February - May, 2016

The total participants of the course were 28 for the third batch: Feb - May, 2016. The participants were from different age group, representing both the genders (14 male and 14 female), Participants were from different areas of Science and Humanities, language (mixed group of Punjabi, Hindi, and English) and with different cultural backgrounds. The Course consisted of participants from different background including university, college students, people from Centre & State Government departments/private sectors, school teachers, persons engaged with NGOs/welfare institutions, advocates etc.

During the course the following lectures were delivered: Dr. Sukhwinder Kaur (Overview of Human Rights, 05.03.2016); Dr Surender Mehra (Rule of Law in Criminal Justice Administration, 12.03.2016); Dr. Nimmi Jindal Open and Transparent Governance and Right to Information, 19.03.2016); Dr. Puneet Pathak (Sexual Harassment Law in India: Sexual Harassment Act, 2013, PWDVA, 19.03.2016); Dr. Jaswant Saini (Redressal Mechanism against Human Rights Violation, 02.04.2016); Dr. Parmod Malik (Role of UDHR in Protection of Human Rights in India, 02.04.2016); Dr. Rajinder Kumar (Social Movement and Freedom Struggle, 09.04.2016); Dr. H. R. Arora (Consumer Rights as Human Rights, 09.04.2016), Dr. Bawa Singh (Historical Development of the Concept of Human Rights, 16.04.2016) Mrs. Seema Sharma (Alternative Dispute Resolution: A tool for Speedy Justice, 16.04.2016) Dr. H. R. Arora (Human Rights under Indian Constitution, 23.04.2016) Dr. Rajinder Kumar (Concept of Dharma in Ancient India, 23.04.2016) Dr. Puneet Pathak (Socio-Economic Aspect of Human Rights, 23.04.2016) Dr. Vinod Arya (Nature and classification of Human Rights, 30.04.2016) Dr. Sukhwinder Kaur (Human Rights and Disadvantaged Groups, 30.04.2016) Dr. H. R. Arora (How to Plan and Carry out a Project, 14.05.2016) Dr. Rajinder Kumar (Human Rights and Terrorism in India, 14.05.2016) Dr. Puneet Pathak (International Human Rights: Enforcement Mechanism, 14.05.2016)



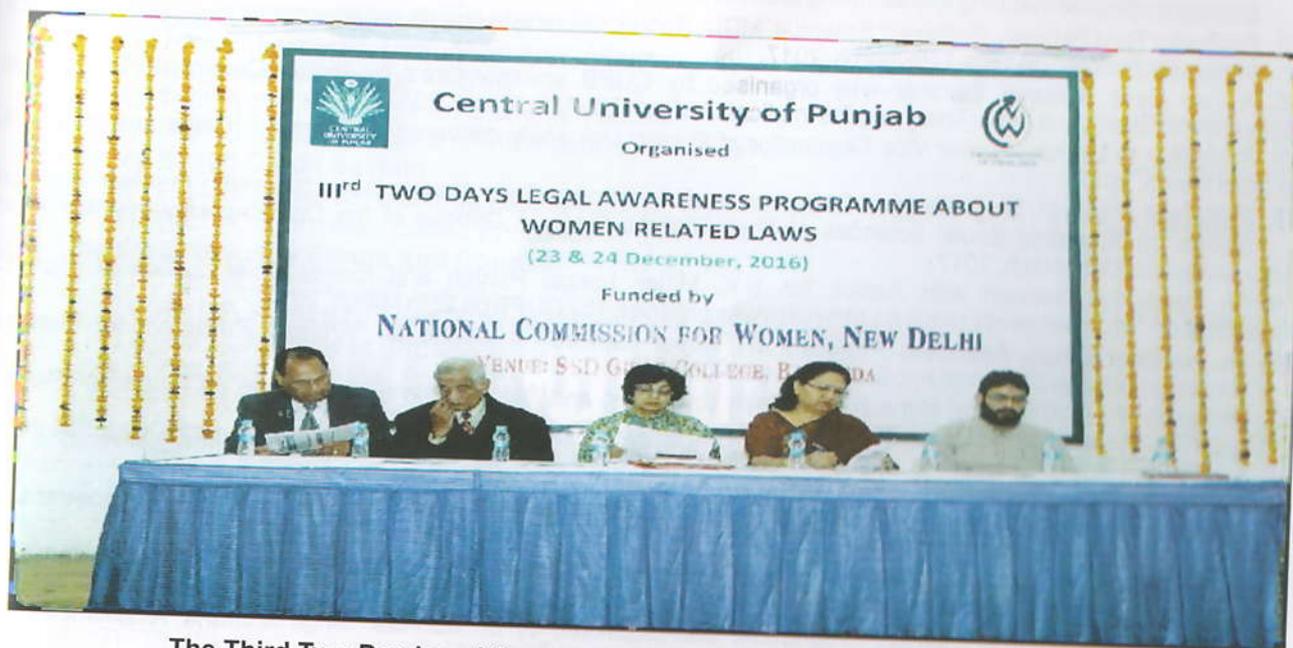
Honorable Vice Chancellor, Prof. R.K. Kohli Addressing the Participants of CCHRD on 11 June, 2016

Two-Day Legal Awareness Programme about Women Related Laws funded by National Commission for Women

The Centre for Law, Central University of Punjab, Bathinda organized the first Two-day legal awareness programme about women related laws in the auditorium of the University on 08th and 09th March 2016 funded by in collaboration of National Commission for Women, New Delhi. The second two-day legal awareness programme about women related laws was organized in 27th & 28th August, 2016 in University Auditorium. The third two-day legal awareness programme about women related laws was organized in SSD Girls College, Bathinda on 23th and 24th December 2016.



The Second Two-Day Legal Awareness Programme



The Third Two-Day Legal Awareness Programme about women related laws

DISSEMINATING KNOWLEDGE: SEMINARS and GUEST LECTURES

University has a policy to invite eminent personalities from within India and abroad to deliver lectures for the benefit of the students and faculty of the university. During the period under review, the following lectures were held:

1. Dr. Ajay Prakash Gupta, Senior Technical Officer, QA & QC Division, IIM, Jammu delivered a lecture on "Quality Control of Medicinal and Aromatic Plants" on 13th July, 2016.
2. Professor K. L. Dhar, Former Head, Natural Product Division, IIM, Jammu delivered a lecture on "Basics of NMR and its spectral interpretations" and "Terpenoids as Medicines" on 26th July, 2016.
3. A Special lecture was organised by CUPB on "Concept of India" on 19th August, 2016 and during this programme The Vice Chancellor of Chitkara University, Brigadier (retired) R.S. Grewal also delivered a lecture on "History of India."
4. Professor Kuldeep Agnihotri, Vice Chancellor, Central University of Himachal Pradesh delivered a lecture on "125th Birth Anniversary of Baba Sahib Dr. B. R. Ambedkar" on 7th October, 2016.
5. A National Seminar on "Recent Trends in Food Processing" organised by CUPB in collaboration with the Indian Institute of Crop Processing Technology (IICPT) on 9th December, 2016.
6. Professor Navsangeet Singh, Department of Post graduate Punjabi, Guru Kashi University, and Bathinda delivered a lecture on "Guru Nanak Dev Ji Di Bharti Samaj Nu Den" on 10th December, 2016.
7. Third Two Day Legal Awareness Programme about women related Laws by CUPB in association with NCW, New Delhi at SSD Girls College, and Bathinda on 22nd-23rd December, 2016.
8. A National Conference on "Computer Engineering Problem Optimisation" on 27th-28th December, 2016.
Dr. S.R.S Iyengar from IIT Ropar, Dr. Balkrishan Jindal from YCOE, Pbi. Univ. Regional Campus, Talwandi Sabo. And Dr. Munish Kumar form Panjab University Regional Campus, Mukatsar. Dr. Iyengar has delivered a talk on Crowd Computing
9. Professor Ravi Kumar Anu, Department of Hindi, Punjabi University, Patiala delivered a lecture on "Literature and Culture" on 8th January, 2017.
10. Professor Satish Kapoor, DAV University, Jalandhar delivered a lecture on "National Youth Day" on 12th January, 2017.
11. Professor Paramjit Nanda, Professor & Head, Punjab School of Economics, Guru Nanak Dev University, Amritsar Punjab delivered a lecture on "Globalization, Demonetization and its Impact in India" on 18th January, 2017.
12. Dr. Sudesh Yadav, Scientist-F, CIAB, DBT, Mohali, Punjab presented a talk on "Metabolic Engineering Flavonoid Biosynthesis and academic and industrial Perspective" on 13th February, 2017.
13. A one day workshop was organised by CUPB on "DNA sequencing and application as well as Hands on training for the scientific/ technical staff of the University and institutions from Punjab and adjoining states" in collaboration with M/s Thermofischer Scientific Pvt Ltd. for capacity building on 18th February, 2017.
14. A Five Day Workshop cum training programme was organised by CUPB on "Techniques of geological, geomorphological mapping and sampling process for geoscience research" on 13th-17th march, 2017.
15. Professor Ravi Parkash, Professor Emeritus, MDU, Rohtak delivered a lecture on "Important Topics from Genetics to Molecular Biology" on 15th-17th march, 2017.
16. A Two Days National Seminar was organised by CUPB and sponsored by Indian Council of Social Science Research on "Brexit and India: Analysing the Implications" on 17th-18th March, 2017.
17. Professor M.M. Puri, former Vice Chancellor of Punjab University delivered a lecture on "China and India in Asia" on 23rd March, 2017.
18. Professor Paramjit Singh Judge, Department of Sociology, Guru Nanak Dev University, Amritsar delivered a lecture on "Situating Social Sciences at Their Rightful Place: A Critique of the Contemporary Impression about Knowledge" on 24th March, 2017.
19. An Interactive Session with Justice Mr. S.K. Mittal, Lokpal Punjab and former Chief Justice of High Court Rajasthan on "Importance of Lokpal & Lokayukta was organised by CUPB on 25th March, 2017.
20. Dr. Narinder Singh, Associate Professor IIT Ropar delivered a lecture on "Artificial Receptors for Sustainable Development and Biological Applications" on 31-03-2017.
21. Professor P. K. Ahluwalia, Himachal Pradesh University, and Shimla delivered a lecture on "Green of Flatland of Crystals: Graphene." on 23rd March 2017
22. Dr. U. C. Lavania, Professor Emeritus, CSIR, Department of Botany, University of Lucknow delivered a special lecture on 09 March, 2017.
23. Dr. Seshu Lavania, Professor and Head, Department of Botany, University of Lucknow delivered Special Lecture on 09 March, 2017.
24. A One Day National Seminar was organized by CUPB in collaboration with IICPT, Thanjavour (Tamil Nadu) on 9th December 2016.
25. A Two week Computer Literacy Programme was organised by Er. Surinder Singh Khurana, Assistant Professor, Centre for Computer Science and Technology, CUPB on 20th June, 2016.

IMPORTANT COMMITTEES at CUPB

- | | |
|--|------------------------------|
| 1. Competitive Examination Cell | Coordinator |
| 1) Dr. Kiran Kumari Singh, Assistant Professor | |
| 2) Dr. Puneet Pathak, Assistant Professor | |
| 2. Earn While You Learn (EWYL) Scheme | Coordinator |
| 1) Prof. Jagdeep Singh, Registrar | |
| 2) Dr. Monisha Dhiman, Associate Professor | |
| 3) Dr. Vinod Kumar, Assistant Professor | |
| 4) Dr. Kiran Kumari Singh, Assistant Professor | |
| 3. Students Financial Assistance Fund and Education Loan Facility Committee | Chairperson |
| 1) Dean, School of Basic and Applied Sciences | |
| 2) Dean Students Welfare | |
| 3) Prof. V.K. Garg, Dean School of Environment & Earth Sciences | |
| 4) Dr. Bawa Singh, Assistant professor | |
| 5) Dr. Dhanya M.S. Assistant Professor | |
| 6) Dr. Dinesh Babu P, Assistant Professor | Convener |
| 7) Assistant Registrar (Finance) | |
| 4. SC/ ST/OBC and Minorities Cell | Chairperson |
| 4) Dr. Dhanya Subramaniam, Assistant Professor | |
| 5) Dr. Yogalakshmi, Assistant Professor | |
| 6) Ms. Shweta Arora, Deputy Registrar | |
| 5. Admission Committee | Overall Chair
Coordinator |
| 1) Prof. P. Ramarao, Dean, Academic Affairs | |
| 2) Mr. Kanwal Pal Singh Mundra, Controller of Examination | |
| School Wise Committees | Chairperson |
| 1) Dean of the School | |
| 2) COCs/OICs of the respective School/Centre. | |
| 3) Three faculty members in the order of eniority of each Center under the School. | |
| 4) Any one member of the faculty will be Member Secretary of that School Admission | Committee |
| 6. Admission of International Students | Chairperson |
| 1) Prof. P. Ramarao, Dean, Academic Affairs | |
| 2) Registrar (Mr. Pankaj Khare) | |
| 3) Prof. A.K. Dhawan, Dean Students Welfare | |
| 4) Prof. S.K. Bawa, Coord, of International Education Division | Convener |
| 7. Choice Based Credit System | Chairperson |
| 1) Prof. P. Ramarao, Dean, Academic Affairs | |
| 2) Prof. A.K. Dhawan, Invited Professor | |
| 8. University Industry Forum and Council | Chairperson |
| 1) The Vice-Chancellor CUPB | |
| 2) Prof. P. Ramarao, Dean, School of Basic and Applied Sciences | |
| 3) Prof. A.K. Dhawan, Professor | |
| 4) Prof. S.S. Marwaha, Professor | |
| 5) Prof. A.K. Jain, Professor | |
| 9. Library Committee | Library In-charge |
| 1) Prof. S.K. Bawa, CoC, Education | |
| 2) Dr. Anil Kumar Mantha, Associate Professor, Animal Sciences | |
| 3) Dr. Sanjeev Kumar, Associate Professor, Plant Sciences | |
| 4) Dr. Felix Bast, Assistant Professor, Plant Sciences | |
| 5) Dr. Deepak Kumar, Associate Professor, Law | |
| 6) Dr. Kiran Singh, Assistant Professor, Geography | |
| 7) Dr. Bhupinder Singh, Information Scientist | |



10. Leave Committee

- 1) Prof. A.K. Jain, Dean, SEES.
- 2) Prof. A.K. Dhawan, Professor
- 3) Prof. Ramakrishna wusurika, Professor

11. Ethics Committee

- 1) Dr. M.K. Mahajan, Chairperson
- 2) Prof. P. Ramarao, DAA
- 3) Dr. A.K. Mantha, Assistant Professor
- 4) Dr. Somesh Baranwal, Assistant Professor
- 5) Dr. Sabyasachi Senapati, Assistant Professor
- 6) Dr. Gurmail Singh Mauji, Clinician
- 7) Mr. Mithu Ram Gupta, Legal Expert
- 8) Mr. Jagmohan Kaushal, Social Scientist
- 9) Dr. Mridula Mittal, Medical Officer
- 10) Prof. R.K. Deora
- 11) Dr. Sandeep Singh, Assistant Prof.

12. Committee for Evaluating the API Scores of the Faculty for Promotion under CAS

- 1) Prof. V. K. Garg, Dean SEES- Chairperson
- 2) Dr. Pabitra Kumar Mishra, Associate Professor- Special Invitee
- 3) Dr. Gauree Shanker, Associate Professor
- 4) Dr. Sandeep Singh, Assistant Professor
- 5) Dr. Krishna Kanta Halder, Assistant Professor
- 6) Dr. Dinesh Babu P., Assistant Professor
- 7) Dr. Aditya Ranjan Kapoor, Assistant Professor
- 8) Mr. Rajender Kalra, Deputy Registrar, Convener

13. Implementation Consultancy Projects

- 1) Prof. P. Ramarao, Dean, Academic Affairs
- 2) Registrar (Pankaj Khaire)
- 3) Prof. A.K. Jain, Professor
- 4) Dr. Sunil Mittal, Associate Professor

14. Intellectual Property Right Cell

- 1) Prof. A.K. Jain, Dean SEES.
- 2) Dr. Sunil Mittal, Associate Professor
- 3) Dr. Preeti Khetarpal, Assistant Professor Convener 13.

15. Research Advisory Committee

- | | |
|---|-------------|
| 1) Prof. A.K. Dhawan, Dean, School of Health Sciences | Chairperson |
| 2) Prof. Dr. N. Sathyamurthy, Director, IISER, Mohali. | |
| 3) Prof. Veer Singh, Ex. Director, Chandigarh Judicial Academy, Chandigarh | |
| 4) Prof. Dr. R.K. Tuli, Former Director, NABI, Mohali | |
| 5) Prof. V.K. Kapoor, Former Chairman UIPS, Panjab University Chandigarh (Pharmaceutical Sciences)/
Director Research, GHG Khalsa College, Raikot. | |
| 6) Prof. Rajesh Gill, Panjab University, Chandigarh (Social Sciences). | |
| 7) Prof. Sohanbir Singh, Guru Nanak Dev University, Amritsar (Literature). | |
| 8) Prof. Nandita Shukla Singh, Panjab University, Chandigarh (Education). | |
| 9) Prof. K.N. Pathak, former Vice Chancellor, Panjab University Chandigarh (Physical Sciences). | |
| 10) Prof. Kesar Singh Kesar, Panjab University, Chandigarh. | |
| 11) Ms. Shweta Arora, Deputy Registrar, CUPB | Secretary |

16. Internal Research Committee

- 1) Prof. A.K. Jain, Professor Centre for Computer Science and Technology.
- 2) Prof. P. Ramarao, Professor, Centre for Pharmaceutical Sciences and Natural Products.
- 3) Prof. A.K. Dhawan, Professor, Centre for Plant Sciences.
- 4) Dr. Anjana Munshi, Centre for Human Genetics and Molecular Medicine.
- 5) Dr. Zameerpal Kaur, Associate Professor, Centre for Comparative Literature.
- 6) Dr. Anil Kumar Mantha, Associate Professor, Centre for Animal Sciences.

17. Student Counselling Cell

- | | |
|--|-------------|
| 1) Prof. S.K. Bawa, Professor | Chairperson |
| 2) Dr. Sushil Kumari Gupta, OSD Administration | |
| 3) Dr. Anjana Munshi, Professor | |
| 4) Dr. Tarun Arora, Associate Professor | |
| 5) Ms. Shweta Arora, Deputy Registrar | Convener |

18. Environment Auditing and Monitoring Cell

- 1) Dr. J. Nagendra Babu, Assistant Professor
- 2) Dr. Sunil Mittal, Associate Professor
- 3) Dr. Yogalakshmi K.N., Assistant Professor
- 4) Dr. Dhanya M.S., Assistant Professor
- 5) Dr. Puneeta Pandey, Assistant Professor
- 6) Mr. Rajinder Singh Smagh, Liaison Officer

19. Core Group: Environment Awareness Committee

- | | |
|---------------------------|---|
| 1) Chairman | : Prof. R.K. Kohli, Vice Chancellor, CUPB |
| 2) Coordinator(s) | : Prof. A.K. Jain, Dean, SEES |
| | : Prof. V.K. Garg, COC, Centre for EVST |
| 3) Organizing Coordinator | : Dr. Sunil Mittal, Assistant Professor, EVST |

Sub Group-1: Waste and e-Waste Management Group

- i) Ms. Shweta Arora, Deputy Registrar
 - ii) Dr. Yogalakshmi K.N., Assistant Professor
 - iii) Dr. Shireesh Pal, Assistant Professor
 - iv) Dr. Dhanya M.S., Assistant Professor
- Convener

Sub Group-2: Green Campus Group

- i) Dr. Sanjeev K. Thakur, Associate Professor
 - ii) Dr. Harish Chander, Assistant Professor
 - iii) Mr. Sweet Singh, Campus Manager
 - iv) Ms. Sapna Thakur, Student
 - v) Ms. Shruti Chaudhri, Student
 - vi) Dr. Pankaj Bhardwaj, Assistant Professor
- Convener

Sub Group-3: Renewable Energy Group

- i) Dr. Sunil Mittal, Associate Professor
 - ii) Dr. Deepak Kumar, Associate Professor
 - iii) Er. Daljit Singh, Executive Engineer
 - iv) Er. Puneet, Assistant Engineer
 - v) Mr. Gajender Singh, Student
 - vi) Mr. Rabindra Kumar, Student
 - vii) Dr. A.K. Jain, Dean, Professor, SEES
- Convener

Sub Group-4: Green Building Policy

- i) Dr. Tarun Arora, Associate Professor
 - ii) Executive Engineer
 - iii) Er. Puneet, Assistant Engineer
 - iv) Dr. Puneeta Pandey, Assistant Professor
 - v) Mr. Ravishankar, Student
- Convener

20. Academic Audit and Monitoring Cell

- 1) Prof. A.K. Dhawan, Professor
 - 2) Dr. Anjana Munshi, Professor
 - 3) Prof. S.K. Bawa, Professor
- Convener

21. Alumni Association

- 1) Vice Chancellor, Chief Patron (*Ex-officio*)
- 2) Prof. P. Ramarao, President
- 3) Prof. A.K. Dhawan, Vice-President:
- 4) Dean, Alumni Relations (*Ex-officio*)
- 5) Registrar, Secretary
- 6) Finance Officer, Joint Secretary-cum-Treasurer (*Ex-officio*)

22. Human Rights Club

A. Executive Committee

- | | |
|--|----------|
| 1) Prof. P. Ramarao, Dean, DAA | Chairman |
| 2) Dr. Tarun Arora, Associate Professor | |
| 3) Dr. Monisha Dhiman, Associate Professor | |
| 4) Dr. Puneeta Pandey, Assistant Professor | |
| 5) Dr. Surinder Khurana, Assistant Professor | |
| 6) Dr. Puneet Pathak, Assistant Professor | |
| 7) Dr. Deepak Kumar, Associate Professor | Convener |

B. Organising Committee

- 1) Mr. Ramandeep Singh, Research Scholar
- 2) Mr. Bibekanand Sarkar, Research Scholar
- 3) Mr. Kovid Kumar, Research Scholar
- 4) Mr. Dinesh Bassi, Research Scholar
- 5) Ms. Anamika Das, Research Scholar

23. Complaint Committee for Cases of Sexual Harassment at CUPB

- | | |
|---|-------------------|
| 1) Dr. Surinderjit Kaur Bawa, Professor, Centre for Education | Presiding Officer |
| 2) Dr. Sushil Kumari Gupta, Officer on Special Duty (Academic and Admin) | |
| 3) Dr. Satwant Kaur Bhullar, Principal, RBDVA Senior Secondary School, Bathinda | |
| 4) Mr. Jagmohan Kaushal, Founder and President, Teachers Home Trust, Bathinda | Member (NGO) |
| 5) Mrs. Shweta Arora (Member), Deputy Registrar | Member Secretary |
| 6) Dr. Deepak Kumar, Associate Professor | |
| 7) Dr. Anil Kumar Mantha, Associate Professor | |
| 8) Dr. Kiran Kumari Singh, Assistant Professor | |

24. Grievance Redressal of Employees and Students

a) Appeals Committee

- | | |
|---|-------------|
| 1) Prof. A.K. Dhawan, Dean, School of Health Sciences | Chairperson |
| 2) Prof. S.K. Bawa, Dean, School of Education | |
| 3) Dr. Alpna Saini, Associate Professor | |
| 4) Dr. Tarun Arora, Associate Professor | |
| 5) Dr. Harish Chander, Assistant Professor | |
| 6) Mr. Rajender Kumar, Deputy Registrar (Estt.) | Convener |

b) Review Committee

- | | |
|---|-------------|
| 1) Prof. P. Ramarao, Dean Academic Affairs SBAS | Chairperson |
| 2) Prof. A.K. Dhawan, DSW | |
| 3) Prof. S.K. Bawa, Dean, School of Education | |
| 4) Dr. Anjana Munshi, CoC, Human Genetics | |
| 5) Dr. Dhanya M.S., Assistant Professor | |
| 6) Dr. Pankaj Khare Registrar | Convener |

c) Grievance Redressal Committee (Examinations)

- 1) Prof. P. Ramarao, Dean, School of Basic and Applied Sciences
- 2) Registrar

d) Grievance Redressal Committee (Infrastructure)

- 1) Prof. A.K. Dhawan, Dean Students Welfare
- 2) Dr. Tarun Arora, Boys Hostel Warden
- 3) Dr. Sandeep Kaur, Girls Hostel Warden
- 4) Er. Daljeet Singh, Executive Engineer

25. Placement Coordination Cell

- 1) Prof. P. Ramarao, Dean, School of Basic and Applied Sciences
- 2) Prof. A.K. Dhawan, Dean, School of Emerging Life Sciences
- 3) Dr. Tarun Arora, COC for Law
- 4) Ms. Shweta Arora, Deputy Registrar

Convener

STUDENTS' ACHIEVEMENTS AND ACTIVITIES

The Central University of Punjab has a Competitive Examination Cell (CEC) to prepare the students to face different competitive examinations and help them acquire the requisite knowledge to excel in these competitions. The cell conducts coaching classes for examinations like UGC CSIR-NET, ICMR, DBT, GATE, GPAT, etc. Classes are held in the evening, so that the regular class schedule of the university is not disturbed. Teachers from different centres of the university coach the students to groom them for the competitive requirements.

List of Students, who have qualified National Level Competitive Exams

S. No.	Name of Students	Batch	Achievement
1.	AkshayBinayke	2016-17	UGC-NET
2.	Ram Sharma	2016-17	GATE
3.	Sachin Sharma	2016-17	GATE
4.	Ajay Kumar	2016-17	GATE
5.	Yogesh Kumar	2016-17	UGC-NET
6.	Adarsh Kumar	2016-17	UGC-NET
7.	Nipunta	2016-17	UGC-JRF-NET
8.	KishoriLal	2016-17	GATE
9.	AkashBansal	2016-17	GATE
10.	SourenAdhikari	2016-17	GATE
11.	Parul Sharma,	2016-17	JSET
12.	AkankshaBhardwaj	2016-17	UGC-JRF-NET
13.	Ravi Shankar Kumar	2016-17	UGC-NET
14.	AnkurBharadwaj	2016-17	UGC-NET
15.	Shilpa Sharma	2016-17	CSIR -NET
16.	Rakesh Kumar Gupta	2016-17	ASRB-NET
17.	Deepak Kumar Mishra	2016-17	ASRB-NET

18.	Sangita Singh	2016-17	ASRB-NET
19.	RatanLal	2016-17	CSIR-JRF
20.	ArindamAdhikari	2016-17	CSIR-JRF
21.	Varun Kumar	2016-17	CSIR-JRF
22.	Anish Gupta	2016-17	GATE
23.	Satnam Singh	2016-17	JRF-NET
24.	Randeep Singh	2016-17	UGC-NET
25.	Priyanka Singh	2016-17	UGC-NET
26.	PrikshitaRathor	2016-17	UGC-NET
27.	Naiyan Ahmad	2016-17	UGC-NET
28.	RanjanBehara	2016-17	GATE
29.	DependuDolui	2016-17	GATE
30.	DiporanjanPatil	2016-17	CSIR-NET
31.	Bandari Naga Chandra	2016-17	UGC-NET
32.	Vandana Singh	2016-17	GATE
33.	Nidhi Sharma	2016-17	UGC-NET
34.	Madhumita	2016-17	UGC-NET
35.	Komal	2016-17	UGC-NET
36.	Jagdeep Singh	2016-17	UGC-NET
37.	Jaskaran Singh	2016-17	GATE
38.	Shweta Sharma	2016-17	GATE
39.	Gursewak Singh	2016-17	GATE
40.	AkaskshaPriya	2016-17	GATE
41.	Sangeeta Yadav	2016-17	GATE
42.	Manpreet Kaur	2016-17	GATE
43.	NishuKundu	2016-17	GATE
44.	ShrutiBhardwaj	2016-17	GATE
45.	Harinder Kaur	2016-17	GATE
46.	Rajendra Singh Rawat	2016-17	GATE
47.	HarshvardanDeoSolanki	2016-17	GATE
48.	GousaiHabib	2016-17	GATE
49.	Moha Gupta	2016-17	GATE
50.	AroofAimen	2016-17	GATE
51.	Varun Kumar	2016-17	GATE

CSIR = Council of Scientific and Industrial Research

UGC = University Grants Commission

GATE = Graduate Aptitude Test

GPAT = Graduate Pharmacy Aptitude Test

ICSSR= Indian Council of Social Science Research

ICAR-ARS= Indian Council for Agricultural Research

Students' Union

The Students form an integral part of any academic institution. The university recognizes the student power and cooperates with the Central University of Punjab Students' Union (CUPSU). Both CUPSU and the university jointly work towards the betterment and the advancement of the academic life of the university. A committee of following members was constituted for conducting Students' Union Election for Session 2016-17:

1. Prof. Ashok Kumar Dhawan, Dean Students Welfare
2. Prof. V. K. Garg, Professor, Centre for Environmental Science and Technology
3. Dr. Anjana Munshi, Professor, Centre for Human Genetics and Molecular Medicine
4. Dr. Tarun Arora, Associate Professor, Centre for Law and Chief Warden (Boys Hostel)
5. Dr. Amandeep Kaur, Associate Professor, Centre for Computer Science and Technology and Chief Warden (Girls' Hostel)
6. Dr. Sanjeev Kumar, Associate Professor, Centre for Plant Sciences
7. Dr. Anil Kumar Mantha, Associate Professor, Centre for Animal Sciences
8. Dr. Monisha Dhiman, Associate Professor, Centre for Biochemistry and Microbial Sciences
9. Dr. Dhanya M.S., Assistant Professor, Centre for Environmental Sciences and Technology
10. Dr. Rajinder Kumar, Assistant Professor, Centre for Comparative Literature
11. Dr. Deepak Kumar, Associate Professor, Centre for Law
12. Dr. Bawa Singh, Assistant Professor, Centre for South and Central Asian Studies
13. Dr. Vinay Kumar, Assistant Professor, Centre for Plant Sciences
14. President Students Union 2015 – 16
15. Secretary Students Union 2015 – 16
16. Treasurer Students Union 2015 – 16

The constitution of Students' Council for the year 2016-17 is as below

Chairman : Dean Students Welfare

Elected Students Members :

Sr. No.	Centre	Name of Elected Student
1.	Chemical Sciences	Bhupender Kumar
2.	Pharmaceutical Sciences & Natural Products	Ankush Thakur
3.	Animal Sciences	Nakul Raj
4.	Plant Sciences	Anish Gupta
5.	Biochemistry & Microbial Sciences	Malaya Ranjan Behara
6.	Computational Sciences	Karamveer
7.	Physical sciences	Rahul Chauhan
8.	Mathematics and Statistics	Ramandeep Kumar
9.	Environmental Science and Technology	Nitin Chowdhary
10.	Geography and Geology	Sumeet Kumar
11.	Human Genetics and Molecular Medicine	Mr. Sourav Kalra
12.	Comparative Literature	Barjinder Singh
13.	Classical and Modern Languages	Neha Sharma
14.	Computer Science and Technology	Akansha Priya
15.	South and Central Asian Studies	Mohamad Raqeeb
16.	Economic Studies	Mohd. Fayaz
17.	Law	Sumandeep Kaur
18.	Education	Sumeet
19.	Sociology	Happy Singh



20. Agribusiness & Food Science and Technology

Santosh Phule

Nominated Students:

1st Year Students on the basis of CUCET Score

Br. No.	Centre	Name of Student
1.	Chemical Sciences	Ravinderanath
2.	Pharmaceutical Sciences & Natural Products	Sachin Sharma
3.	Physical sciences	Anamika Kumari
4.	Geography and Geology	Ujjwala Rout
5.	Classical and Modern Languages	Jaspal Kaur
6.	Law	Satish Singh

2nd Year Students on the basis of First Year Merit

Br. No.	Centre	Name of Student
1.	Chemical Sciences	Dependu Dalui
2.	Biochemistry & Microbial Sciences	Satveer Kaur
3.	Computational Sciences	Komal Yadav
4.	Environmental Science and Technology	Sweta Choubey
5.	Human Genetics and Molecular Medicine	Ms. Babita Sharma
6.	Law	Vishakha Chib

Ph.D. Research Scholar (Nominated by CoCs on the basis of performances)

Br. No.	Centre	Name of Student
1.	Plant Sciences	Wahil UI Rehman
2.	Computational Sciences	Suchismita
3.	Geography and Geology	Amandeep Kaur
4.	Comparative Literature	Devendra Kumar Gora
5.	South and Central Asian Studies	Abdul Rauf Bhat
6.	Education	Shyam Sunder

Students nominated in the category of NSS, extra-curricular activities and Sports

1.	Igona Gorakhnath, Ph. D. Education	-	Extracurricular activities
2.	K. C. Saini, Biosciences	-	Sports

Out of these 40 students, the following four students were elected as the members of Executive Committee of Students Council:

1. Mohd. Fayaz, Centre for Economic Studies,
2. Mr. Satish Singh, Centre for Law
3. Mr. Nakul Raj, Centre for Animal Sciences
4. Mr. Sumeet Kumar, Centre for Geography and Geology

Meeting schedule of the DSW with the members of Students Council:

The members of the Executive Committee meet the DSW at 4:00 p.m. on every Wednesday, in the Sub-Committee room, Academic Block.

The Students Council meets the DSW once in every month on the first Thursday of the month at 4:00 p.m. in the Seminar Hall.

National Service Scheme

National Service Scheme of Central University of Punjab has experienced a dynamic change in the academic year 2016-17. The NSS Unit resumed its activity with its motto 'NOT ME BUT FOR YOU'. NSS activities began with the following aims and vision. It seeks to raise awareness among the students on national integration, social harmony, general health awareness, personality development, personal hygiene, mental health and stress management.

NSS Activities during the Academic Year

The NSS volunteers actively participated and rendered their services to the University in all the campus activities through the following programmes:

1. Cleanness and Plantation Drive on 12 August, 2016 at Ghudda

To create awareness among the villagers and generate service sentiments in students, National Services Scheme (NSS) volunteers of Central University of Punjab, Bathinda joined at village Ghudda for one day special camp on 12 August, 2016. Volunteers during the Swachh Bharat Campaign special camp carried out cleanness and plantation drive inside the holy place and Panchayat Land. During the camp, about 50 saplings were planted by the volunteers. After the drive, they met with the villagers and motivated them to adopt general cleanness and environment ethics. The village panchayat during the camp, the village panchayat fully cooperated with the staff and volunteers. The new volunteers of NSS of year 2016-17 were highly motivated and enthusiastic enough in the activities. Before concluding the camp, they also met with the girls learning stitching and machine work run by the village panchayat. NSS Programme Coordinator Dr. Deepak Chauhan, Programme Officer Dr. Mahesh Kulharia and Dr. Ramanpreet Kaur managed the camp successfully.



2. One-Day Special Camp

To create awareness among the students and volunteers of National Services Scheme (NSS) a One-Day special camp had been organized at Central University of Punjab, Bathinda on 03.12.2016. 70-80 NSS volunteers of Central University of Punjab, Bathinda worked at University Campus for cleanness. Old and new volunteers of NSS, participated together in this activity. Volunteers motivated the people to clean the environment. NSS Programme Coordinator was present there.



Glimpses of the activities at the One-Day Special Camp

3. Voter's day on 25th Jan 2017 at University Campus

To create the people for maximum voting for upcoming Punjab Vidhan Sabha election on 04 February, 2017, NSS Central University of Punjab, Bathinda has organized Voter's day on 25th Jan 2017 at university campus. Most volunteers participated in the celebration of voter's day. A voter's pledge has been taken by the NSS volunteers and other the students. Programme coordinator, Programme officers and other faculty members has also participated in the voter's day. Also a hand written voter's pledge has been submitted by NSS volunteers and other students in the office of NSS at CUPB.



A view of the Voter' Pledge taking ceremony

4. Cleanness, Plantation Drive and maintenance of planted saplings on 15 February 2017 at CUPB main campus, Ghudda

To create awareness among the villagers and to generate service sentiments in students, National Services Scheme (NSS) volunteers of Central University of Punjab, Bathinda joined at University main campus, Ghudda for a one-day camp on 15 February 2017. NSS Volunteers followed the flagship programme of Govt. of India Swachh Bharat Campaign a camp carried out Cleanness, Plantation Drive and maintenance of planted saplings inside the University main campus. The new volunteers of NSS of year 2016-17 were highly motivated and enthusiastic enough in the activities. NSS Programme Coordinator Dr. Deepak Chauhan, Dr. Ashwani Kumar, Dr. Monisha Dhiman, and Dr. Ramanpreet Kaur, Programme Officers managed the camp successfully.



Glimpses of the activities during the Cleanness, Plantation and Maintenance Drive

5. Vittiya Saksharata Abhiyan (VISAKA) on 16 December, 2016 at Ghudda

To create awareness among the villagers and generate service sentiments in students, National Services Scheme (NSS) volunteers of Central University of Punjab, Bathinda joined at village Ghudda for VISAKA campaign on 16 December, 2016. Volunteers during the VISAKA campaign met the people of Village Ghudda and motivated to the people to use ATM card, Paytm, Credit Card and Debit Card cheque. The village panchayat during the camp fully cooperated with the staff and volunteers. The new volunteers of NSS of year 2016-17 were highly motivated and enthusiastic enough in the activities.



A View of Vittiya Saksharata Abhiyan

In this visaka campaign initiated by the Ministry of Human Resource and Development, 4896 Institution participated in promoting the awareness from this programme. The Central University of Punjab obtained 8th rank amongst all the institution. Ms. Shweta Arora, Deputy Registrar receiving the award from the Information and Broadcasting Minister Sh. Ravishankar Prasad and the Human Resource Development Minister Sh. Prakash Javadekar.



Deputy Registrar Ms. Shewta Arora Receiving the Award from the Information & Broadcasting Minister

Celebration of National Youth Day 2017

Mahatma Vivekananda's birthday on January 12, is celebrated as National Youth Day every year to encourage and inspire the youths of the India. The NSS Unit of Central University of Punjab, Bathinda organized a debate competition on "Demonetisation: A Move to Change the Fate of the Youth" on January 12, 2017. Students shared their views and experiences about the digitalization and demonetization. They showed great enthusiasm in participating in the competitions, 15 students participated in the debate. Prof. P Ramarao, Dean, School of Basic and Applied Sciences, applauded the organizers for organizing the event and discussed the demonetisation related issues.



Student expressing her view on Demonetisation

ADMISSIONS 2016-17

The seventh entrance examination for admission to M.A., M.Sc., M. Pharm., LL.M., M. Tech., M.Ed. and MBA (Agribusiness) courses of the academic session 2016-17 was held at various centres spread throughout the country including the City Campus of Central University of Punjab, Bathinda. Online applications were invited for admission to various programmes, and more than 11060 applications were received. Since a large number of candidates appeared for the test, the entrance examination was held on 21st May 2016 and 22nd May 2016 in three shifts starting from 9 a.m. to 5 p.m. 511 candidates were admitted to be CUPB given admission to the university at Bathinda. In addition, 30 students were admitted to the Ph.D. programmes in various Centres. 24 students was prepared for Ph.D. admission during the session 2016-17. The admission process was successfully completed in time.

S.No.	Name of the Programme	Seats Intake	No. of Students Applied	Total Student Admitted
1	L.L.M	15	89	15
2	M.A. Economics	15	281	15
3	M.A. Education	15	32	11
4	M.A. English	15	253	13
5	M.A. Hindi	15	23	03
6	M.A History	15	91	09
7	M.A Political Science	15	155	13
8	M.A Punjabi	15	17	15
9	M.A Sociology	15	95	05
10	M.Ed	50	135	18
11	M.Pharm. Pharmaceutical Sciences (Medicinal Chemistry)	18	74	13
12	M.Pharm. Pharmaceutical Sciences (Pharmacognosy and Phytochemistry)	18	84	09
13	M.Sc Chemical Sciences (Medicinal Chemistry)	15	235	14

14	M.Sc. Chemistry	15	1111	14
15	M.Sc. Chemistry (Computational Chemistry)	5	190	05
16	M.Sc. Geography	15	134	15
17	M.A. Geography		35	
18	M.Sc. Geology	15	101	15
19	M.Sc. Environment Science and Technology	15	422	13
20	M.Sc. Life Sciences (Specialization in Animal Sciences)	15	702	14
21	M.Sc. Life Sciences (Specialization in Biochemistry)	15	728	16
22	M.Sc. Life Sciences (Specialization in bioinformatics)	15	519	14
23	M.Sc. Life Sciences (Specialization in Human Genetics)	15	828	16
24	M.Sc. Life Sciences (Specialization in Microbial Sciences)	15	663	14
25	M.Sc. Life Sciences (Specialization in Molecular Medicine)	15	554	15
26	M.Sc. Life Sciences (Specialization in Plant Sciences)	15	467	16
27	M.Sc. Mathematics	15	893	15
28	M.Sc. Physics	15	1213	16
39	M.Sc. Physics (Computational Physics)	5	202	05
30	M.Sc. Statistics	15	187	06
31	M.Tech Computer Science and Technology	24	150	22
32	M.Tech Computer Science and technology (Cyber Security)	15	227	12
33	M.Sc. Food Science & Technology	10	36	06
34	MBA Agribusiness	10	134	05
35	Ph.D. (All Subjects)	65	141	24
	TOTAL			431

NON-TEACHING STAFF OF THE UNIVERSITY

The details of the non-teaching staff of the University

S. No.	Name	Designation	S. No.	Name	Designation
1	Prof. Jagdeep Singh (D)	Registrar	26	Mr. Ashvani Kumar (R)	Technical Assistant
2	Ms. Shweta Arora (R)	Deputy Registrar	27	Mr. Roshan Kumar (R)	Technical Assistant
3	Mr. Kanwal Pal Singh (R)	Controller of Examination	28	Mr. Dharendra Pratap Singh (R)	Technical Assistant
4	Mr. Ajit Singh (R)	Finance Officer	29	Mr. Nivedan Salwan (R)	UDC
5	Mr. Rajender Kumar (R)	Deputy Registrar	30	Mr. Rohit Rastogi (R)	UDC
6	Dr. Mridula Mittal (R)	Medical Officer	31	Ms. Poonam Rani (R)	UDC
7	Mr. Amandeep Singh Mann (R)	System Analyst	32	Mr. Ram Kumar (R)	UDC
8	Mr. Rupinder Sharma (R)	Hindi Officer	33	Mr. Sukhpinder Singh (R)	UDC
9	Dr. Bhupinder Singh (R)	Information Scientist	34	Mr. Harvinder Singh (R)	UDC
10	Mr. Gaurav Tandon (R)	Assistant Registrar	35	Mr. Pawan Poonia (R)	Laboratory Assistant
11	Mr. Mukesh Kumar (R)	Assistant Registrar	36	Mr. Rajesh Tiwari (R)	Laboratory Assistant
12	Dr. Sumeer Razdan (R)	Technical Officer (Lab.)	37	Ms. Sona Rani (R)	Laboratory Assistant
13	Dr. Rabindra Kumar (R)	Technical Officer (Lab.)	38	Mr. Ravi Dutt (R)	Laboratory Assistant
14	Mr. Ranbir Singh (R)	Section Officer	39	Mrs. Neha Yadav (R)	Laboratory Assistant
15	Mr. Vivek Goyal (R)	Section Officer	40	Mr. Radha Kishan Sadh (R)	Laboratory Assistant
16	Mr. Suresh Kumar (R)	Senior Section Officer	41	Ms. Babita Yadav (R)	Library Assistant
17	Mr. Jatinder Pal Singh (R)	Senior Section Officer	42	Mrs. Veerpal Kaur (R)	Library Assistant
18	Mr. Puneet (R)	Assistant Engineer	43	Ms. Jyoti (R)	LDC
19	Mr. Umesh Kumar (R)	Security Officer	44	Mrs. Anupam Sharma (R)	LDC
20	Mr. Sandeep Kumar (R)	Assistant	45	Mr. Sachin (R)	LDC
21	Mr. Parveen Kumar (R)	Personal Assistant	46	Mrs. Harvinder Kaur (R)	LDC
22	Mr. Manoj Kumar (R)	Junior Engineer (Elect.)	47	Mr. Ajay Kumar (R)	LDC
23	Ms. Usha Sharma (R)	Technical Assistant	48	Ms. Taranveer Kaur (R)	LDC
24	Mr. Ravinder Singh (R)	Semi Professional Assistant	49	Mr. Amrik Singh (R)	LDC
25	Mrs. Prachi Srivastava (R)	Semi Professional Assistant	50	Ms. Parul Jindal (R)	LDC

51	Mr. Sarabjit Singh (R)	LDC
52	Mr. Sukhmander Singh (R)	LDC
53	Mr. Narayan Bahadur Sunar (R)	LDC
54	Ms. Sunita (R)	Hindi Typist
55	Mr. Jyoti Singh (R)	Cook
56	Mr. Darshan Singh (R)	Driver
57	Mr. Balraj Singh (R)	Driver
58	Mr. Lakhvir Singh (R)	Driver
59	Mr. Parminder Singh (R)	Driver
60	Mr. Sandeep Singh (R)	Driver
61	Mr. Mandeep Singh (R)	Laboratory Attendant
62	Mr. Deepak Sharma (R)	Laboratory Attendant
63	Mr. Puneet Kumar (R)	Laboratory Attendant
64	Mr. Dushyanth Reddy Vennapu (R)	Laboratory Attendant
65	Mrs. Gagandeep Kaur Dhaliwal (R)	Laboratory Attendant
66	Mr. Mitthu Lal (R)	Library Attendant
67	Mr. Kishan Rai (R)	Library Attendant
68	Mr. Harvinder Singh (R)	Office Attendant
69	Mr. Devi Lal (R)	Office Attendant
70	Mr. Pawan Kumar (R)	Office Attendant
71	Mr. Lakhwinder Singh (R)	Office Attendant
72	Mr. Subash Chander (R)	MTS
73	Mrs. Simerjit Kaur (R)	Medical Attendant
74	Mr. Nitish Kumar (R)	Hostel Attendant
75	Mr. Gagandeep Singh (R)	Hostel Attendant

76	Mr. Mandeep Singh (R)	Kitchen Attendant
77	Mr. Dayal Singh (R)	Kitchen Attendant
Contractual Staff		
1	Dr. Jaswinder Singh Bilga	Consultant (Horticulture)
2	Er. Prem Sagar	Executive Engineer
3	Mr. Gurmail Singh	Accountant
4	Mr. Naresh Kumar Dhir	Section Officer (Accounts)
5	Ms. Sonia	Assistant (Accounts)
6	Mr. Gagandeep	Sports Officer
7	Mr. Yadvinder Singh	Senior Technical Asst. (Cmptr)
8	Mr. Davinder Singh	Senior Technical Asst. (Cmptr)
9	Mr. Ajit Paul Singh	Senior Technical Asst. (Lab)
10	Mr. Gajendra Singh Vishwakarma	Senior Technical Asst. (Lab)
11	Mr. Sweet Singh	Consultant (Security & Management)
12	Mr. Ajay Kumar	DEO
13	Mr. Bharat Bhushan	DEO
14	Ms. Sarupinder Kaur	DEO
15	Mrs. Simerpreet Kaur	Library Trainee
16	Mr. Satpal Singh	Office Attendant
17	Mr. Sandeep Singh	Office Attendant
18	Mr. Gurpreet Singh	Office Attendant
19	Mr. Vajinder Kumar	Cleaner
20	Mr. Jeet Singh	Cleaner
Note: Regular-(R); Deputation-(D)		

State-wise Distribution of Non-Teaching Staff

S.No	Category	Total
1	Andhra Pradesh	-
2	Arunachal Pradesh	-
3	Assam	-
4	Bihar	04
5	Chhatisgarh	-
6	Goa	-
7	Gujrat	-
8	Haryana	03
9	Himachal Pradesh	02
10	Jharkhand	-
11	Jammu & Kashmir	01
12	Karnataka	-
13	Kerala	-
14	Madhya Pradesh	01
15	Maharashtra	-
16	Manipur	-
17	Mizoram	-
18	Meghalaya	-
19	Nagaland	-
20	Orissa	-
21	Punjab	71
22	Rajasthan	04
23	Sikkim	-
24	Tamil Nadu	-
25	Tripura	-
26	Uttaranchal	01
27	Uttar Pradesh	05
28	West Bengal	01
29	Union Territory	-
30	Andaman Nicobar	-
31	Chandigarh	-
32	Dadra & Nagar Haveli	-
33	Daman & DU	-
34	Delhi	03
35	Telangana	01
	Sub Total	97
36	Foreign National	-
	Grand Total	97

State-wise Distribution of Teaching Staff

S.No.	Name of the State	Total
1	Andhra Pradesh	04
2	Telangana	02
3	Assam	01
4	Bihar	02
5	Haryana	12
6	Himachal Pradesh	10
7	Jharkhand	01
8	Kerala	04
9	Maharashtra	04
10	Manipur	02
11	Odissa	03
12	Punjab	21
13	Rajasthan	04
14	Tamil Nadu	03
15	Uttaranchal	01
16	Uttar Pradesh	18
17	West Bengal	03
18	Delhi	05
	Sub Total	100
	Foreign National	
	Grand Total	100

State-wise Distribution of Students



Total Students **936**

INFRASTRUCTURE

Central Instrumentation Laboratory

Central Instrumentation Laboratory (CIL) was established in 2010 with the vision to cater to hi-end research instrument requirements of different Schools/Centre of the university through a common portal. It was mandated that the Central Instrumentation Laboratory would focus on the optimum usage of the equipment and instruments for the basic and technological research of the university. During the last six years, University has further strengthened its analytical facilities with hi-end equipment, as well as technically experienced and trained scientific staff, to operate and maintain the facility developed at CIL. With this change, the mandate of CIL has also diversified for providing its services to the users from the academic, R&D and commercial houses on chargeable basis to put the facilities to maximum usage. Consequently for the last four months CIL at the university has started providing its services to users from various other institutions on payment basis.

CIL Committee Members

Prof. (Dr.) Satwinder Singh Marwaha
Chairperson, CIL

Professor & Coordinator of the Centre
Centre for Applied Agriculture
Central University of Punjab, Bathinda



Prof. V. K. Garg

Professor and Dean
School of Environment and Earth Sciences
Central University of Punjab, Bathinda



Prof. Ramakrishna Wusurika

Professor and Dean
School of Global Relations
Central University of Punjab, Bathinda



Dr. Anil K. Mantha

Associate Professor and Coordinator
Centre for Animal Sciences
Central University of Punjab, Bathinda



Dr. Sanjeev K. Thakur

Associate Professor and Coordinator
Centre for Plant Sciences
Central University of Punjab, Bathinda



Dr. Vikas Jaitak

Assistant Professor
Centre for Pharmaceutical Sciences & Natural Products
Central University of Punjab, Bathinda



Dr. J. Nagendra Babu

Convener, CIL
Assistant Professor
Centre for Chemical Sciences,
Central University of Punjab, Bathinda



The following equipment are operative in the different sections of the Central Instrumentation Laboratory

Analytical Section	Name /Year of Purchase of Equipment	Make & Model	Applications	Instrument Details
Biological	DNA Sequencer 96 well type / 2010	Applied Biosystems; Model: 3730xl	DNA fragment analysis applications such as microsatellites, AFLP, SNP analysis, mutation detection and traditional DNA sequencing.	
	Flow Cytometer / 2014	BD Diagnostics, USA; Model: Accuri C6	Flow cytometer utilizes light to count and profile cells in a suspension. It is used for cell counting, biomarker detection and protein engineering	
Analytical Section	Name /Year of Purchase of Equipment	Make & Model	Applications	Instrument Details
	Bioanalyzer / 2012	ERBA, USA; Model: EM 200	A powerful analytical tool for metabolites, electrolytes, proteins, and / or drug analysis in serum, plasma, urine, cerebrospinal fluid and other body fluids	
Imaging	Field Emission Scanning Electron Microscope / 2014	Make: Carl Zeiss, Germany; Model: Merlin Compact	For surface morphology imaging upto 2 nm resolution and Elemental analysis using Dispersive X-Ray (EDX)	
	Confocal Laser Scanning Microscope / 2014	Olympus, Japan; Model: Olympus FV 1200 CLSM Picoquant	Fluorescence Correlation Spectrometer (FCS) suitable for biological applications	
	Fluorescence Microscope /2010	Olympus, Japan; Model: FSX-100 Bioimaging Navigator	Bright field Imaging, Phase Contrast Imaging, Multicolour Fluorescence Imaging, Live cell Imaging	
Spectroscopy	UV-Visible Spectrophotometer /2012	Shimadzu, Japan; Model: UV-2450	Colorimetric analysis, Protein folding dynamics and Enzyme Kinetic study, Flow Kinetic analysis	

Analytical Section	Name /Year of Purchase of Equipment	Make & Model	Applications	Instrument Details
	Atomic Absorption Spectrophotometer /2012	Shimadzu, Japan; Model: Shimadzu AA 7000	Used for analysis of metals in solution using spectroscopic technique by Flame adsorption, Hydride Generator and Graphite Furnace.	
	Fourier Transformed Infrared Spectrometer / 2012	Bruker; Model: Tensor 27	Functional group analysis of solid and liquid samples using Attenuated Total Reflectance (ATR) and Diffuse Reflectance (DR)	
	Inductively Coupled Plasma Mass Spectrometer / 2016	Thermo Scientific; Model: iCAP-Qc	Multielemental qualitative and quantitative analysis with detection upto parts per trillion.	
Chromatography	Gas Chromatography Mass Spectrometer / 2012	Shimadzu, Japan; Model: Shimadzu QP- Ultra GC-MS	Qualitative and Quantitative analysis of volatile sample analysis, Pesticide residue (organochlorine, organophosphorus, organonitrogen, polynuclear aromatic hydrocarbon) analysis in soil, water and solids. Qualitative Essential oil analysis. Direct Mass analysis and Headspace volatile sample analysis	
Analytical Section	Name /Year of Purchase of Equipment	Make & Model	Applications	Instrument Details
	Gas Chromatography with TCD/FID / 2012	NUCON, Delhi; Model: NUCON 5700	Quantitative analysis of biogas and producer gas. FAME analysis on FID. Purity testing of volatile organics.	
	Ultrahigh Performance Liquid Chromatography / 2011	Thermo Scientific; Model: Dionex Ultimate 3000	Quantitative analysis of drugs, food stuff and organic analytes.	

Strengthening / Updation of Central Instrumentation Laboratory

A. New Addition of Hi-end Analytical Equipment to Strengthen the Central Instrumentation Laboratory

During the period under report, The University Grants Commission (UGC) has sanctioned a capital grant of Rs. 10 Crore to strengthen the analytical facilities of the Central Instrumentation Laboratory. The process of purchase of the equipment with the said grant is at the advanced stages and the equipment is likely to be installed and commissioned by the end of 2nd quarter of the financial year 2017-18. The following equipment with application ascribed against their name are being purchased to strengthen the analytical strength of Chromatography and Spectroscopy sections of CIL.

No.		
1.	Nuclear Magnetic Resonance Spectrometer	<ul style="list-style-type: none"> • Small molecule characterization • Natural product structure elucidation • Protein structure elucidation • Multinuclear Inorganic characterizations
2.	Powder X-Ray Diffractometer	<ul style="list-style-type: none"> • Powder Sample Analysis • Geological rock sample identification • Epitaxial Thin Film analysis • SAXS analysis • Polymorphism analysis
3.	Liquid Chromatography Tandem Mass Spectrometry (LC-MS/MS)	<ul style="list-style-type: none"> • Small molecule quantification • Proteomics analysis • Small molecule structure elucidation

B. Appointment of Technical Staff in CIL

The university has appointed the following technical staff to strengthen the Central Instrumentation Laboratory to put the hi-end analytical equipment to maximum use as well as their flawless operation and maintenance:

S. No.	Details of Personnel	Designation / Date of Joining	Job Profile
1.	Dr. Sumeer Razdan 	Technical Officer 02 November, 2016	DNA Sequencing and Confocal Laser Scanning Microscope
2.	Dr. Rabindra Kumar 	Technical Officer 30 December, 2016	Inductively Coupled Plasma – Mass Spectrometer (ICP-MS), Atomic Absorption Spectrometer, Gas Chromatography – Mass Spectrometry

3.	Mr. Ajit Singh Paul 	Senior Technical Assistant 01 November, 2016	Gas Chromatography – Mass Spectrometry, Gas Chromatography – TCD/FID, Atomic Absorption Spectrometer, Ultrahigh Performance Liquid Chromatography, Fourier Transformed Infrared •Spectrometer
4.	Ms. Neha Yadav 	Laboratory Assistant 05 October, 2016	Fourier Transform Infrared Spectrometer, UV- Visible Spectrometer, Ultrahigh Performance Liquid Chromatography, FESEM sample preparation

Besides the above technical staff, Prof. S. S. Marwaha joined the University as Coordinator of the Centre for Applied Agriculture. He has been entrusted with the responsibility as Chairman of Central Instrumentation Laboratory (CIL) and Dr. J. Nagendra Babu of Centre for Chemical Sciences continued as the Convener of CIL.

The CIL is also getting the onsite technical support of the technical personnel provided by M/s Carl Zeiss Pvt Ltd, M/s DSS Imagetech Pvt Ltd and M/s Thermofischer Scientific for the operation and maintenance of Field Emission Scanning Electron Microscope, Confocal Laser Scanning Microscope and Inductively Coupled Plasma Mass Spectrometry, respectively.

C. Capacity Building

Central Instrumentation Laboratory organized a workshop on DNA sequencing and application as well as hands on training for the scientific/ technical staff of the University and institutions from Punjab and adjoining states, jointly with M/s Thermofischer Scientific Pvt Ltd. for capacity building on 18th February, 2017. The workshop provided key insight into both fundamental and advanced aspects of Sanger DNA sequencing by Dr. Kuldeep Singh, Director NBPGR, New Delhi and Dr. Suresh Korpole, IMTECH Chandigarh. Dr Ajit Dua Senior Scientist cum Quality Assurance Head, PBTI appraised the participants the importance of the accreditation and briefed the procedure of getting the DNA sequencing facility of the university NABL Accredited. Dr. Sailesh Gochhait, Scientist from Thermo Fischer Scientific Pvt. Ltd. besides explaining the components of the DNA sequencer imparted hands on training of the participants.

Sangers DNA Sequencing and Application Workshop

During the workshop the participants were informed that the hi-end analytical facilities of CIL are available for usage by the outside users on payment basis. After the workshop on DNA sequencing, The University is getting queries regarding the use of analytical facilities of the CIL from various institutions from Punjab State and adjoining areas.





Dr. Kuldeep Singh, NBPGR, New Delhi



Dr. Suresh Korpole IMTECH, Chandigarh



Dr. Ajit Dua Sr. Scientist cum Head QA



Dr. Pankaj Bharwdwaj, Asstt. Prof., CUPB

Also from time to time Central Instrumentation Laboratory has organized awareness lectures for the students, faculty of the university and technical staff of CIL.



Dr. Ajai Prakash Gupta, Senior Technical Officer, QA & QC Division, IIIM, Jammu interacting with the participants of "Quality Control of Medicinal and Aromatic Plants" lecture on 13 August, 2016.

A. NABL Accreditation of Central Instrumentation Laboratory

The process for getting the NABL accreditation of DNA sequencing facility of CIL has been initiated. The technical staff have started the process of understanding the management system of the laboratories, which is the prerequisite for the NABL accreditation.

A. Service Provided by Central Instrumentation Laboratory

Details of sample analyzed by using various hi-end analytical equipment of Central Instrumentation Laboratory from 1st April 2016 to 31st March 2017 is as below:

Instrument used in analysis	Total no. of Samples Analyzed
UV	4985
FTIR	665
GCMS	837
FE-SEM	994
CONFOCAL	880
ICPMS	1255
AAS	1285
GAS CHROMATOGRAPHY (TCD / FID)	61
CLINICAL CHEMISTRY ANALYZER	627
FLOW CYTOMETER	537
FLUORESCENCE MICROSCOPE	38
TOTAL	12164



Front view of the Academic Block

Academic Block

The academic block comprises of classrooms, a seminar hall, the library, the computer centre, faculty rooms and laboratories. The newly-established Community College is also located in this block. The Academic Block is well equipped with purified drinking water, clean washrooms, air-conditioned classrooms and free Wi-Fi connectivity. The block is the hub for exchanging knowledge and platform for discussion.

Class Room

The class rooms are equipped with LCD projectors as teaching-aids and for making presentations by the students, and AC with an average seating capacity of 25 students per room. These classrooms are learning spaces and platforms for discussion, interaction and building thinking ability and speaking ability. The Classrooms are also utilized for organising class seminars, lectures and talks.



A Well equipped Classroom

Library

The University Library is on a rapid and consistent path of expansion and development since its inception in 2009, catering to the learning and research requirements of teachers and students of the university. Carefully designed with elegant modular furniture, the library presently has over **33,940 titles** and subscribes to **42 international and national print journals**. The University Library subscribes to a large number of electronic journals through the **UGC-INFONET Digital Library Consortium** and independently apart from subscribing to **9572 full text online journals** through the **UGC-INFONET Digital Library Consortium** and independently, with access to ACM Digital Library, American Chemical Society, American Physical Society, Annual Reviews, Cambridge University Press, Institute of Physics, JSTOR, Oxford University Press, Project Muse, Royal Society of Chemistry, Sage, Science Direct, Science Online, Springer Link, Taylor & Francis, Wiley-Blackwell etc. The University Library has access to all important full text data base including SCOPUS database, Web of Science dataset, West Law, Hein Online, Manuparta, SciFinder Evaluation, **EPWRF India Time Series**, **DELNET Online**, **ISID** (The Institute for Studies in Industrial Development), **JCCC** (J-Gate Custom Content for Consortium), etc. It is fully air-conditioned and is located at a central place in the Academic Block with state-of-the-art seating facility, apart from providing a quiet and restoring ambience. The interior of the library is enabled with **Wi-Fi connectivity** allowing the users to work within the library by accessing both offline and online resources. The University Library is equipped with **Radio Frequency Identification (RFID) and Electro Magnetic Security System (EMSS)** providing automated self-service facility for the users and high end security. It is also equipped with an advanced **Online Public Access Catalog (OPAC) and modern reprographic facilities**. The library facility is available to the students **8.00 am to 2.00 am** on all days.



A view of the automated Library

Museum

The University Museum of the Central University of Punjab has been set up for depicting arts, crafts and culture of the Malwa region of Punjab along with a section dedicated to the history of the university. The Museum has further dedicated itself to collect metal utensils from India and abroad, technological innovations like Portable TV set, Radio, Typewriter, computer and Printer, bulb projector, etc., which are outmoded by the new technological innovations in society for preserving and disseminating knowledge regarding these items to the coming generations. The Museum has also dedicated its one section to display collected coins belonging to different historical periods from India and abroad. The museum has a photo-gallery on display, which depicts the change of this forbidden site into a first class campus through comparative photographs. The dedicated section of the museum exhibits the history of Bathinda region and its historical monuments, including the medieval fort, the 13th century *dargah* of Haji Ratan, late 19th or early 20th century *havelis* and other vital buildings of the city, capturing the change of architectural styles over time.

Many articles, which were a part of the everyday life of people of Punjab in twentieth century and almost extinct now, are displayed in the museum. These articles are donated to the museum by a benevolent private collector of Barnala, Mrs. Savita Goel and many more. Hon'ble Vice-Chancellor, Prof. R.K. Kohli has donated electronic device like Bulb Projector made in the USSR to the Museum. The Malwa region holds archaeological significance, with a number of ancient mounds, which have not been so far systematically excavated. The Museum is displayed in its devoted section for the objects found on the surface of these mounds at villages *Sirkap, Maan, Marahar, Lakhmirewala, Kali Bangan* (Rajasthan) etc. The museum is its own way to expansion by collecting diverse historical items, which are significant to human civilization for the purpose of transaction of knowledge from one generation to another generation.



A view of the University Museum

Fitness Centre

The fitness centre is open to all students, staff and faculty members, twice a day, morning and in the evening is run under the guidance of an expert and contains all the requisite equipment for fitness.

List of Gym Equipment

1. Cardio fitness section

- 1) Treadmills
- 2) Elliptical/ Cross Trainer
- 3) Upright Bike

2. Strength training section

- 1) Chest Press
- 2) Lat Pull-down
- 3) Shoulder Press
- 4) Abdominal Crunch
- 5) Leg Extension
- 6) Leg Press
- 7) Seated Leg Curl
- 8) Smith Machine
- 9) Cable Crossover

3. Hard core section

- 1) Dumbbells
- 2) Olympics Barbell
- 3) EZ Bar
- 4) Weight Plates

4. Tables and racks

- 1) Preacher Curl Bench
- 2) Back Extension Bench
- 3) Olympic Flat Bench
- 4) Olympic Incline Bench
- 5) Olympic Decline Bench
- 6) Weight Plates Rack
- 7) Tier Dumbbell Rack

5. Free weight Equipment

- 1) Exercise Mats
- 2) Step Boards



A view of the Fitness Centre

Activities carried on regular basis in the university:

- 1) Conduct of **Fitness work shops** on regular basis to students and staff as well.
- 2) **Fitness consultancy** to the needy persons with regard to health fitness and lifestyle.
- 3) **Preparing university teams** for tournaments (Selections, coaching camps etc).
- 4) **Conduct of regulars sports activities** in Shuttle badminton, Cricket, Football, Volley Ball, Athletics, Basketball, Carom, Chess, Table tennis etc.
- 5) **Conducting Intramural sports competitions** in various sports and athletics for the Sports Week Celebrations.

Specialized Activities:

1. Conducted **Fitness work shops** for students and staff during the last four years during which Health fitness of the individuals is measured (Cardiac efficiency through GXT, Imonary function Testing etc) and appropriate measures are suggested.
2. Celebration of **Internation Day Yoga 1st and 2nd** in 2015 & 2016 **Therapeutic Yoga classes** are conducted regularly at the Fitness Centre.
3. Special coaching in running is provided at the sports complex to the students a part from providing all the facilities for various others porting events.
4. **Fitness guidance** is provided by the sports officer in this field to the community of the university.
5. **Intra-University cricket tournament** was conducted in the month of December 2016.

There have been several developments in physical education. Several facilities have been created and more diversified sports activities are seen now in the campus. The following are the developments with regard to sports in this university:

- * A dedicated indoor hall with good badminton courts
- * The Fitness Centre has been developed recently and it houses all the necessary fitness equipment (Commercial treadmills, cross trainers, one five station machine, one three station machine, fourteen individual fitness stations along with gym balls etc). The fitness Centre is in 4000sq ft area.
- * A standard 200 meters track with good facility will be created after three years. The work is in progress and this track will be filled with the cinder
- * Athletics facilities like long jump pit, discus and shot sectors have been created during the present year.
- * Cricket Pitch and Practice Pitch for students



A view of the Boys Hostel No. 5

Hostels

In the academic session 2016-17, Hostel no. 4 has been built in addition to the existing three girls' hostels with the increasing number of students coming from other states. In winters, hot water is available for 24 hours. The air conditioned common room in the hostel remains open for 24 hours. Wi-Fi connectivity is also available to students for 24 hours for efficient studies. Female security guards are positioned at the girls' hostels gate for their safety, and for boys, Hostel No. 5 has been constructed.

Health Centre

The Health Centre is open round the clock for the residents of the University for Medical Assistance. A doctor and two nurses have been appointed to take care of the health centre. OPD timings are from 8:00 AM to 1:00 PM while the supporting staff is available 24 hours. Medicines are given free of cost to all. An ambulance is also available in the University for Emergency Services.

- 24 X 7 dispensary open
- Morning and Evening O.P.D attended by regular Medical Officer
- Medical Officer 24 X 7 on call for emergencies
- Total No. of Patients between- 01-04-2016 to 31-03-2017 is 11489
- Medical files reimbursed
- Medical Fitness Certificate for the new employees
- Emergency kits provided for the various Centres
- Ambulance round the clock available
- Panel of doctors enlisted for the faculty and staff of CUP, Bathinda
- Medicines purchased along with the Local Purchase Committee at lowest possible rates from the market every month
- A regular Medical Attendant present during the day time 2 outsourcing employees as staff nurses maintain the evening shifts attentively



A view of the Health Centre

Day Care Centre

Central University of Punjab Day Care Centre (CUPB-DCC) is functional since February, 2013 for the children of teachers, officers, non-teaching staff, research scholars and regular full-time students as per the University Grants Commission's (UGC) guidelines. The Centre is located near the primary health centre in the university's main campus. The main objective is to keep the children of university employees and students under good care during the day time inside the university campus. This allows members of the university community to work with peace of mind and access their children quickly in case of an emergency. Apart from taking good care of the children, the centre involves children in various extra-curricular activities for their growth and development. At present 14 kids of various age groups are availing the facility.

A Day Care Committee of following members is headed by Chairperson (Senior Professor) to look after the day to day activities and any issues related to the Day Care Centre. The committee members meet the parents once in a month to discuss the Day Care Centre related issues.

Day Care Centre Committee

Chairman: Prof. A. K. Jain

Members: Dr. Monisha Dhiman

Dr. Preeti Khetarpal

Dr. Nishtha Kaushiki

Facilities provided at the Day Care Centre

1. The premises: Two newly renovated rooms with a kitchen and toilet.
2. A colourful play area with fencing which has a multi-activity play station comprising of a merry-go-round, swings, slide and see-saw.

3. Apart from basic furniture, utensils, activity toys, books, riders, baby cribs/beds, bouncer/rockers and walkers for infants are also available. The day care centre is equipped with microwave oven, refrigerator, all weather air conditioner and water purifier
4. A child care attendant.
5. Basic medical services to the wards of the centre are provided by CUPB Health Centre, if required.



A view of the Daycare Centre

Mess/Canteen

A student cooperative mess has been constituted in the session 2016-17 with an attempt to improve the quality of food. The management of the mess solely lies with the students' union. Apart from providing regular meals, it also provides tea and snacks throughout the day.

At present 3 messes and 1 tuck shop cum canteen function in the Centre University of Punjab.

1. Co-operative Mess 1: for students

Strength: 300 Students

Mess Committee: Student Council Committee + Committee of Students.

2. Co-operative Mess 2: for students

Strength: 500 Students

Committee: Student Council + Committee of Students

3. Mess 3: for faculty and staff members (Co-operative Mess cum Canteen)

Strength: 60 to 80

Running under staff and faculty committee.

4. Tuck Shop cum Canteen:

Run by a Contractor through Contract agreement.

All the Mess, Canteen, Tuck Shop are running under the guidance of Registrar and in supervision of Dean Students' Welfare on the advise of Mess and Canteen Advisory Committee.

Members of Advisory Committee

Dr. Deepak Kumar Chauhan	
Dr. Monisha Dhiman	
Dr. Malkhey Verma	: Warden
Dr. Dinesh Babu P	: Warden
Dr. Jubilee Padmanabhan	: Warden
Dr. Sukhwinder Kaur	: Warden

Menu of the Mess is decided by the students in monthly meeting of all the stake-holders & The co-operative Mess 1 and 2 are managed by a Committee of 18 members & 1/3rd members complete their tenure on the completion of 1 month.



A view of the Mess Hall

Sports

In CUPB, sports has been identified as playing a pivotal role in the academics. Keeping in view of the overall development of the students, the university provides sports coaching to the students for various sports & games. The campus has a basketball court, a badminton court, a playground, and two tennis tables. Many students of the university have participated in various games such as Boxing, Cricket, Football, Chess and Gatka at All India Inter University and Zonal Inter University Sports competitions held at various parts of the country

Outdoor Activities	Indoor Activities
Football	Chess
Basketball	Carom
Cricket	Badminton
Volleyball	Table Tennis
Badminton	

Annual Athletics Meet 2017

The two-day long Annual Athletics Meet 2017, had the former Hockey Captain, Sardar Rajpal Singh and the Arjuna Awardee shooter Mrs. Avneet Kaur Sidhu as the chief guests. The meet involved the participation of both the students and the Faculty members, who actively competed and secured prizes. Several fun games were also organized in the function. The details of the events are as below:

Event	Gold Medal	Silver Medal	Bronze Medal
50 Mts. (Girls)	Ms. Komal	Ms. Arti	Ms. Sumandeep
50 Mts. (Female Faculty)	Mrs. Veerpal	Mrs. Sona Rani	Dr. Mridula and Dr. Kiran
80 Mts. (Male Faculty)	Dr. Rajinder Kumar	Dr. Rajesh Kumar	Dr. Jitendra Patnaik
80 Mts. (Non-teaching Male)	Sh. Gagandeep Singh	Sh. Rupinder Sharma	Sh. Pawan poonia
100 Mts. (Girls)	Ms. Aarti Yadav	Ms. Komal	Ms. Sumandeep
100 Mts. (Boys)	Mr. Abhishek Singh	Mr. Deepak	Md. Waseem / Shubhranshu
200 Mts. (Boys)	Mr. Fameel	Ms. Shubhranshu	Md. Waseem
400 Mts. (Boys)	Mr. Fameel	Mir Yousuf	Md. Mushtaq
Long Jump (Girls)	Ms. Navjotpreet Kaur	Ms. Aarti	Ms. Jyoti meena
Long Jump (Boys)	Mr. Picky Pang	Mr. Abhishek Singh	Md. Waseem

Long Jump (Male Faculty)	Dr. Vinay Yadav	Dr. Gauree Shanker	Dr. Rajesh Kumar Gupta and Dr. Vinod Arya
Long Jump (Non-teaching Male)	Sh. Narayan Sunar	Sh. Gagandeep Singh	Sh. Roshan Kumar
Shot Put (Girls)	Ms. Himani Sharma	Ms. Pooja	Ms. Sumandeep Kaur
Shot Put (Boys)	Mr. Sumeet	Mr. Rakesh Ghosh	Mir Yousuf
Shotput (Female Faculty)	Dr. Yogalakshmi	Mrs. Sona Rani	Ms. Anupam Rani
Shotput (Male Faculty)	Dr. Deepak Chauhan	Dr. Vinay Yadav	Dr. Sanjeev Thakur
Shotput (Non-teaching Male)	Sh. Rupinder Sharma	Sh. Narayan Sunar	Sh. Nitish Kumar
Three-leg Race (Girls)	Ms. Komal and Aarti	Ms. Igona and Ritu	Ms. Amandeep and Mammandeep Kaur
Three-leg Race (Boys)	Mr. Sumit and Narender	Mr. Kishori and Ankur	Mr. Babu Singh and Satnam Singh
Sac Race (Boys)	Mr. Vilayaat Ali	Mr. Sarnaam	Mr. Vikram
Discus Throw (Girls)	Ms. Himani Sharma	Ms. Sumandeep Kaur	Ms. Jyoti
Discus Throw (Boys)	Mr. Rakesh Ghosh	Mr. Vijay Jaiswal	Mr. Sumeet
Discus Throw (Female Faculty)	Dr. Jubilee	Ms. Anupam	Dr. Yogalakshmi
Discus Throw (Male Faculty)	Dr. MD Noor Alam	Dr. Sunil	Dr. Deepak Chauhan
Discus throw (Non-teaching Male)	Sh. Mandeep Singh	Sh. Yadwinder Singh	Sh. Sukhnaib Singh

Some other indoor activities like Carom, Chess, Badminton, Cricket, Volleyball, Basketball and Football Competitions were also organized which witnessed great zeal and effort on the part of the students.

Team Sports/Games

Event	Boys	Girls
Carom single	Mr. Shishir upadhyay Masoor Ahmad	Ms. Harpreet Kaur Shweta Choubey
Carom Doubles	Mr. Amit/Shishir Mansoor/Irshad	Ms. Igona/Ritu Sheetal/Gursharan
Carom mixed double	Satej/Richa Rambha/Shishir	
Chess	Mr. Adarsh Kumar Suranjan	Ms. Ashwarya pruseth Shweta Choubey
Football	Mr. Balraaj and team Rohit and team	
Volleyball	Mr. Sumeet team Md. Waseem	Ms. Sumandeep team Ms. Akansha
Basketball	Mr. Rohit and team Harpreet and team	Ms. Akanshapriya Ankita
Cricket	Mr. Hilal bhat Amit Singh	Ms. S. Monica Igona

The Year in Review: 2016-17

April 2016

9th to 25th April, 2016: Fitness Camp organised for CUPB members

The Sports wing of Central University of Punjab organised a fitness camp for all the CUPB members from 9 to 25 April, 2016. Faculty members, non-teaching staff and students were taught how to remain fit, and were given training on using fitness equipment in the Fitness Centre of the university. The session was held in the evening from 6:00 pm to 7:00 pm in the Fitness Centre and 20-25 participants made their presence, showcasing their concern for maintaining fitness.

26th to 30th April, 2016: Visit by the NAAC team

The NAAC peer-team for accreditation of CUPB visited the university from April 26-30, 2016. The peer-team comprised of 8 members: Prof. Harish Padh, Vice – Chancellor, Sardar Patel University (Chairperson), Prof. A.V. Prasada Rao, Former

Rector, Andhra University (coordinator), Prof. P. G. Marvania, Professor, Dept. of Economics, Saurashtra University, Dr. V. Rhymend Uthariaraj, Professor & Director, Ramanujan Computing Centre, Anna University, Prof. Smriti Swaroop, Former Director, Department of Special Education, SNDT Women's University, Prof. T.V. Subbarao, Visiting Professor, National Law School of India University, Prof. Dr. S Anbazhagan, Professor & Director, Centre for Geoinformatics & Planetary Studies, Periyar University, and Prof. S. K. Jain,



NAAC Peer Team during the presentation

Professor & Head, Dept. of Biotechnology, Hamdard Institute of Medical Sciences & Research, Jamia Hamdard University. The NAAC team members were impressed, that the university operating from a mill shed had achieved such great heights and expressed appreciation about the with the fact way the Self Study Report was written. As a respect of the great zeal and efforts of the Vice-Chancellor, Director IQAC, Dean, School of Basic and Applied Sciences, Registrar, Faculty, staff members and students of CUPB, the University got "A" grade in its very first cycle from NAAC.

May 2016

20th May, 2016: Observance of Anti-Terrorism Day

The Anti-Terrorism Day was observed on May 20, 2016 at Central University of Punjab. The members of both teaching and non-teaching staff took part in the oath taking ceremony. Honourable Vice-Chancellor, Prof. R. K. Kohli, paid a kind visit on the occasion



Participants taking Anti-Terrorism Oath

15th to 21st June, 2016: Celebration of Yoga Week at Central University of Punjab

Central University of Punjab celebrated the Yoga Week from 15-21 June, 2016 at its city campus. The programme was a huge success right from its beginning on June 15, 2016, and two sessions, morning and evening, were held every day. Prof. R. K. Kohli, Vice-Chancellor, inaugurated the yoga week in the presence of Prof. P. Ramarao, Dr. Jagdeep Singh, and Prof. V. K. Garg. The Vice-Chancellor encouraged the participants to sustain the momentum. Yoga trainers Mr. Vijendra Sharma and Ms. Veena from Patanjali Yoga Samiti, Bathinda trained the participants and delivered lectures on the importance of Yoga in solving many health problems and in bringing the mind and body in unison with each other. During the Yoga week, poster presentation and yoga competition were also organised. On the morning of June 21, 2016, prizes for best performance in yoga were awarded to Ms. Ritu Kamboj and Mr. Surya Parkash while Mr. Radhey Shyam was awarded for consistent and regular attendance in all the yoga sessions. In poster presentations, Ms. Mehul Arora, Ms. Serra Verma and Mr. Tejpal Singh were selected as the winners.



Students performing *Asanas* during the Yoga Week

27th June, 2016 CUPB celebrated International Day for Biological Diversity

Central University of Punjab, Bathinda through its Centre for Environmental Science and Technology and Community College (UGC Scheme) in collaboration with Punjab Bio-diversity Authority and National Bio Diversity Authority celebrated International Bio-diversity day.

The CUPB invited two prominent stalwarts Prof. Daizy R. Batish and Prof. Arun D. Ahluwalia, both from Panjab University, to commemorate the event. Prof. Batish in her presentation, enlightened the audience with the theme of International Biodiversity Day 2016 that is 'Mainstreaming Biodiversity; Sustaining People and their Livelihoods'. Prof. Batish stated that biodiversity should be given foremost consideration in modern life style because it is useful for the survival of mankind from ecological, economical, cultural, and social and so many other perspectives. Pointed out she that about 50% of all species faced mass extinction due to natural calamities in 440 million years. But nowadays, the speed of deterioration of mass life on the earth has increased due to man made causes.

In the second session, Prof. Arun D. Ahluwalia spoke at length about history of life on the earth. He refuted the assertions of botanists regarding man made harm to the environment. He elaborated the man and the earth relationship with the help of the cliché, 'The Earth does not belong to us, and we belong to the Earth'. Therefore, mankind should have a peaceful and harmonious relationship with the Earth and the Nature. He inspired teachers and researchers to find beauty and romanticism in education and research to make it more interesting. Prof. V.K. Garg, Dean EVST, Prof. A.K. Jain, Dr. Kiran K. Singh and Dr. Tarun Arora were also present on the occasion.

July 2016

27th June to 8th July, 2016: Computer Literacy Program Organized by the Centre for Computer Science and Technology

In pursuance of Digital India move a computer literacy program for the university employees and their wards was organized by Centre for Computer Science & Technology from 27 June 2016 to 08 July 2016. The objective of the course was to enable the participants to use computer for basic needs. The program covered the basics of computers, word processing and Internet. Around 20 candidates participated in the program.



Computer Literacy Program

August 2016

12th August, 2016: Cleanness and Plantation Drive at Ghudda

To create awareness among the villagers and to generate service sentiments in students, National Services Scheme (NSS) volunteers of Central University of Punjab, Bathinda gathered at village Ghudda for one day special camp on 12 August, 2016. Volunteers during the Swachh Bharat Campaign special camp carried out cleanness and plantation drive inside the holy place and Panchayat Land. During the camp, about 50 saplings were planted by the volunteers. After the drive, they met with villagers and motivated them to adopt general cleanness and environment ethics. The village panchayat during the camp fully cooperated with the staff and volunteers. The new volunteers of NSS of year 2016-17 were highly motivated and enthusiastic enough in the activities. Before concluding the camp, they also met with the girls learning stitching and machine work run by the village panchayat. NSS Programme Coordinator Dr. Deepak Chauhan, Programme Officer Dr. Mahesh Kulharia and Dr. Ramanpreet Kaur managed the camp successfully.



Students Participating in the Cleaning Drive

13th August, 2016: Awareness Lecture

The Central Instrumentation Laboratory of CUPB organized an awareness lecture on 13 August 2016 for the students, faculty of the university and technical staff of CIL, wherein Dr. Ajai Prakash Gupta, Senior Technical Officer, QA & QC Division, IIM, Jammu interacted with the participants of "Quality Control of Medicinal and Aromatic Plants" lecture.



Dr. Ajai Prakash Gupta delivering the lecture

26th August, 2016: Lecture on “Basics of NMR and its spectral interpretations” and “Terpenoids as Medicine

“Professor K. L. Dhar, Former Head, Natural Product Division, IIM, Jammu delivered two lectures on “Basics of NMR and its spectral interpretations” and “Terpenoids as Medicines” on 26-08-2016, wherein he shared his experiences with the students on the use of NMR and using the terpenoids as medicines.



Prof. K.L. Dhar delivering a lecture

27th August, 2016: Inauguration of Second Two- Day Legal Awareness Programme about Women Related Laws

Inaugural session of the Two Day Legal Awareness Programme was held at the Auditorium of the Central University of Punjab. The session was presided by Prof. R.K. Kohli, Vice Chancellor, Central University of Punjab. In his presidential remark, he pointed out the need for training programme and enhancing the expertise among various sections of the society in order to understand and effectively manage mechanisms for dealing with the atrocities against the women.



Participants in the Two-day Legal Awareness Programme

Prof. P. Rama Rao, Dean of Academic Affairs, addressed the gathering and pointed out the responsibility of academic community in the empowerment of women. Dr. Puneet Pathak, Convener of the programme spoke about the various activities that the Centre for Law holds in regard to the Human Rights education as well as the mandate of National Commission for Women in protection of women's rights and the dissemination of legal provisions related to women. Ms. Paramjeet Kaur Landran, Punjab State Women Commission Chairperson Chandigarh, Professor, Punjab University, Chandigarh spoke on the Role of NCW, PSCW in the Empowerment of Women. Prof. D. K. Singla, Professor Faculty of Law, Punjabi University, Patiala Spoke on the Rights of Women under Family Law. Mr. Amit Malhan, CJM Secretary, District Legal Service Authority spoke on the Alternative Dispute Resolution. He apprised of various courts like Lok adalat, Family Court and especially talked about the functioning of Lok Adalat. Rakesh K. Gupta, Lead District Manager, Bathinda spoke on the Empowerment of Women through Financial Inclusion.

28th August, 2016: Conclusion of Two-Day Legal Awareness Program

The programme of the day two began with the address by Mrs. Paramjit Kaur, Chairperson, Punjab State Women's Commission, Chandigarh followed by the felicitations of Guests and Speakers. Mrs. Paramjit Kaur described the importance of such training programmes in spreading awareness the society. Ms. Daljit Kaur Advocate Punjab & Haryana High Court, Chandigarh spoke on the Problem of Abundant NRI Women in Punjab. Ms. Madhu P. Singh Advocate Punjab & Haryana High Court, Chandigarh spoke on the Crime against Women in India, The two major issues - Domestic violence and sexual harassment at workplace that is nowadays commonly known to all. The students of Law department and other centres of the university presented a skit on women empowerment. The skit was named as "MERAADHIKAAR". A Quiz contest was organized as a part of the awareness programme.



Informal Open Discussion: During Informal open discussion the participants discussed the real life problems relating to the rights of women.

The valedictory session of the two days training programme was presided by Ms. Paramjeet Kaur Landran, Chairperson, Punjab State Women Commission. She reiterated the need for organising such training programme in universities as well as in the public sphere.

September 2016

1st September to 15th September, 2016: Observance of Swachh Bharat Pakhwara

Central University of Punjab, Bathinda observed Swachh Bharat Pakhwada from 1 September-15 September, 2016 as a mark of cleanliness and hygiene. Activities like weeding out the old files and removal of waste material like broken furniture, etc. particularly in faculty rooms and administrative block of the campus were conducted. The motive of the event was to encourage students and faculty to participate in the Swachhta Abhiyaan not just for one day, but adopting cleanliness as a routine activity to make their surroundings country clean and green.



A view of Swachh Bharat Pakhwara

9th September, 2016: National Youth Parliament

The Central University of Punjab organised National Youth Parliament on September 9, 2016 in its campus. The main motive of the competition was to create interest among students about the politics and the functioning of the parliament. In the competition, students performed all duties of MPs and acted as parliamentarians of the ruling and opposition parties. They took part in the proceedings of the Parliament and addressed the issues through Speaker of the House. The Central University of Punjab created a niche by setting the benchmarks for other competitors of the 13th National Youth Parliament competition. Avinash Rai Khanna, Ex Rajya Sabha MP, praised the performance of the students. He explained the procedure of the Lok Sabha to the students, covering all process of voting, decorum, role of Speaker, role of Secretaries, Secretary General, Deputy Speaker, Opposition and Leader of Opposition. Kulvir Singh, nominated judge, also discussed the constructive role of the opposition and various stages of passing a bill. Mr. S.P. Singh, a representative of the



Ministry of Parliamentary Affairs, applauded the efforts and scholastic visions of the university administration in giving the students such infrastructure for co-curricular activities. Igona Pandey, Vishakha Chib, Jithin V.J., Richa and Purshutam Kumar were declared the winners for the award of certificate of appreciation, That was issued by the Ministry of Parliamentary Affairs in the National Prize Distribution Ceremony at Delhi.



National Youth Parliament participants posing with the dignitaries

14th September, 2016: Hindi Day and Hindi Fortnight Celebrations

Central University of Punjab, Bathinda celebrated Hindi Day on 14th September 2016 at 10:00 a.m. in the Seminar Hall of its City Campus. Prof. (Dr.) R. K. Kohli formally inaugurated the Hindi Fortnight Celebration on this occasion.

At the opening of the programme, Convenor of the Official Language Implementation Committee Dr. Rajinder Kumar welcomed the Hon'ble Vice Chancellor of the University. He informed that in this fortnight starting from 14th September 2016, a number of Hindi activities & competitions such as Hindi Poem Recitation, Hindi Translation, Hindi Essay-Writing, Hindi Singing, and Hindi Training Workshop will be organized as a part of Hindi Pakhwara, which will be concluded on 28th September 2016.

In his presidential address, Vice Chancellor Prof. R. K. Kohli stressed on the easiness of Hindi language and told that language always helps in cooperation among people. He informed that the Hindi is the fourth most popular language of the world and we should acquire the knowledge created in other languages of the world through translation for its further enhancement as well as for the welfare of the mankind. Prof. Kohli appreciated the Government for making efforts to get the Hindi language declared as the United Nation's official language and hoped that Hindi may get the required votes in UN for its declaration as official language.

While speaking on the legal status of Hindi, Dr. Puneet Pathak, Assistant Professor told that Hindi was constitutionally declared as Official Language of the Govt. of India. Consequently all ministries, departments, offices of the Central Govt. are using Hindi in its day to day office correspondences.

While speaking on the global perspectives of Hindi language, Ms. Chitra, a PhD scholar of the University presented various examples of Hindi being used in different countries of the world. She told that the propagation and promotion of Hindi language is well received in the American and European countries apart from the Asian countries. Hindi literary figures and Hindi lovers made massive contribution to the encouragement to Hindi language in these countries. While sharing her experiences and views on the status of Hindi in North-Eastern states including Assam, Dr. Sumedha Datta, Assistant Professor told that the patriotic songs, freedom fighters and their organisations during the freedom movements contributed a lot in the promotion of Hindi in these states. She further told that the people became habitual of Hindi because of the Hindi programmes telecasted through Radio and Doordarshan. This is one of the reason that these people can easily speak and understand the Hindi language.

Feathering the cultural cap in this programme, Ms. Gitesh, a student of the University presented a beautiful Hindi poem carrying the audience to pensive moods. Another student of the University Mr. Jahid, while speaking on the status of Hindi in the state of Jammu and Kashmir, told that the Kashmiri people can very well understand Hindi, but to speak it is a difficult job.

However, the people living in Jammu comparatively are more frequent towards speaking Hindi. Hindi Translator, Mr. Rupinder Sharma threw lights on the official status of the Hindi and told that Hindi language was used for grouping people for freedom of India and for the national integrity it was given official status in the Govt. of India through Constitution. He told that consequently the Official Language Act was issued for using Hindi in all departments/offices of the Central Government. Mr. Sharma further elucidated that Central University of Punjab, being a Central Government University, ensures the Official Language Act. Controller of Examinations of the University Mr. Kamwal Pal Singh, Deputy Registrar Ms. Shweta Arora, Associate Professors Dr. Alpana Saini, Dr. Monisha Dhiman, Dr. Anil Mantha and Assistant Professor Dr. Ramanpreet Kaur alongwith students of the University were also present during this programme. Dr. Sindhu Suman, Assistant Professor presented vote of thanks to all the participants.

14th to 28th September, 2016: Hindi Fortnight Closing Ceremony

Closing ceremony of the Hindi Pakhwara (fortnight) was held on 28 September. Delving on the importance of taking Hindi to the common man, the Honourable Vice Chancellor had formally inaugurated the Hindi Pakhwara celebrations with his worthy notes. Dr. Rajinder Kumar conducted the event in which various activities like solo song competition, debates, and declamation were organized. Hindi as well as non- Hindi speakers were also encouraged to take part in the various activities of the event. The event earned much zeal and enthusiasm when along with students, staff members of CUPB also participated in various competitions organized as part of the event.



A Student performing in solo song competition

October 2016

7th October, 2016: Special Lecture Organised on 125th Birth Anniversary of Baba Sahib Dr. B. R. Ambedkar

Central University of Punjab, Bathinda organized a special lecture on the Bharat Ratna awardee Baba Sahib Dr. B. R. Ambedkar in order to celebrate his 125th Anniversary on 7th October 2016. The programme was marked by a lecture by Honorable chief guest Prof. Kuldeep Agnihotri, Vice Chancellor, Central University Himachal Pradesh. The programme started with the formal welcome and introduction of the chief orator, by Vice Chancellor, Central University of Punjab, Bathinda, Prof. R.K. Kohli.

Prof. Kuldeep Agnihotri in his lecture brought out the role and importance of Dr. B. R Ambedkar not only as a social reformer but also as a prominent economist, historian and a well recognized law maker. He also laid stress on complete acquaintance with the unabridged personality of Dr. Ambedkar, without which he can't be understood as a whole. He went further to tell that Dr. B. R. Ambedkar enunciated the drive for better education, struggle against atrocities by making the masses aware about its importance in the long run. His struggle was not against an individual but against the mindset of people. He pronounced class division to be the root cause of the weakening of any society especially the Indian society which has suffered its consequences for a long time. In his book "Shudra Kaun Hai", Baba Sahib by tracing the history of the castes referred to the people of these castes as being the ones who have been struggling against atrocities for a long time. Adding to this he said that Baba Ambedkar suffered a lot because of the indiscrimination meted out to him for being

the part of the lower caste. Dr. Agnihotri described caste discrimination as the cancer of society which has a bad impact on every sections of the society.

After this Prof. R. K. Kohli announced naming of the Central University of Punjab Auditorium as "Dr. B. R. Ambedkar Hall". The chief guest was felicitated by Prof. Kohli. Dr. Dhanya M. S. presented vote of thanks on behalf of Central University of Punjab. The programme was graced by the presence of Dean of Academic Affairs, Registrar, Deans of all the Schools, Teaching and Non-teaching staff and the students of university.

14th October, 2016: Alumni Meet

Central University of Punjab Alumni Association (CUPAA) organized second alumni meet on 14th Oct. 2016. Approximately 50 Alumni participated out of invited 116. On this occasion a website link of CUPB alumni association <http://cup.edu.in/CUPB%20Alumni/default.html> was launched, with a presentation showing key features like online registration etc. Many distinguished alumni who were unable to attend the meet, congratulated by bestowing blessing and good wishes. Some of alumni shared their views and emotional belongingness with CUPB by sending e-mails and messages. CUPB Students enthusiastically participated and presented a musical Jamming session.

Dean of Students' welfare, Prof. Ashok Dhawan shared his memories of being an alumnus of prestigious institutes. The program was finally concluded by Dean of Academic Affairs, Prof. P.Ramarao, who emphasized on paying respect to the mother institution and stay in a connected with the CUPB.



Glimpse of the events during the Alumni Meet

15th October 2016: 2nd Convocation of the CUPB Held

The second Convocation of the Central University of Punjab was held on 15th October, 2016 at its City Campus, during which 148 degrees were awarded to students and scholars by the Vice-Chancellor in the presence of the esteemed Chief Guest Prof. Ajay Kumar Sood, President-elect INSA and Honorary Professor, Department of Physics, Indian Institute of Science, Bangalore, Hon'ble Chancellor Prof. S.S Johl, and the Guest of Honour Prof. A.S. Brar, Vice Chancellor, Guru Nanak Dev University, Amritsar. Toppers were awarded Gold Medals with Hallmark certification.



18th October, 2016: Industrial Visit to Vedanta Unit, Talwandi Sabo

A visit to Talwandi Sabo Power Limited (TSPL), a 1980 (3x660) MW thermal power plant at Banawala village in Mansa district, Punjab was organized for the students of Second Year M.Sc. Environmental Science and Technology (Batch 2015-16). This company is one of the first few supercritical plants with ISO 9001:2008; ISO 14001:2004 & OHSAS 18001:2007 certification, A subsidiary of Vedanta Limited has implemented the largest Greenfield Power Project in Punjab, India, with all consents and approvals of the place.

A visit to National Fertilizer Ltd. (NFL) Bathinda Unit was organised in the third week of October, 2016, for the students of 2nd year M.sc. Environment Science & Technology.



Industrial visit to Thermal power plant (TSPL) and NFT Bathinda

20th October, 2016: Organized book exhibition in Central University of Punjab, Bathinda

A two-day book exhibition was held on 20-21 October, 2016 in Central University of Punjab, Bathinda. The exhibition was inaugurated by Prof. (Dr.) Gurmail Singh, Vice Chancellor, Akal University, Talwandi Sabo on 20th October, 2016. The book exhibition was held in two days, wherein various book vendors and 5 key publications viz. Cambridge University Press, Pearson Publishing, Sage, Publications, McGraw-Hill, Taylor & Francis and Orient Blackswan etc. displayed its latest publications on topics like Biological Science, Humanities, Social Sciences, Engineering, and Medicine etc. Fifty thousand books were exhibited by various faculty and vendors under the book exhibition.

Students of the university participated in the book exhibition with enthusiasm and also helped in the selection of books for the university. Senior faculty members of various colleges from the city and surrounding area participated in this book exhibition. Students, teachers and visitors expressed excitement in seeing books related to various subjects and languages at one place. It was an inspirational experience for many of them.



Glimpses of the Book Exhibition at the City Campus

November 2016

25th November, 2016: Observation of the Constitution Day

CUPB observed the Constitution Day on November 25, 2016. The event was organized by Centre for Law and was initiated by Dr. Tarun Arora. Dr. Rajinder Kumar Sen addressed the audience on the Topic "Concept of Duty" followed by a panel discussion by students from various centres on "Perspective of Concept of Duty in Modern Times". Dr. Bawa Singh deliberated about the "Introduction of Fundamental Duties".



Speakers deliberating on the Concept of Duty

December 2016

1st December, 2016: Observance of World AIDS Day

The NSS Cell, along with Vardaan-Health Awareness & Blood Donation Club of Central University of Punjab, Bathinda, organized an awareness programme on World AIDS Day on December 01, 2016. Poster making, painting and slogan writing competitions were organized to spread awareness of it among the students. Mr Narinder Kumar Bassi, social activist, a renowned community AIDS educator and recipient of the UN AIDS Civil Society award graced the occasion by his presence. Mr Bassi shared the history of the disease since its inception and discussed the measures to root it out. He added that students and the peer educators play a vital role in spreading awareness about AIDS. The event was concluded with a prize distribution ceremony through which students were given prizes.



Students participating in poster making competition during the day

3rd December, 2016: One Special Camp of NSS at CUPB

To create awareness among the students and volunteers of National Services Scheme (NSS), A One day special camp was organized at the Central University of Punjab, Bathinda on 03 December, 2016. Around eighty old and new NSS volunteers of Central University of Punjab, Bathinda worked at University Campus for cleanness. Volunteers motivated the people to clean the environment. The NSS Programme Coordinator was present there.



NSS one-day special camp

9th December, 2017: One-day National Seminar on 'Recent Trends in Food Processing' organised at CUPB.

Central University of Punjab, Bathinda jointly under the auspices of Indian Institute of Crop Processing Technology (IICPT) organised a one-day National Seminar on "Recent Trends in Food Processing" on 9th December 2016 at Dr. B.R. Ambedkar Auditorium, CUPB.

Professor Gurmail Singh, Vice Chancellor, Akal University, Talwandi Sabo attended the seminar as the Chief Guest while Prof. C. Anand Ramakrishnan, Director, IICPT presided over the program. In the beginning of the program, Er. Pratibha Singh, Assistant Professor, IICPT presented formal congratulations and informed that the zonal center of IICPT at Bathinda has been started. Prof. P. Ramarao, Dean Academic Affairs, CUPB presented a formal introduction to the Chief Guest and Director.

Prof. C. Anandramakrishnan said in his address that there are endless possibilities of food processing in India. The size of the Indian market is very broad, for which the food processing industry can provide a better option. He told that food processing in India is used very little. India is a distinguished nation and food processing in India's GDP can play a very big role.

While addressing the participants Prof. R.K. Kohli, Vice Chancellor, Central University of Punjab, Bathinda said that the education and food are two such industries in the country, which have bright future. He said that our 35 percent food grains are destroyed. Under Food processing, there is a dire need to preserve the edibles from damage, to maintain its quality and to focus on diabetic patients. He added that food processing will not only increase possibilities of export, but the demand of our domestic market will also be fulfilled.

Prof. S.S. Marwaha, Professor & COC, Applied Agriculture, CUPB said that there is immense potential of food processing in the country. Referring to Punjab, he said that there is a record production of milk, vegetables and fruits but due to lack of processing, most of the production gets spoiled. He added that with the setting up of this industry in Punjab will not only save the food production from damage, but it will also provide the more creative use of human resources.

Prof. Gurmail Singh, Chief Guest said in his address that there is immense potential and capacity for food processing in the country because of the geographical and cultural diversity of the country. He told that out of the total 60 types of soil, 46 are available in India. He explained that biodiversity in India and long coastal regions expresses the possibility of processing. He said that due to urbanization and new rising demands, the second stage of the Green Revolution is necessary and therefore food processing is extremely important.

In the technical session, Dr. C. Anandramakrishnan presented lectures on innovation and development in food processing. Dr. M. B. Bera, Professor and Dean Academic, Department of Food Processing and Technology, Sant Longowal Engineering and Technology Institute presented lectures on the application of probiotics in the Nano Dairy Matrix. After this, Dr. Amarjit Kaur, Professor and Head, Department of Food Science and Technology, Punjab Agricultural University, Ludhiana presented lectures on their value addition process after harvesting. After a panel discussion, the programme ended with the distribution of certificates to all participants.



VC Prof. RK Kohli addressing the participants



Participants of the event in pensive mood



Dr. Anandramakrishnan delivering the lecture

16th December, 2016: Vittiya Saksharata Abhiyan (VISAKA) at Ghudda

To create awareness among the villagers and generate service sentiments in students, National Services Scheme (NSS) volunteers of Central University of Punjab, Bathinda joined at village Ghudda for VISAKA campaign on 16 December, 2016. Volunteers during the VISAKA campaign met the people of Village Ghudda and motivated to the people to use ATM card, Paytm, Credit Card, Debit Card cheque. The village Panchayat during the camp fully cooperated with the staff and volunteers. The new volunteers of NSS of year 2016-17 were highly motivated and enthusiastic enough in the activities.



The Volunteers of NSS from CUPB motivating the Villages to use digital payment system at Gudda Village

23rd & 24th December, 2016: National Commission for Women sponsored 3rd Two- Days Legal Awareness Programme about Women Related Laws

Inaugural session of the Two-Day Legal Awareness Programme was held at the SSD Girls College Bathinda. The gathering was warmly welcomed by Dr. Tarun Arora, while the Convener of the programme, Dr. Puneet Pathak talked about the aims and objectives of the programme. The Chief guest of the function, Dr. Kumkum Kohli spoke about women empowerment and female infanticide. Principal (Retd.), Govt College for Girls, Chandigarh then addressed the audience, while the vote of thanks was proposed by Dr. Parminder Kaur, Principal, S.S.D Girl's College. The faculty of Centre for Law and staff of SSD College for Girls were also present during the inaugural session.

Prof. Promila Batra, Department of Psychology, MDU, Rohtak spoke on the empowerment of women, obstacles and opportunities. Ms. Laxmi Kanta Chawla, Former Health Minister, Govt. of Punjab spoke on the Sexual & Reproductive Health, and female foeticide, women's Right to health in India. Adv. Ms. Mandeep Kaur Dhillon and Adv. Mr. Amit Kumar Aneja spoke on the Lok Adalat, Family Court, Mahila Court, Juvenile Justice Act etc., Mr. Rakesh K. Gupta, Lead District Manager Bathinda, Sh. Rameshwar Dass Singla, Financial Literacy counselor and Sh. Chetan Jindal, Information Technology Officer spoke on the Vittiya Sakshastra Abhiyan, How to go Cashless.



A view of the inauguration of the programme



A view of the working session

On the second day, a documentary based on women empowerment in India on the themes of 'female foeticide', 'girl child labor', and 'boys and girls are not equal' was screened. Whereas, a quiz contest was also organised apart of this awareness programme.

Ms Veerpal Kaur, Representative from PSCW spoke on the Political Participation of Women. Ms. Daljit Kaur, Advocate Punjab and Haryana High Court, Chandigarh spoke on Eve Teasing, Sexual Harassment at work place, complaint and remedies. Prof. Paramjeet Singh, Dept. of Law, Punjabi University, Patiala spoke on the Rights of Women under Family Law, Matrimonial Rights: Separation, Divorce, Maintenance, Property Rights and Succession. Mr. Rajeev Arora, Director AIR spoke on the crucial issue of media and protection of women.

The valedictory session of the one day training programme was presided over by Dr. Tarun Arora, CoC, Centre for Law. Prof. P. Rama Rao, Dean, School of Basic and Applied Sciences was the Chief Guest of the function. Prof. Rao in his speech mentioned the importance of these training programmes in universities and colleges as well as in the public sphere and also acknowledged the role of the activities held by the Centre for law, in imparting awareness about legal issues, and laws.

24 December, 2016: Two Scientists from Central University of Punjab selected for Indian Antarctic Expedition

Two faculty members from Central University of Punjab, Bathinda were selected for the 36th Indian Scientific Expedition to Antarctica, coordinated by Ministry of Earth Sciences, Government of India. This was for the first time that any newly established Central University in the country get an involvement in the Indian Antarctic programme. Selected scientists were Dr. Felix Bast, a DST-INSPIRE Assistant Professor at Centre for Plant Sciences, and Dr. Jitendra Kumar Pattanaik, Assistant Professor, Centre for Geography and Geology.

Selected scientists were part of a group of around thirty scientists who got high altitude acclimatization training at Auli, Himalayas organized by Indo-Tibetan Border Police. The voyage to Antarctica aboard RV Ivan Papanin commence on 24th December 2016 from Cape Town, South Africa that lasted for 16 days before the crew disembark at Bharati Station Antarctica. They stayed at two of India's research stations, Bharati at Larseman Hills and Maitri, Schirmacher Oasis for one month each before returning by April 2017. With this expedition CUPB became first new central university in the country to have an active polar research programme.



Dr. Felix Bast and Dr. Jitendra Kumar Pattanaik

27th & 28th December, 2016: National Conference on Computer Engineering Problem Optimisation

Centre for Computer Science & Technology organised a maiden National Conference on Computer Engineering Problem Optimisation-2016 from 27-28 Dec 2016. The Conference received more than 65 papers from across the country. Out of these only 35 were selected for the Oral Presentation. The Conference was inaugurated by the worthy Vice Chancellor Prof. R.K. Kohli. He motivated the young scientists and participants for ethical research in their respective fields.

The Conference was divided into four technical sessions, two each day. The Conference session was chaired by eminent personalities in their field that includes Dr. S.R.S Iyengar from IIT Ropar, Dr. Balkrishan Jindal from YCOE, Pbi. Univ. Regional Campus, Talwandi Sabo. and Dr. Munish Kumar from Panjab University Regional Campus, Mukatsar. Dr. Iyengar delivered a talk on Cloud Computing. All participants enjoyed his lecture and appreciated the content and simplicity of the new term in the computing age. He also chaired the first session of the conference. Dr. Balkrishan Jindal chaired the second session of first day of conference. He delivered a talk on Digital Image Processing and appreciated the work done by CUP, Bathinda students. On the second day of the conference Dr. Munish kumar chaired the third session and he delivered an expert talk on CAPTCHA. In his lecture he had described the role of CAPTCHA as security measure in accessing the computer world through web. In the Valedictory function certificates to the participant were distributed by the Prof. A.K. Jain, Dean, School of Engineering.



Prof. R.K. Kohli delivering the lecture



Prof. A.K. Jain delivering the lecture

January 2017

11th to 13th January, 2017: Community Development Programme by the Vardaan Club of CUPB

The volunteers of **Vardaan Club of CUPB** celebrated their Lohri in a very unique way. The unique celebration went on from January 11-13, 2017. They marked the festival by doing the following activities: Visit to an Old Age home in Bathinda, Visit to Mahant Gurbanta Das School for Deaf & Dumb, Bathinda. They distributed warm clothes and shoes to the deaf and dumb students, which were contributed by the students of CUPB.

12th January, 2017: Celebration of National Youth Day 2017

Swami Vivekananda's birthday on January 12, was celebrated as National Youth Day to encourage and inspire the youths of India. The NSS Unit of Central University of Punjab, Bathinda organized a debate competition on "Demonetisation: A Move to Change the Fate of the Youth" on January 12, 2017. Students shared their views and experiences about the digitalization and demonetization. They showed great enthusiasm in participating in the competitions. 15 students participated in the debate. Prof. P. Ramarao, Dean, School of Basic and Applied Sciences, applauded the organizers for organizing the event and discussed the demonetisation related issues.



Student expressing her view on demonetisation

12th January, 2017: Special Lecture on National Youth Day

The Central University has organized a Special Lecture on National Youth Day by Prof. Satish Kapoor from DAV University Jalandhar on 12 January at 10:30. Prof. Ashok Dhawan, Dean Student's Welfare welcomed Prof. Dr. Satish Kapoor, a well known Historian, internationally famed researcher who has established his name in research on Swami Vivekananda. Prof. Kapoor described Vivekananda's biography by explaining his philosophical teachings, and elaborated on how he served as a connecting agency between the ancient times and modernity and how he played a great role in connecting the east and the west. He told that it was Vivekananda who described the Vedanta Philosophy to the west. He said, "All the human beings are the part of the universal consciousness and all souls are great. The only need is self-realization". Prof. Kapoor showed his concern about youth, by advising them to consider Vivekananda as ideals in the times of depression. Youth should utilize their power and capacity in positive way. He told that Vivekananda can be taken as the soul of development among the youth in modern India. So, all the youths should follow the philosophy of Vivekananda. Prof. Kohli, Vice-Chancellor, Central University of Punjab, in his address told the students about the importance of the day in the life of the youth. After this Prof. Kohli and Prof. P. Ramarao, Dean, Academic Affairs presented the Award of Honour to Prof. Kapoor. Officers, Teachers, Researchers and the Students of the University attended the program.



National Youth Day

18th January, 2017: A Special Lecture on Globalization, Demonetization and its Impact in India

Dr. Sandeep Kaur organised a special lecture on 'Globalization, Demonetization and its Impact in India' by Prof.(Dr.) Paramjit Nanda, Professor & Head, Punjab School of Economics, Guru Nanak Dev University, Amritsar, Punjab on 18 January 2017.



Prof.(Dr.) Paramjit Nanda delivering a special lecture

25th January, 2017: Celebration of Voter's Day

To sensitize the people for maximum voting for upcoming Punjab Vidhan Sabha election on 04 Feb, 2017, the unit of the NSS Central University of Punjab, Bathinda organized Voter's day on 25th Jan 2017 at the University Campus. Most of the volunteers had participated in the celebration of voter's day. A voter's pledge was taken by the NSS volunteers the the other students. Programme coordinator, Programme officers and other faculty members also participated in the voter's pledge.



Celebration of Voter's Day

A hand written voter's pledge was also submitted by the NSS volunteers and other students in the office of NSS cell, CUPB. Two flex boards were installed at Jassi Chowk and Under Bridge near the University to awake the people to promote maximum voting.



Flex Boards Installed at Jassi Chowk and Under Bridge Near the University

26th January, 2017: Celebration of Republic Day in CUPB

A function was organized to celebrate the 68th Republic Day at the University on January 26, 2017. Prof. R. K. Kohli, Vice-Chancellor, hoisted the National Flag and inspected the guard of honour. In his address, Honorable Vice-Chancellor said that quality education as well as the top ranking of the university was attained through team work of students, faculty and the non-teaching staff on this occasion. The students of CUPB recited the national anthem. Many other student performances like patriotic song singing, short oratories graced the event. The event was concluded with the vote of thanks by Registrar Dr. Jagdeep Singh and everyone was invited tea.



Celebration of the Republic Day

February 2017

8th February, 2017: Special Lecture on Literature and Culture

The Centre organized a Special Lecture on Literature and Culture by Prof. Ravi Kumar Anu from Punjabi University Patiala, on 08 February 2017 at 10:00 am. Prof. Dr. Ravi Kumar Anu is a well-known researcher who has established his name in Hindi Literature.

Prof. Ravi Kumar described the changes which are taking place in the Indian culture gradually. Indian Culture has been full of values and morals, but they are shattering day by day. He described how Indian culture has been changed in the name of westernization. He told that literature is the only thing that reflects our society as it is and teaches us the art of living. Literature teaches us to differentiate between right and wrong. Literature inspires us to know ourselves, our ambition, and it forces us to think about our future. Indian culture has been a precious heritage and it has established its own identity in the world. Literature provides us vision and culture inspires us to think forward. Prof. Ravi Kumar Anu satisfied the students by answering their curious questions.

13th February, 2017: Metabolic Engineering Flavonoid Biosynthesis and Academic and Industrial Perspective

Dr. Sudesh Yadav, Scientist-F, CIAB, DBT, Mohali, Punjab presented a talk on Metabolic Engineering Flavonoid Biosynthesis and Academic and Industrial Perspective on 13th February, 2017.



Dr. Sudesh Yadav delivering the special lecture

15th February, 2017: Cleanness, Plantation Drive and maintenance of planted saplings at CUPB main campus, Ghudda

To create awareness among the villagers and to generate service sentiments in students, National Services Scheme (NSS) volunteers of Central University of Punjab, Bathinda joined at the University main campus, Ghudda for a one day camp on 15 February, 2017. NSS Volunteers following the flagship programme of Govt. of India Swachh Bharat Campaign carried out cleanness, plantation Drive and planted saplings inside the University main campus. The new volunteers of NSS of year 2016-17 were highly motivated and enthusiastic enough in the activities. NSS Programme Coordinator Dr. Deepak Chauhan, Dr. Ashwani Kumar, Dr. Monisha Dhiman, and Dr. Ramanpreet Kaur, Programme Officers managed the camp successfully.



Students Participating in the Cleanness, Plantation and Maintenance Drive

17th February, 2017: 5th Annual Sports and Athletic Meet Inaugurated at Central University of Punjab, Bathinda

Central University of Punjab, Bathinda marked its assertion on the significance of sports in student life by inauguration of two day long 5th Annual Sports and Athletic Meet 2016-17 on 17 February 2017. The event was graced by the presence of former Hockey Captain, Sardar Rajpal Singh as the chief guest. The celebrations began at 9.00 A.M. with a march past by the students of the University. Thereafter, the students and faculty members took an oath which filled the hearts of everyone with the spirit of sportsmanship and unity. Prof. R. K. Kohli, Honorable Vice-Chancellor, Central University of Punjab, Bathinda extended a warm welcome to the esteemed gathering. He said that organizing sports meet is essential for instilling a sense of discipline and belongingness among the students. He said that sports is a vital part of every student's life and should be given as much importance as academic subjects as they help students to learn values of life.

Various track events were organised in which Arti, Komal and Suman bagged the first, second and third positions respectively in girls 50 m race. In the boys 100 m race Abhishek, Wasim and Mir Yusuf took the first, second and third places respectively. Apart from this, various other activities like 50 m female faculty staff and 80 m male faculty staff race, shot put, and several fun games were organised on the first day of the sports meet in which both faculty and the students took part with great fervor.

18th February, 2017: 5th Annual sport and Athletic Meet Concluded at Central University of Punjab, Bathinda

The second day of the meet was also marked by the same zeal and excitement in which the main attractions were girls 100 m race in which Arti Yadav was graced with a gold medal and in boys 400 m race Fameel got the gold medal, in 200 boys race again Fameel got the first position. In long jump (girls) Navjotpreet won the gold medal, in (boys) long jump Picky Pang got the gold medal, marked with very exceptional performance Sumit Kumar ensured his gold medal in (boys) shot

put, (girls) volleyball match which the Blue team won the gold, discus throw in girls category in which Himani Sharma won the gold and boys category Rakesh Ghosh got gold medal. Other events such as boys' football match, boys' kabaddi match, tug of war etc. Faculty members also participated in various games.

The sports meet was concluded on 18-02-2017 at 4 P.M. This event was graced by Mrs Avneet Kaur Sidhu, Arjun awardee shooter as the chief guest alongwith Amritpal Singh Brar. She facilitated the winners with medals and trophies for different categories of games. In her address to the students she highly commended the effort of students and encouraged them to come forward in sports along with academics too. She further added that it is important to participate in sports as it is a way to challenge oneself which is victory in true sense of word. Prof. R. K. Kohli, Vice- Chancellor, Central University of Punjab facilitated the Chief Guest with a memento and the event was concluded.



Annual sports and Athletic Meet

18th February, 2017: A workshop on DNA sequencing and application

Central Instrumentation Laboratory organized a workshop on DNA Sequencing and Application as well as hands on training for the scientific/ technical staff of the University and institutions from Punjab and adjoining states, jointly with M/s Thermofischer Scientific Pvt Ltd. for capacity building on 18th February, 2017. The workshop provided key insights into both fundamental and advanced aspects of Sanger DNA sequencing by Dr. Kuldeep Singh, Director NBPGR, New Delhi and Dr. Suresh Korpole, IMTECH Chandigarh. Dr. Ajit Dua Senior Scientist cum Quality Assurance Head, PBTI appraised the participants the importance of the accreditation and briefed the procedure of getting the DNA sequencing facility of the university NABL Accredited. Dr. Sailesh Gochhait, scientist from Thermo Fischer Scientific Pvt. Ltd., besides explaining the components of the DNA sequencer imparted hands on training the participants.

During the workshop the participants were also informed that the hi-end analytical facilities of CIL are available for usage for the outside users on payment basis. After the workshop on DNA sequencing, The University is getting queries regarding the use of analytical facilities of the CIL from various institutions in Punjab and adjoining areas.



The eminent speakers with participants and organizers of the Sangers DNA Sequencing and Application Workshop

21st February, 2017: International Mother Tongue Day
February, 2017: International Mother Tongue Day

As CUPB boasts of a diversity of linguistic communities from all over India, and has students from 26 states of India, this celebration assumed greater importance. The celebration, by combining activities like singing of different regional songs and recitation of different poems from Kashmir to Kerala, focused on highlighting the linguistic diversity of our country and to draw the attention of the University fraternity to the diversity of cultures in our country



Students Performing during the International Mother Tongue Day

21st February, 2017: 8th Foundation Day Celebrations Commences in Central University of Punjab

Central University of Punjab, Bathinda started a series of events to mark the celebrations of the 8th Foundation day which was celebrated on 28 February 2017. The celebrations witnessed a series of different educational as well as creative and cultural events. These celebrations started with the two day long Annual Athletic and Sports Meet 2016-17 on 17th and 18th February, which observed huge participation on the part of both the faculty members and the University students. This event was followed by another series of events in which the students got a chance to exhibit their creativity and talent in a very unique way through "Rangoli making" competition and "Best out of Waste" competition. Students participated in both the competitions with great zest and zeal. In total 16 teams participated in the rangoli making competition and 11 teams participated Best out of Waste competition? In continuation to this event, a special lecture on "Living Wisely" by Dr. Samuda Chetri, Director, Gross National Happiness Centre, Bhutan, was also organized in the university premises. In his address Dr. Chetri emphasised on the importance of living life wisely which brings out the real happiness in life.



Rangoli competition organised during the foundation week

23rd Feburary, 2017: Organization of Various Competitions during the 8th Foundation Day Celebration of Central University of Punjab, Bathinda

As a part of this celebration, a Photography Competition and Documentary Making Competition were organized on February 23, 2017. In these competitions, students depicted university life in documentaries and demonstrated various facets of university campus through their photography skills.

At 3 P.M. Poetry Recitation and Declamation competitions were organized. In Declamation, students presented their views on "Demonetization: Challenges and Opportunities". Afterwards, students presented poems related to various social, economic and political issues.



Vice Chancellor honouring the Honourable Chancellor on the Foundation Day

28th Feburary, 2017: Conclusion the 8th Foundation Day

Central University of Punjab Bathinda (CUPB) concluded its week long Foundation Day Celebrations on 28 February 2017 at its City Campus. Padma Bhushan awardee and the Hon'ble Chancellor of the University Prof. Sardara Singh Johli was the Chief Guest on this occasion. Prof. R. K. Kohli, Vice Chancellor of the Central University of Punjab welcomed the Chief Guest. While addressing the audience, Prof. Kohli said that the CUPB is itself a mini India, where students from 26 states, faculties from the 19 states and non-teaching staff from the 13 states brings unity in diversity. He told that CUPB is on the top of the newly established Central Universities in academic sphere, and appreciated the teachers and students for this success.



8th Foundation Day Celebration

While presenting annual progress of the CUPB, Dean of Academic Affairs, Prof. P. Ramarao discussed in detail the achievements of the students and faculty of the university. The Chief Guest of the programme and Hon'ble Chancellor of the University Prof. Sardara Singh Johli, Padma Bhushan awardee shared his lifelong experiences with the audience. While remembering his school teacher Sufi Mohammad Deen, he told as how his teacher inspired him to do hard work which in turn ensured his name in the merit list of the Board Examinations.



Members of Cultural Program receiving awards on the Foundation Day

After the address of the Chief Guest, prizes to the students, faculty and staff were distributed. Award for the Best Ph.D. Student, the Best Girl Student and the Best Postgraduate Student were given to Ms. Navaratan Kaur, Ms. Amanpreet Kaur and Ms. Komal Mansotra, respectively. In Best Teaching Awards, Dr. Sunil Mittal and Dr. Rajendra Singh Dhayal were given the first and second prize respectively, whereas, the third prize was jointly distributed to Dr. Yogalakshmi K.N. and Dr. Kamlesh Yadav. Various non-teaching employees were also honoured with the Registrar's Award for Best Non-teaching Employee for their best efforts in administrative and technical field. Mr. Ajay Kumar, Mr. Ravinder Singh and Mr. Balraj Singh were given the first, second and third prize respectively. Apart from the above, Research Awards were also distributed among seven faculty members viz. Dr. Rajendra Singh Dhayal, Dr. Vikas Jaitak, Dr. Raj Kumar, Dr. Vinod Kumar, Dr. Sunil Mittal, Dr. Sunil Mittal and Dr. Sandeep Singh.

Prize distribution ceremony was followed with the cultural programmes, where students exhibited cultural skills in the field of singing, dancing and mime presentation, and received round of applause. The programme concluded with the vote of thanks by Prof. Jagdeep Singh, Registrar of the CUPB. University officers, teachers, students and the dignitaries of Bathinda were present in the function.



Cultural Program on the Foundation Day

March 2017

9th March, 2017: Special Lecture Delivered

Dr. U.C. Lavania, Prof. Emeritus CSIR, Department of Botany, Dr. Seshu Lavania, Professor and Head, Department of Botany, University of Lucknow delivered Special Lecture.



Dr. U.C. Lavania delivering the Special Lecture



Dr. Seshu Lavania delivering the Special Lecture

13rd March, 2017 to 17th March, 2017: Workshop- cum- training programme on *Techniques of Geological, Geomorphological Mapping and Sampling Process for Geoscience research*

A Five-Day workshop-cum-training program under the topic "*Techniques of Geological, Geomorphological Mapping and Sampling Process for Geoscience Research*" was organized by the Centre for Geography and Geology 13 March 2017 to 17 March 2017. The main aim and objective to this program was to serve the basic understanding of geological and geomorphological mapping, introduction to tools and techniques of mapping and the processes of sampling in geosciences research. The training programme comprised of three days class room lectures and two days field training. Thus, the participants were given hands on practice exercises by actually going to the field. A total of 50 participants joined the course with much enthusiasm.

The workshop was full of information and was helpful for the students in their project and thesis work by getting information about various field and lab techniques.



Glimpses of the Workshop

14th March, 2017: Rashtriya Avishkaar Abhiyaan Activities

CUPB has initiated Rastriya Avishkaar Abhiyaan scheme through which the university is encouraging and igniting young minds to develop their interest in Mathematics and Science. Under this scheme a group of 40 students from B.Sc.-III Biotechnology, Baba Farid College, Deon, Bathinda visited the University campus on 14 March 2017. The students were divided into small groups and were shown the university museum, library and laboratories. The students were amazed to see world class facilities and laboratories in their own city.



Undergraduate students of Baba Farid College, Deon visit CUPB

15th March 2017: Extension Lecture Delivered

Centre for Animal Sciences organized a series of extension Lectures by Prof. Ravi Parkash, Professor Emeritus, MDU, Rohtak from 15th March to 17th March 2017. He delivered lectures on important topics from Genetics to Molecular Biology.



Prof. Ravi Kumar, Professor Emeritus, MDU, Rohtak with the Dean

17th March, 2017: Two-Day National Seminar on “Brexit and India”

The Centre for Economics of the Central University of Punjab, Bathinda (CUPB) organised a two days ICSSR sponsored national seminar on 17-18 March 2017. The seminar on "Brexit and India: Analysing the Implications" started with the inaugural session on March 17. Prof. Jaswinder Singh Brar from Punjabi University Patiala presented the keynote address, while the session was chaired by Prof. Sucha Singh Gill, Professor & the former Head of the Centre for Research in Rural and Industrial Development.



A view of inaugural session of the Seminar

The programme started with the introduction of the seminar topic to its audiences by Coordinating Secretary Dr. Sandeep Kaur, Assistant Professor of the University. The Coordinator of the Centre for Economics, Dr. P.K. Mishra formally introduced the guests, which was followed by the formal welcome of the guests by Prof. A.K. Jain, officiating Vice Chancellor of the CUPB.

During his keynote address, while analyzing the important facts regarding the history of European Union and the membership of the Great Britain, Prof. Jaswinder Singh Brar made its evaluation of the current political and global scenario. He mentioned that exiting of Britain from the EU (Brexit) will not only affect the trade of the country, but it will also affect the rest of the world. Prof. Brar told that it will particularly affect the Indian trade as Britain is the third biggest investor to India, whereas India's export to EU and Britain has been highest in the commodities and IT sectors.

Prof. Sucha Singh Gill told during his presidential address that EU presents itself as the best example of the alternative economy, wherein the mutual differences among various countries in general have become secondary whereas we have failed to provide such system in South Asia. He told that Brexit is a challenging event in previewing a global scenario. While analyzing the factors, Prof. Gill told that the growing number of the migrants in Britain is the major factor affecting its economy. He spoke that there is a change in the present world because the national interests and sovereignty are considered to be of paramount importance instead of the regional interests, and Brexit confirms it.

On its first day, Dr. Pralok Gupta, an Assistant Professor of the IIFT told during his special lecture that Brexit is a good indication for Indian economy as majority of Indian goods & services are exported to Britain. He spoke that the Indian trade will now depend on the bilateral relations with Britain and the Indian companies will have to play this role positively.

Guests were honoured at the end of the first days' programme. Apart from the officers, faculty, staff and students of CUPB, participants from eight states were also present during the programme. Forty eight research papers on various topics were presented by the participants during the two days' seminar. Prof. Gurmail Singh, Vice Chancellor of the Akal University Talwandi Sabo graced the closing ceremony of the seminar on 18th March 2017.



Prof. J.S. Brar Delivering a Key Note Address

18th March, 2017: Concluding day of the "Brexit and India" Seminar

The Indian Council of Social Science Research sponsored two-day national seminar on 'Brexit and India: Analysing the Implications' ended on 18th March 2017 at the Central University of Punjab Bathinda (CUPB). The seminar was organised by the Centre for Economic Studies of the CUPB.



Validictory session of the Seminar

Prof. Gurmail Singh, the Vice Chancellor of Akal University, Talwandi Sabo was the chief guest on the closing day of the seminar, while Prof. R.K. Kohli, the Vice Chancellor of the CUPB chaired the closing ceremony.

The Organising Secretary Dr. Sandeep Kaur presented the progress report of the seminar. Forty two research papers were presented on various relevant themes by the participants coming from far distant states of India viz. Kerala, Karnataka, West Bengal, Jammu & Kashmir, New Delhi, Rajasthan, Haryana and Punjab during the seminar.

Dean of Academic Affairs of CUPB, Prof. P. Ramarao formally welcomed the chief guest Prof. Gurmail Singh, while the Coordinator of the Centre for Economic Studies, Dr. P.K. Mishra formally introduced the chief guest.

Talking over the case of the pharmaceutical industries, Prof. P. Ramarao said that the Brexit would have great implication for India if it becomes a hardliner. He added that, however, it will be too early to make conclusions on the implications of Brexit.

It is a long process and will have distant implications. Prof. Singh said it may bring positive effects on Indian economy in historical preview of the Indo-UK bilateral relations. He advised the scholars and the young researchers to forecast Brexit in light of static as well as dynamic data. He further added that apart from the visa regulations, trade and education, the immigration and employment may also be affected because the President of the UK is a strong opponent of immigration. During his presidential address, Prof. R.K. Kohli said though the invasion to the territory of the UK by the immigrants might have been the reason behind the Brexit, yet it will be too immature to conclude on its impact. A documentary was presented on the preparation of the seminar, which was followed by the felicitation of the chief guest by Prof. Kohli, Vice Chancellor, CUPB. The seminar ended with the vote of thanks proposed by Dr. J.K. Parida, Assistant Professor of CUPB.



Address by Prof. Gurmail Singh



Vice Chancellor Prof. R.K. Kohli felicitating Prof. Gurmail Singh during the concluding session of the seminar

21st March, 2017: University Industry Forum and Council Meeting

A meeting of university Industry forum and Council was held on 21 March, 2017 with a view to strengthen the University Industry relationship with a view to seek the possibility of Students industrial training. Industrial visit of students, Placement of student, invited talk by the industry resonals and to provide assistance to resolve the industrial problems by the faculty of the University. The Forum meeting was chaired by Prof. P. Ramarao, Dean Academic affair, CUPB. The Council meeting was chaired by Vice Chancellor of CUPB



University Industry Forum Meeting



University Industry Council Meeting

22nd March, 2017: Central University of Punjab signs MoU with National Council of Rural Institutes

Adding another feather in its cap, Central University of Punjab, Bathinda signed a memorandum of understanding with MHRD's National Council of Rural Institutes, Hyderabad for making collective efforts to raise the bar of higher education and research focused on issues of concern to rural India. The MoU was signed by Prof. Jagdeep Singh, Registrar, CUPB and Dr. W.G. Prasanna, Chairman, NCRI in the esteemed presence of Prof. R.K. Kohli, Vice Chancellor, Prof. P. Ramarao, Dean, School of Basic and Applied Sciences, Dr. Tarun Arora, Dr. Deepak Chauhan, Dr. Monisha Dhiman, Dr. Rajendra Kumar, Dr. Sandeep Kaur and Dr. Ashwani Kumar from CUPB, and Dr. Rajnish Sharma, Curriculum Consultant from NCRI.



Signing of MoU between Central University of Punjab, Bathinda and National Council of Rural Institutes

According to Prof. R.K. Kohli, this exercise will facilitate both the partners to move jointly on academic, teaching, training and research fronts in the arena of rural studies. The purpose of this MoU is to support each other's endeavours in the delivery of academic programmes and research activities through various steps. Prof. Kohli added that the objectives of the research under this MoU would be designed in such a way that would initiate the rural studies in real sense.

Dr. Prasanna highlighting the distinguishing features of the document, shared that both the institutions intend to exchange resources, undertake collaborative research activities and provide guidance and research towards building a resilient rural India. He further shared that Punjab has been found to be the most rural friendly state in India and the community engagement activities of the CUPB had attracted them as a lot. The MoU will fulfill a common vision of collaborative academic activity through inspiring and motivating young minds for research and innovations. Signing of MoU will certainly provide an opportunity to the teachers, research scholars and students of both the partner institutions to learn through exchange of ideas and resources. It was stated that during the period of MoU, the universities will do their best to contribute in building intellectual capital through research, innovation and scholastic ideas.

23rd March, 2017: Special Lecture on China and India in Asia

Central University organized a Special Lecture on China and India in Asia on 23 March 2017. Professor M.M. Puri, former Vice Chancellor of Punjab University, was the main speaker on this topic. Professor Puri described the geographical, political, Economical and cultural conditions of China and India in Asia. He said that China and India are the both important and big nations and are progressive to increase their impact in the economic sphere. After that he satisfied the queries of the students. Prof. R.K. Kohli, Vice Chancellor, Central University of Punjab and Prof. P. Ramarao, Dean of Academic Affairs honored the speaker. Dr. Bawa Singh presented the vote of thanks. The students and faculty participated in the programme.



Address by Prof. M.M. Puri



Concluding function of the special lecture

24th March, 2017: A Lecture on “Situating Social Sciences at Their Rightful Place: A Critique of the Contemporary Impression about Knowledge

Prof. Judge had comprehensively elaborated the evolution and ever changing approaches towards knowledge in the field of natural sciences and also social sciences from ancient past to the present. He emphasised on the need of integrated approach towards knowledge rather than limiting a particular kind of knowledge towards an absolute truth. The lecture was attended by a diverse audience of scholars, students and faculty members of natural sciences, law and green-farming, social sciences and humanities.



A view of the audience during the lecture

25th March, 2017: Interactive Session with Justice Mittal on the Importance of Lokayukta

The Centre for Law, Central University of Punjab flagged off an interactive programme involving civil society for sensitizing the Institution and office of Lokpal in India. Hon'ble Justice Mr. S.K. Mittal, Lokpal Punjab and former Chief Justice of High Court Rajasthan shared his ideas on the institution of Lokpal and Lokayukta in the presence of Prof. R.K. Kohli, Vice Chancellor, Prof. P. Ramarao, a galaxy of lawyers including Bar President Mr. Ranjit Singh Jalal, Senior Advocates and Bar functionaries, NGOs, retired teachers and social workers from the civil society and students of the University and different schools & colleges of Bathinda were also present. Marking the event with the introduction of Justice Mittal and

object of this sensitization programme, Prof. Kohli applauded the efforts of Justice Mittal in making efforts for a progressive and corruption free society judicial system. While talking on the corruption in his special lecture, Justice Mr. S.K. Mittal said that India ranks 79th as per Corruption Perception Index of 176 countries and that's why the institutions viz. Lokpal and Lokayukta have been established by the government to eradicate this issue. He added that different states of India have different Lokpal Act and therefore different powers have been rendered to them. Justice Mittal stated that not only the Lokpal and Lokayukta, but there are certain other methods viz. strong deterrence, strong press, RTI Act, good governance, strong integrity of the public servants and independent & effective judicial system to deal with the corruption, which is deeply penetrated in our society.



A view of the audience attending the interactive session with Justice Mittal

Justice Mittal further added that institutions of Lokpal and Lokayukta need strengthening through amendments in their Act and there is a greater need to make the society aware of these institutions for eradicating corruption from the society.

An interactive session was also held at the end of the lecture, wherein different professionals and other participants from the civil society interacted with the Lokpal to satiate their queries to bring corruption free India. In the end, the Chief Guest was honored with a token of love.

While proposing vote of thanks, Dean of the CUPB Prof. P. Ramarao said that there is a greater requirement to speedy justice as the justice delayed is justice denied. Prof. P. Ramarao added that misutilisation of powers by the public functionaries is still a problem persisting in the society. Dr. Tarun Arora, Associate Professor coordinated the stage during the programme.

31st March, 2017: A Lecture on Artificial Receptors for Sustainable Development and Biological Applications

A lecture by Dr. Narinder Singh, Associate Professor IIT Ropar, on "Artificial Receptors for Sustainable Development and Biological Applications" was organised on 31 March 2017.



Dr. Narinder Singh Delivering the Lecture

Media Coverage

पंजाब केन्द्रीय विश्वविद्यालय व राष्ट्रीय ग्रामीण संस्थान परिसर मध्य हृदय समझौता

पंजाब केन्द्रीय विश्वविद्यालय (CUP) और राष्ट्रीय ग्रामीण संस्थान (NARS) के बीच एक समझौता हुआ है। इस समझौते के तहत, NARS को CUP परिसर में एक 'मध्य हृदय' (Heart Centre) स्थापित करने की अनुमति दी गई है। यह केंद्र ग्रामीणों को हृदय रोगों का निदान और उपचार प्रदान करेगा।

केन्द्रीय विवि में अगले सेशन से एमए मास कॉम की होनी पढ़ाई

केन्द्रीय विश्वविद्यालय (CUP) के अगले सेशन से एमए (MA) मास कॉम (Mass Communication) की पढ़ाई शुरू होगी। यह कार्यक्रम विभिन्न विभागों के छात्रों के लिए है।

एनएनटीएस ग्रीड: सत्रों में तैयारी के लिए

एनएनटीएस (NNTS) ग्रीड के तहत, छात्रों को सत्रों में तैयारी के लिए प्रोत्साहित किया जा रहा है।

DEGREE DELIVERY FOR 168 STUDENTS

केन्द्रीय विश्वविद्यालय (CUP) ने 168 छात्रों को डिग्री प्रदान की।

महिलाएं अपनी ताकत पहचानें : लक्ष्मीकांता चावला

लक्ष्मीकांता चावला ने महिलाओं को अपनी ताकत पहचानने और सामाजिक कार्य में सक्रिय होने के लिए प्रोत्साहित किया।

केन्द्रीय विवि में खेल महोत्सव संपन्न

केन्द्रीय विश्वविद्यालय (CUP) में खेल महोत्सव संपन्न हुआ। विभिन्न खेलों में छात्रों ने भाग लिया।

Seminar on trends in food processing held

केन्द्रीय विश्वविद्यालय (CUP) में खाद्य प्रसंस्करण के रुझानों पर एक सेमिनार आयोजित हुआ।

डॉ. राजिवर ने हिंदी भाषा और साहित्य के प्रसार पर दिया जोर

डॉ. राजिवर ने हिंदी भाषा और साहित्य के प्रसार पर जोर दिया।

Punjab lokpal seeks more teeth to fight corruption in state

पंजाब लोकपाल ने राज्य में भ्रष्टाचार से निपटारे के लिए अधिक शक्ति (teeth) की मांग की।

केन्द्रीय विवि ने समझौता ज्ञापन पर हस्ताक्षर किए

केन्द्रीय विश्वविद्यालय (CUP) ने समझौता ज्ञापन पर हस्ताक्षर किए।

केन्द्रीय विवि केन्द्रिय व राष्ट्रीय ग्रामीण संस्थान परिसर मध्य हृदय समझौता

केन्द्रीय विश्वविद्यालय (CUP) केन्द्रिय व राष्ट्रीय ग्रामीण संस्थान परिसर मध्य हृदय समझौता।

National seminar on implications of forest begins at CUP

केन्द्रीय विश्वविद्यालय (CUP) में वन के अर्थसाथीकरण पर राष्ट्रीय सेमिनार शुरू हुआ।

Book exhibition opens at Central University of Punjab

केन्द्रीय विश्वविद्यालय (CUP) में किताबों की प्रदर्शनी शुरू हुई।

मैट्रो सुपरमार्केटों की किचन प्रदर्शनी शुरू

मैट्रो सुपरमार्केटों की किचन प्रदर्शनी शुरू हुई।

शेखर बंसाली, रविशंकर प्रसाद सुखरानी का पुस्तक प्रदर्शनी

शेखर बंसाली और रविशंकर प्रसाद सुखरानी की पुस्तक प्रदर्शनी आयोजित हुई।

दो दिवसीय पुस्तक प्रदर्शनी का शानदार आगाज

दो दिवसीय पुस्तक प्रदर्शनी का शानदार आगाज हुआ।

चंडीगढ़ से अब एक दिन में 36 पराइटें

चंडीगढ़ से अब एक दिन में 36 पराइटें (flights) शुरू हुईं।

Go back to nature & dodge chemicals in today's life

आज के जीवन में प्रकृति के लौटने और रासायनिक पदार्थों से बचने पर जोर दिया गया।

पंजाब केन्द्रीय जूनीवर्सिटी, चंडीगढ़ विधि दृष्टि दृष्टी वनस्पति व्यवसायी

पंजाब केन्द्रीय जूनीवर्सिटी, चंडीगढ़ विधि दृष्टि दृष्टी वनस्पति व्यवसायी।

दो दिवसीय पुस्तक प्रदर्शनी का शानदार आगाज

दो दिवसीय पुस्तक प्रदर्शनी का शानदार आगाज हुआ।

अध्ययन सपर्यंक है व्यवसाय की

अध्ययन सपर्यंक है व्यवसाय की।

जगति प्रसाद से मुक्त हुए विना स्वस्थ समाज को परिकल्पना लेना है प्रोफेसर अजितेश्वरी

जगति प्रसाद से मुक्त हुए विना स्वस्थ समाज को परिकल्पना लेना है प्रोफेसर अजितेश्वरी।

Expert throws light on Ambedkar's life

एक विशेषज्ञ ने अम्बेडकर जी के जीवन पर प्रकाश डाला।

दो दिवसीय पुस्तक प्रदर्शनी का शानदार आगाज

दो दिवसीय पुस्तक प्रदर्शनी का शानदार आगाज हुआ।

Panel to take call on regularisation

एक पैनल को नियमितकरण (regularisation) पर फैसला देना है।



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