NCU
THE NORTHCAP UNIVERSITY ®
Bridging the gap between the classroom and the real world
NAAC ACCREDITED

(Formerly ITM University, Gurugram)

ANNUAL
REPORT 2019

ENGINEERING

MANAGEMENT

LAW

OUR WORLD OF
EXCELLENCE

WHERE EDUCATION BRIDGES THE GAP BETWEEN
THE CLASSROOM AND THE REAL WORLD

Contents

University at a Glance

University at a Glance

The NorthCap University (Formerly Institute of Technology & Management) was founded in 1996 to promote excellence in technical and management education by the Educate India Society and was affiliated to Maharishi Dayanand University, Rohtak. The Institute gained the status of a University by an act of legislature from Govt of Haryana. under the Haryana Private Universities (Third amendment) Act 25 of 2009. The University is recognised by the University Grants Commission under section 2(f), and has the right to confer degrees under section 22 of the UGC Act of 1956. The University is also recognized by the Bar Council of India. It encourages education that is Interdisciplinary and follows the best educational practices in the country.

The list of recognized Universities is available on the UGC website:

www.ugc.ac.in/inside/privateuniversity.html#haryana.

Nature of University	:	Multidisciplinary, Co-educational University offering Under Graduate, Post Graduate and Doctoral Programmes in Engineering, Management, Law, Applied Sciences and Humanities
Established	:	1996
By	:	Educate India Society
Located	:	In the industrial heartland of Gurugram, Haryana (located 7km from Indira Gandhi International Airport, New Delhi)
Campus Address	:	Sector 23-A, Gurugram, Haryana, India, Tel.: +91-124-2365811-13 Email: ncu@ncuindia.edu
Chancellor	:	Mr. V Daulet Singh
Pro-Chancellor	:	Prof. Prem Vrat
Vice-Chancellor	:	Prof. H B Raghavendra
Registrar	:	Col. Bikram Mohanty (Retd.)
Student Population	:	Under Graduate: 2703, Post Graduate: 119 Doctorate 155
Gender Profile	:	Male - 70%, Female -30%
Faculty	:	169
Scholarships	:	Merit cum means and Merit based Scholarships awarded

Vision, Mission & Core Values

Vision:
To be known globally for learning innovations, academic excellence and socially relevant research outcomes; strive to become the preferred destination for students, faculty, employers and collaborators & pride of alumni and the community.

Mission:
1. *Focus on quality of learning and innovation in all programmes with rigour and relevance.*
2. *Develop competent professionals - innovative, analytical and independent; committed to excel in all their endeavours.*
3. *Develop linkages globally with government, industry, academia and alumni for knowledge generation, dissemination and application.*
4. *Encourage multi-disciplinarity in programmes and projects to explore new frontiers of knowledge.*
5. *Continuously improve physical, academic and information infrastructure in pursuit of academic excellence.*
6. *Create a nurturing environment for lifelong learning.*
7. *Focus on entrepreneurship and socially relevant projects.*

Core Values:
1. *Integrity in all endeavours.*
2. *Humility, compassion and concern for all.*
3. *Passion for quality and excellence.*
4. *Quest for innovation.*
5. *Leadership and Team Spirit.*
6. *Autonomy with Accountability.*
7. *Perseverance.*

Visitor of the University

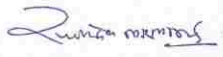
Hon'ble Mr Satyadev Narayan Arya
Governor of Haryana

हरियाणा राज भवन,
चण्डीगढ़ – 160019
HARYANA RAJ BHAVAN,
CHANDIGARH - 160019

सन्देश

मुझे यह जानकर अत्यंत हर्ष हो रहा है कि नार्थकैप विश्वविद्यालय गुडगांव गुणवत्ता की शिक्षा उपलब्ध करवाने में एक अग्रणी विश्वविद्यालय है। यह विश्वविद्यालय इंजीनियरिंग, विज्ञान, प्रवंधन और कानून में स्नातक और स्नातकोतर स्तर पर शोध को वढ़ावा दे रहा है। नार्थकैप विश्वविद्यालय प्रयोगशालाओं के साथ–साथ उद्योग इंटर्नशिप के माध्यम से छात्रों को व्यावहारिक अनुभव भी करवाता है। विश्वविद्यालय द्वारा शिक्षा के क्षेत्र में किए जा रहे प्रयास सराहनीय है। नार्थकैप विश्वविद्यालय परिसर में पूरी तरह रैगिंग मुक्त वातावरण है। यह विश्वविद्यालय उत्कृष्ट प्लेसमेंट की व्यवस्था भी करवा रहा है। विश्वविद्यालय आधुनिक पाठ्यक्रम, वैश्विक आधारभूत संरचना और गुणवत्ता संकाय के साथ एकेडमिक विकास के प्रतिवंध है।

मै नार्थकैप विश्वविद्यालय के शिक्षकगण और छात्राओं को शुभकामनाएं प्रदान करते हुए विश्वविद्यालय के उज्जवल भविष्य की कामना करता हूं।

(सत्यदेव नारायण आर्य)

Governing Body

Mr V Daulet Singh
Chancellor

Prof. Prem Vrat
Pro-Chancellor.
Professor of Eminence & Chief Mentor

Prof. H B Raghavendra
Vice - Chancellor
Member

Mr Shiv Saran Mehra
Founder and Member
Governing Body

Mr Avdhesh Mishra
Founder and Member
Governing Body

Mr Ankur Gupta (IAS)
Principal Secretary
Higher Education Department
Govt. of Haryana

Mrs Kavita Mishra
Founder and Member
Governing Body

Mr Rajesh Marwaha
Chartered Accountant
and Member Governing Body

Mr Venkatesh Sarvasiddhi
Senior Digital Skills & Technology
National Skill Development Corporation

Col. Bikram Mohanty (Retd)
Registrar,
Member Secretary

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External Members

Mr Analjit Singh
Padma Bhushan
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Emeritus of Max Group

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Chairman & CEO,
Visnova Solutions, Noida
Former President & CEO
Hewlett-Packard (India)

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Dogra Chair
& Emeritus Professor,
Dept. of Civil
Engineering, IIT, Delhi

Mr Ajai Chowdhry
Padma Bhushan
Founder – HCL,
New Delhi

Prof. SK Joshi
Padma Bhushan
Former – DG, CSIR
& Hon. Distinguished
Scientist (CSIR)

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Vice-Chancellor
National Law University,
New Delhi

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CEO & MD,
Nucleus Software
Exports Ltd, Noida

Dr Girdhar J Gyani
Director General,
Association of
Healthcare Providers
(India)

Mr Mangu Singh
Managing Director,
DMRC, New Delhi

Mr Bunty Peerbhoy
Director,
Maa Group Holdings

Dr Devi Singh
Former Vice Chancellor,
FLAME University, Pune
Former Director-IIM,
Lucknow

Prof. KL Chopra
Padma Shri
Former Director,
IIT Kharagpur,
SS Bhatnagar Awardee

Mr Indu Bhaskar
Scientist G & HOD,
Department of Scientific
& Industrial Research,
Team Leader

Prof. Kehar Singh
Ex-Dean & Emeritus
Fellow, IIT Delhi
SS Bhatnagar Awardee

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Distinguished Professor
and former Director,
Indian Institute of
Astrophysics, Bangalore

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Chairman & MD,
Pathera Developers &
Former Chairman & MD,
HUDCO

Dr Krishan Lal
Former Director,
NPL, New Delhi &
DST Ramanna Fellow

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Founder Vice-Chancellor
Mahamaya Technical
University, Noida

Prof. PB Sharma
Vice-Chancellor
Amity University,
Gurgaon

Mr Vikram S Mehta
Chairman,
Brookings India &
Former Chairman,
Shell Companies
in India

Prof. MK Jain
Ex- Dy. Director
IIT Delhi & Professor of
Mathematics

Prof. Karmeshu
Former Prof & Dean,
School of Computer
& Systems Sciences,
JNU, New Delhi
SS Bhatnagar Awardee

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Professor, IIT, Roorkee
Former Vice-Chancellor,
Delhi Technological
University, New Delhi

Prof. AS Brar
Former Vice Chancellor,
Guru Nanak Dev
University,
Amritsar, Punjab

**Hon'ble Justice
M Karpaga Vinayagam**
Former Chairperson –
Appellate Tribunal
for Electricity

Prof. RC Budhani
Professor, IIT Kanpur
Former Director
National Physical
Laboratory, New Delhi

Prof. SG Deshmukh
Director ABV-IIITM
Gwalior
Professor, IIT, Delhi

Mr Satish Kaura
Padma Shri
Chairman
Samtel Color Ltd

Board of Management

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Vice-Chancellor

Mr Avdhesh Mishra
Founder and Member
Governing Body

Mr Shiv Saran Mehra
Founder and Member
Governing Body

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Principal Secretary
Higher Education Department
Govt. of Haryana

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Founder and Member,
Governing Body

Mr Z Daulet Singh
Founder and Member
Governing Body,

Mr N K Dewan
Founder and Member,
Governing Body

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Dean (Academics)

Dr Hemant C Trivedi
Officiating Dean,
School of Management

Dr Ambika Devi
Head
Department of
Applied Sciences

Dr Rekha Vig
Dy. Dean (Academics)
UG

Dr Archana Sarma
Assistant Professor
School of Law
Member

**Col. Bikram
Mohanty (Retd)**
Registrar,
Member Secretary

Academic Council

Prof. HB Raghavendra
Vice-Chancellor
Chairman

Prof. Prem Vrat
Pro-Chancellor.
Professor of Eminence
& Chief Mentor

Prof. SD Joshi
Professor,
Dept. of Electrical
Engineering,
IIT Delhi

Mr Indu Bhaskar
Scientist G & HOD,
Department of Scientific
& Industrial Research,
Team Leader

Prof. JL Gupta
Former Vice -Chancellor
G.G. University & Principal,
Shri Ram College of Commerce

Prof. V. G. Hegde
Professor, Centre for
International Legal Studies,
JNU, New Delhi

Prof. Rajesh Chadha
Program Director –
Natural Resources,
Brookings Institution
India Centre, New Delhi

Dr Hemant C Trivedi
Officiating Dean,
School of Management

Prof. Swaran Ahuja
Dean (Academics)

Dr Kavita Khanna
Head,
Department of
Computer Science
Engineering and
Information Technology

Dr Sharda Vashisth
Head, Department of
Electrical, Electronics
and Communication
Engineering

Dr Archanaa Dongre
Officiating Head
Department of Civil &
Environmental Engineering

Dr Ambika Devi
Head,
Department of
Applied Sciences

Dr Archana Sarma
HOD,
School of Law

Dr. Divyabha Vashisth
Officiating Head - CLL

Prof. Ram Karan Singh
Dean, (RDIL) &
PhD Studies

Dr. Rekha Vig
Dy. Dean (Academics)
UG

Dr. Rohit Singh Lather
HOD,
Department of
Mechanical Engineering

**Col. Bikram
Mohanty (Retd)**
Registrar,
Member Secretary

Chief Guests at Convocations

*Late Dr APJ Abdul Kalam, Former President of India
at ITM University Campus, Degree Distribution Ceremony- Class of 2010*

*Mr Analjit Singh, Chairman, Vodafone and Max New York
Life Insurance, Chief Guest, Degree Distribution Ceremony-Class of 2009*

*Dr Surinder Kapur, Founder Chairman, Sona Group, Chief Guest,
Degree Distribution Ceremony-Class of 2001*

*Shri Tarun Das, Director General, Confederation of India Industries (CII),
Chief Guest, Degree Distribution Ceremony- Class of 2002*

*Padma Bhushan Prof SK Joshi, FNA, Former Director General, CSIR,
Chief Guest, Degree Distribution Ceremony- Class of 2003*
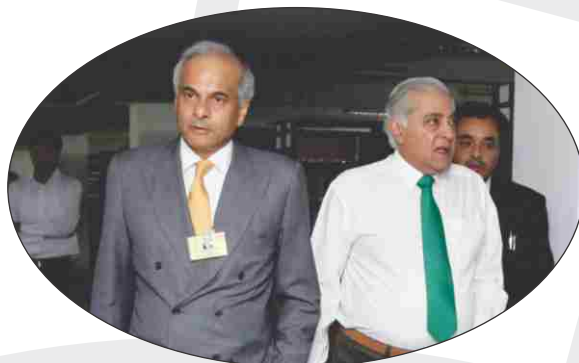
*Mr Vikram Singh Mehta, Chairman, Brookings India &
Former Chairman, Shell Companies in India, Chief Guest,
Degree Distribution Ceremony-Class of 2011*

*Hon'ble Mr Justice AK Patnaik, Judge, Supreme Court of India,
Chief Guest, Convocation -Class of 2012*

*Prof. D P Agrawal, Chairman Union Public Service Commission,
Govt. of India, Chief Guest, Convocation-Class of 2013*

Dr Karan Singh, Member of Parliament (Rajya Sabha), presented the awards and Certificates of Excellence to the students - Convocation, Class of 2014

Shri Balmiki Prasad Singh, IAS (Retd), Ex-Governor Sikkim, Former Union Home Secretary and Executive Director, World Bank, Chief Guest, Convocation-Class of 2015

Dr Bibek Debroy, Padma Shri, Chairman, PM's Economic Advisory Council, Chief Guest, Convocation-Class of 2016

Hon'ble Governor of Haryana, Prof. Kaptan Singh Solanki, Chief Guest, Convocation - Class of 2017

Hon'ble Justice Dipak Misra, Chief Justice of India, Chief Guest, Convocation - Class of 2018

Quality Benchmarks

	Established under Haryana Private University Act No. 25 of 2009 (Third amendment)
	Recognised by the University Grants Commission, Govt. of India, under Section 2(f) of the UGC Act 1956, and empowered to grant degrees under Section 22 of the Act.
Bar Council of India	Recognised by the Bar Council of India, Govt. of India
MHRD GOVT. OF INDIA	Ranked 2nd All India in the University Category in the Swachhta Ranking 2018 by MHRD, Govt of India
	University is accredited by the National Assessment and Accreditation Council (NAAC) for the period 2016-2021
nirf	The University ranked 117 in All India NIRF Engineering ranking in the University Category, in the Rank Band 151-200 in the NIRF Ranking released by MHRD for the year 2019-20.
ASIC ACCREDITED 2016 - 2020	Accredited by Accreditation Services for International Colleges (ASIC), United Kingdom, in the category of 'Premier' Universities, with 'Commendable' Grades, for 2016-2020
T-4402 NABL Accredited Lab	The NorthCap University Testing Centre established as per ISO/IEC:17025-2005, is NABL Accredited for the Mechanical Testing of Building & Construction Materials.
	Member of Association of Indian Universities
The Association of Commonwealth Universities	Member of the Association of Commonwealth Universities
ASQ AMERICAN SOCIETY FOR QUALITY	Institutional Member of American Society for Quality (India)
isep	Member of International Students Exchange Programme
@govcampus	Recognised as the BEST @e.govcampus

Rankings

The NorthCap University continues to nurture its ambition to be known globally for learning innovations, academic excellence and socially relevant research outcomes. It is driven by an ambition to be in the top of the league by embracing global best practices and championing the highest ethical standards.

- The University is ranked 117 in the All India NIRF Engineering ranking in which 970 Institutions of the country participated and is now the top Private Engineering University in Haryana & Delhi. In the University Category, it has maintained its ranking in the rank band of 151-200, for this year 2019-20.

- The NorthCap University, Gurugram, has been ranked fifth amongst the Cleanest Higher Educational Institutions in the Country in the Category 'University (Non Residential)'. The University won this award for Maintaining, Promoting and Encouraging the culture of 'SWACHHTA' in Higher Educational Institutions in the Country.

- The University has established an Institution Innovation Council (IIC) for the calendar year 2019-20 as per the norms of MHRD, Govt. of India.

- The University participated in the ARIIA ranking, by the MHRD, Govt of India for the year 2019.

- The NorthCap University was Ranked No.1 amongst Top Engineering Colleges in Haryana and Ranked No.2 amongst Top Engineering Colleges of Eminence in India in the CSR-GHRDC Ranking Survey 2019 published in the July 2019 issue.

- School of Law NCU, was Ranked No. 9 amongst Top Law Schools of Eminence, All India and No. 1 in Haryana by GHRDC Law Schools Survey June 2019.

- The NorthCap University was ranked No.1 Engineering College in Delhi & Haryana and No. 59 All India in a survey of India's Top Professional Colleges by Outlook in their June 2019 issue.

- NCU ranked among top 17 multi disciplinary Universities in North Zone by The Week published in May 2019.

- Ranked No. 1 Private Engineering Institute in the State of Haryana, No. 5 Private University in the State of Haryana and No. 48 in 'India's Top 100 Private Universities League' by Education World in May 2018 issue.

Programmes

The NorthCap University has grown from strength to strength since its inception to become a unique university of higher learning in North India and has shown a determined commitment to academic development in India in general & Haryana in particular.

The University in its vision has stated to be known globally for learning innovations, academic excellence and socially relevant research outcomes. It strives to become the preferred destination for students, faculty, employers and collaborators & pride for the alumni and the community.

The University offers programmes in a wide range of professional fields in diverse areas of Engineering, Applied Science, Management & Law at the Under graduate, Post Graduate and PhD levels, approved by the relevant bodies and endorsed by Haryana State Govt., UGC and the Bar Council of India.

The following programmes were offered in academic year 2019-20:

I. SCHOOL OF ENGINEERING & TECHNOLOGY

A. BTech (4 years)

Computer Science & Engineering (CSE)

Specialization options

1) Full Stack Development
2) Cyber Security
3) Internet of Things (IOT) & Cloud Computing
4) Data Science and Artificial Intelligence (AI)
5) Game Technology, Augmented Reality (AR) and Virtual Reality (VR)

Electronics & Communication Engineering

Specialization Options

1) Internet of Things (IOT)
2) Embedded Systems and VLSI Design'

Mechanical Engineering

Specialization Options

1) Thermal Engineering
2) Mechanical Engineering Design
3) Industrial and Production Engineering
4) Automobile Engineering

Civil Engineering

Specialization options

1) Smart Infrastructure Development
2) Construction & Project Management

B. MTech

Degree in Computer Science & Engineering with specialization in:
- Cyber Security
- Data Science

Degree in Electronics & Communication Engineering with specialization in:
- Communication Engineering
- VLSI Design

Degree in Mechanical Engineering with specialization in:
- Mechanical Engineering
- Thermal Engineering
- Mechanical Engineering Design

Degree in Civil Engineering with specialization in:
- Structural Engineering
- Construction Engineering & Management
- Environmental Engineering

C. BSc (Hons) Mathematics

D. BSc (Hons) Physics

E. MSc Mathematics

II. SCHOOL OF MANAGEMENT
- BBA
- BA (Hons) Psychology
- BA (Hons) Economics
- BCom (Hons)
- MBA

III. SCHOOL OF LAW
- BBA-LLB (Hons)
- **LLM**
  Specialization Options 1. Corporate Law
  2. Human Rights 3. Intellectual Property Rights (IPR)

IV. PhD in Engineering, Management, Law, Sciences & English

The Chief Guest

Hon'ble General (Dr.) Vijay Kumar Singh (Retd.)

Minister of State, Road Transport & Highways,
Govt. of India

General Vijay Kumar Singh was born in 1951, in Haryana. His father was a Colonel in the Indian Army General. V K Singh did his schooling at Birla Public School, Pilani, Jhunjhunu Rajasthan is an alumunus of National Defence Academy, Pune. Gen Singh was commissioned into the 2nd Battalian of the Rajput Regiment (Kali Chindi) on 14 June 1970 and commanded the same unit along the Line of Control with Pakistan.

He graduated from the Defence, Services Staff College and is also an honors graduate of the United States Army Infantry School, a graduate of the Rangers Course at Fort Benning and the United States Army War College in Carlisle, Pennsylvania. During his distinguished military career, he served both in counter-insurgency and high-altitude areas. He also saw actions in the Indo-Pak war of 1971. During his career he served in various staff positions, which included Instructor at Indian Military Training Team (IMTRAT) in Bhutan, Chief Instructor at the Commando Wing in Belgaum, Military Operations Directorate (MODte), Colonel General Staff of an Infantry Division, Brigadier General Staff (BGS) of Corps. He also commanded Victor Force of the Rashtriya Rifle and later commanded a strike Corps in North India and was the Eastern Army Commander before he became the 24th Chief of the Army Staff on 31 March 2010. He is a recipient of the Param Vishisht Seva Medal, Ati Vishist Seva Medal and Yudh Seva Medal, for his exemplary & meritorious service to the nation..

After leaving the army, he joined Bharatiya Janta Party, contested and won the Ghaziabad Lok Sabha constituency seat in 2014 General Election, and was appointed as the Minister of State of External affairs and Minister of State (Independent Charge) for North Eastern region. He did an outstanding job for leading 'Operation Raahat', a rescue mission to evacuate Indian citizens and other foreign Nationals from Yemen during the 2015 Yemini crisis. He was elected to the 17th Lok Sabha in 2019 and is currently Minister of State for Road Transport & Highways.

He has published a book, 'Sahas Aur Sankalp': Ek Aatmkatha, and is currently engaged in social & cultural activities and Empowerment of women projects in rural areas. He has travelled extensively all over the world and has special interest in Defence & Strategic issues.

Vice-Chancellor's Address

Prof. H B Raghavendra
Vice-Chancellor

Hon'ble Chief Guest, General (Dr) V K Singh; Chancellor, Shri V Daulet Singh; Members of the Governing Body, Shri Avdhesh Mishra, Shri Shiv Saran Mehra, Pro-Chancellor, Prof. Prem Vrat, distinguished colleagues on the dais, invited dignitaries, recipients of the degrees, eminent alumni, members of the press, faculty and staff, parents, students, and those joining us from various parts of the world through the webcast of the function. Let me begin by saying good afternoon to everybody and thank you for being here with us.

To begin with, I wish to thank our Chief Guest General (Dr) V K Singh for sparing his valuable time and for his consent to be the Chief Guest at this solemn occasion. It is an honour and privilege for me to welcome you Sir, to the Eighth Annual Convocation of University.

I welcome you all to this graduation ceremony. We are here today to acknowledge the great work done by our students, to honour them with warm congratulations, and send them on their way to the real life journey with the blessings and good wishes of NCU.

Sir, with an alumni strength of 15,000+ and a glorious track record of 23 years, The NorthCap University, evolved itself as benchmarked professional institutions of excellence in Engineering, Management, Applied Sciences and Law at Undergraduate, Postgraduate and PhD levels approved by relevant bodies and endorsed by the Haryana State Government and the University Grants Commission, Govt of India. Since its establishment in 1996, the University has been expanding through the fraternity of its alumni who have gone on to make a mark in every walk of life. NCU has developed an education system, which is more process driven, practical oriented and meets the requirement in the present context of globalisation. Our first and foremost focus is to bring best education practices from all over the world along with the best people from the Industry. The effort is not only to make our youth more employable, well equipped with necessary knowledge but to develop necessary skills of entrepreneurship so that they can contribute to the growth story of India. Whether we talk about updated curriculum, delivery model of a course or a particular skill set required for a sector, there should be perfect synergy with the industry. In a span of a few years, we have grown to be one of the foremost educational institutions in North India. The NorthCap University continues to be the leader amongst the private universities in Delhi & Haryana in the NIRF ranking, conducted by Ministry of Human Resource Development (MHRD), Government of India for the year 2019, the result of which was released by the Hon'ble President of India on 08 April 2019. The University has been ranked 117 in the Engineering category and rank band of 151-200 in the University category in All India NIRF ranking survey 2019 in which 970 Institutions participated.

The University also participated in the ARIIA ranking, by the MHRD, Govt of India for the year 2019. In continuation with our consistent top rankings in different surveys and rankings; the University was Ranked No.1 amongst Top Engineering Colleges in Haryana. It was also Ranked 2 amongst Top Engineering Colleges of Eminence in India in the CSR-GHRDC Ranking Survey 2019. The School of Law at NCU, was Ranked No. 9 amongst Top Law Schools of Eminence, All India and No. 1 in Haryana by GHRDC Law Schools Survey June 2019. The NorthCap University was also ranked 1 Engineering College in Delhi & Haryana and ranked 59, All India in a survey of India's Top Professional Colleges by Outlook in their June 2019 issue. It also ranked 1 Private Engineering Institute in the State of Haryana, and ranked 48 in 'India's Top 100 Private Universities League' by Education World in May 2018 issue.

The NorthCap University was accredited in May 2016 by the National Assessment and Accreditation Council (NAAC) for a period of five years i.e. 2016-2021. Accreditation Services for International Colleges (ASIC), UK reaccredited the University in the category of 'Premier' Universities with 'Commendable' Grades, for 2016-2020. The accolades by various organizations, our consistent top rankings in different surveys, a good placement record of students in reputed organizations – Inculcating such job-centric concepts and value-based education, NCU is fulfilling its mission of creating global citizens ready to take on challenges in a knowledge-driven world. The University has also established an Institution Innovation Council (IIC) for the calendar year 2019-20 as per the norms of MHRD, Govt. of India. The University is currently underway to a new world of digital revolution. With an aim to bring all the emerging technologies like Data Science, Full Stack, Cybersecurity, Internet of Things and Cloud Computing, Game Technology, AR and VR under one roof, the University has setup a unique Design Centre in the Campus to help students and parents understand the basics of these technologies through visualizations, infographics and interactive AR applications with a VR demo zone.

Sir, I am pleased to present before you the Annual Report for the year 2019 of our University which is tabled before you. As the detailed Annual Report is in your hands, I shall share with you the impressions of our Report, defining our sustained focus on quality and the efforts we made during the year 2019.

The University has continuously strived to create well balanced personalities who are ready to brave challenges and come out as winners. The institution has nurtured students who have dared to dream big rather than settle for a low-risk path. They are savvy, talented and passionate about their goals and aspirations. What it also gave the students is a remarkable blend of tradition and modernity, inspiring them to make their presence felt on national and international platforms. To showcase students' skills, abilities etc. to potential employers, 'E-portfolio'- a unique initiative has been started at the University. It helps to identify students' interests in the first year itself and encourages them to develop these areas for enhanced employability. We have been able to achieve an enviable placement record, both nationally and internationally of over 90% of eligible students of Class of 2019 being placed in core and other companies from the campus. To enhance placements, NCU has taken a new initiative to facilitate evaluation of students' employment readiness and gap analysis by outsourcing it to the companies 'Aon CoCubes' and 'Youth4Work' which do third party assessments for BTech graduating students, on behalf of hiring companies. In addition to providing student-centric deliverables like assessment scores and improvement areas, it also helps to generate employment leads for the students with its empaneled companies. The University has also established the Office of International Relationship to facilitate students who want to study abroad and for student & faculty exchange programmes. The rich academic experience at NCU has infused them with both clarity and conviction to pursue their dream career with confidence and pride.

The University's focus is on building and strengthening association with Industry and the Government for community development programmes and for providing opportunities to students in India and abroad. NCU has collaborations with reputed industries such as Daikin, MACE, Space Application Centre, ISRO, IBM, Mitsubishi Electric India Pvt Ltd, Delta Power Solutions India Pvt Ltd, Beijing Wavespectrum Science and Technology Co China, CADD Centre, Power Grid Corp of India and many more.

The NorthCap University has expanded and further strengthened foreign partnership opportunities to prepare our students to be globally competitive. The University has collaborated with world renowned Universities namely ITB Ireland, University of Chester, UK; University of Regina, Canada; Michigan Technological University, USA; University of Dayton, Ohio, USA; Shibaura Institute of Technology, Japan, for exchange programmes. Students are supported for credit exchange, internships and project collaborations along with faculty through frameworks of MoUs. Recently the University collaborated with the National Technical Research Organization, New Delhi, for collaborative working arrangement on specific research, development projects, student internships, collaborative research, trainings and higher education.

NCU has academic associations with leading IITs for three programmes i.e. 'Spoken Tutorials', 'Quality Enhancement in Engineering Education Program' (QEEE programme), and remote access to IIT lab facilities through their 'Virtual Lab' platform. Digital learning technologies are a vital component to achieve enhanced programme offerings, quality and increased access anytime anywhere. The University offerings blended learning with the use of Learning Management System (LMS), National Programme on Technology Enhanced Learning (NPTEL), online courses of University of Maryland/Illinois, UGC MOOCs, E-Pathshala, Swayam Prabha and others.

The Incubation Centre is a facility fostered at NCU for all students to propose, create and incubate their ideas irrespective of the programmes which they are studying. It is worthwhile to note that students in the Incubation Centre have taken up an Online Food Aggregator project in collaboration with a start-up company. We have a well-equipped Central Research Facility and all labs and workshops have been upgraded with the latest equipment. The Vice-Chancellor's Innovation Fund continues to encourage innovative ideas amongst faculty and students. A Tinkering Lab is being nurtured as a central facility to encourage all students to work on projects of their interest and create artefacts that would bring them satisfaction and gain confidence. The NorthCap University Testing Center (NCUTC) has been reaccredited by NABL for Mechanical

Testing of building materials for 2018-19. The University has also established a Thought Lab with the aim of developing a positive attitude, reducing negative energy, stress and improving overall development of students and staff. The University has also started Value Added Courses with training modules for weak/slow learners. This is helping in improving their skill sets and makes them feel good not only at the University but also enhances their employment opportunities. The University recently initiated a Parent Information System which keeps the parents informed about the progress of their wards timely.

Several community schemes floated by Government of India and Government of Haryana like Pradhan Mantri Ujjwala Yojana, Ujwal Bharat, National Solar Mission, India's Energy Storage Mission, Swachh Bharat Abhiyan, Jal Shakti Abhiyan, etc. are being treated as co-curricular activities which would help in understanding Bharat before serving India.

NCU has moved in tandem with changing times, focusing on facets like employability, industry compatibility and exposure, research and innovation. We give our students the freedom to think and decide for themselves - this has found remarkable acceptability among them.

A significant part of the University's overall research is undertaken in collaboration with industry partners. NCU itself also supports research students and provides related funding for equipment etc. During the reporting year, ten research projects for a total amount of Rs 2.36 crore have been sanctioned by funding agencies and Rs 1.48 crore has been received till date. One DST (WOS-A) project of 36.96 Lakhs was technically approved on 20 Feb 2018. In addition to these, 12 research projects have been submitted to various funding agencies. 120 doctoral students are currently registered with the University to carry out their doctoral dissertation research work: SOET – 96, SOL - 11, SOM - 13. Seven students have submitted PhD theses and six have submitted PhD synopsis, during the year.

NCU is an environmental friendly institution. Campus-wide initiatives and remarkable contribution are committed to the green movement such as energy conservation; use of solar energy with the installation of a 150 KW rooftop solar PV system with a net metering facility; a comprehensive rain water harvesting system; sewage and waste water treatment plants etc.

The legacy of NCU goes on, and given the wide gamut of initiatives, both scientific and social, it has been imparting education that has been impacting the world at large.

It is with immense pleasure that I greet students and knowledge seekers to this educational hub and infrastructural grandeur. I congratulate our new graduates who are now on the threshold of beginning an exciting new phase of their relationship with the University as alumni. An organisation's alumni are a reflection of its past, representation of its present and a link to its future. You are the brand-ambassadors of the institution. As I come to a close, I would like to reiterate the role you play in the wider society. You should always endeavour to uphold good morals and act as an inspiration to the society.

NCU's vibrant alumni network has made its mark in India and overseas by attaining leadership positions in corporations, creating successful ventures and cofounded several successful companies.

Our alumni are our pride. Alumni being ambassadors of the University can make an important contribution to the University in Mentorship and Scholarships, Career Guidance, Networking Platform, Fund-raising and Placements.

We wish you every success in your chosen career and hope that you will keep in touch with us and support our development in the years to come. I once again congratulate the graduating students and their respective families on behalf of this unique institution. I express my gratitude towards each & everyone of you present here for sparing sometime to be with all of us!

Have a good time ahead.

JAI HIND

Thanks

Academic Advisory Board

The Academic Advisory Board is the supreme advisory body of The NorthCap University comprising of eminent experts from the industry national and international institutions. They form the intellectual think-tank of the University and come together each year for an interaction focused on development directions, and to discus and advise the apex forum on strategic options and choices for the futuristic growth of the of University.

The Eighth meeting of the Academic Advisory Board was held on 22 February 2019 to review and advise on future plans for the growth and development of the University. The discussions centered around major aspects like lack of experience faculty, traditional standards and introduction of internship programme of students. The progressive ideas have been helpful in introducing holistic growth.

Members of the Board interacted with faculty members and students on the Dean's List, sharing their thoughts and inspiring them to be innovators, ground breakers and nation builders. The following points were discussed during the meeting:

Project Modular Teaching

Internationalization of Higher Education

Integration of Curricular and Co-currilur general proficiency activity

Improving Quality Admissions

Attracting & retaining talent in the University

Academic Advisory Board

Eighth Meeting held on 22 February, 2019

(Left to Right):

1. **Col Bikram Mohanty** (Retd)-Registrar, The NorthCap University. 2. **Ms. Neeru Bahl**-Director, The NorthCap University. 3.**Prof. Pradeep Kumar,** Professor-IIT, Roorkee, 4. **Prof. SG Deshmukh,** Professor - IIT, Delhi, 5. **Mr. Indu Bhaskar**-Scientist G & HOD, 6. Mr. **Avdhesh Mishra**- Founder & Member, Governing Body – The NorthCap University. 7. **Mr. Shiv S. Mehra**-Founder & Member, Governing Body – The NorthCap University. 8. **Prof. H B Raghavendra**- Professor & Vice-Chancellor, The NorthCap University. 9. **Prof. S K Joshi,** Padam Bhushan, Former-DG, CSIR, 10. **Prof. Prem Vrat** - Pro-Chancellor, The NorthCap University. 11. **Prof. K L Chopra**-Padam Shri, Former Director-IIT Roorkee, 12. **Prof. Kehar Singh** - SS Bhatnagar Awardee, Distinguished Research Professor, NCU, 13. **Prof. Karmeshu** - Former Professor & Dean, School of Computer and System Sciences, JNU, 14. **Prof. Ranbir Singh,** Vice Chancellor-NLU, 15. **Dr. P S Rana** - Chairman & MD, Pathera Developers, 16. **Prof. S K Kak** - Founder Vice Chancellor, MTU Noida, 17. **Dr. Krishan Lal** - DST Ramanna Fellow, 18. **Mr. Vishnu R Dusad**-CEO & MD, NSE Ltd. Noida.

Faculty Mentors

Prof. Prem Vrat
BTech. (Hons.), MTech
IIT Kharagpur
PhD-IIT Delhi
Doctor of Engineering
(Honoris Causa)
FNAE, FNASc.,
FWAPS, FISTE, FIIIE
Chief Mentor

Prof. Rajesh Chadha
Program Director –
Natural Resources,
Brookings Institution
India Centre, New Delhi

Prof. Pushpesh Pant
Padma Shri
PhD (JNU)
Distinguished Professor Emeritus,
School of Law

Prof. Kehar Singh
Ex-Dean & Emeritus Fellow,
IIT Delhi
SS Bhatnagar Awardee

Prof. Kasturi Lal Chopra
Padma Shri
BSc (Hons), MSc, PhD
FNA, FASc, FNASc, FNAE, DSc(hc)
Former Director, IIT Kharagpur
SS Bhatnagar Awardee

Prof. Indira K Varma
MSc, DPhil, PhD, DSc,
Glasgow University
Honorary Doctorate Degree

Prof. Amitava Sen Gupta
PhD, MSc, BSc,
University of Delhi
Honorary Distinguished
Research Professor and Mentor,
RDIL

Dr C R Prasad
BE, MBA, DSc (Honoris Causa),
FNAE, FIE, FIME, MAIMA
Chairman & Managing Director
Everest Power Private Limited.
Former Chairman & Managing
Director of Gas
Authority of India Ltd.

Prof. Surendra Kumar Kaushik
FNAE; PhD (Engg.)
FIE (India)
AICTE-INAE Distinguished Professor.
Formerly Professor and Head,
Dept. of Civil Engineering,
IIT Roorkee

Prof. B K Das
BTech (IIT Kharagpur),
MS (Illinois), PhD (Illinois)
FNASc, FMAS
Formerly Dean-RDIL,
The NorthCap University,
Gurugram

17

Officers of the University

Prof. Swaran Ahuja
Dean (Academics)

Dr. Hemant C Trivedi
Officiating Dean,
School of Management

Ms Kirti Singhal
Chief Finance &
Accounts Officer

Dr. Rekha Vig
Dy. Dean (Academics)
UG

**Prof. Ram Karan
Singh**
Dean, (RDIL) &
PhD Studies

Ms Kiran Mrig
Controller of
Examinations

Dr. Shrutimita Mehta
Dy. Dean -
Students' Welfare

Ms Deepika Deswal
Dy Manager (HR)

Mr Sudesh Kumar
Sports Officer

Institutional Meetings

The management of The NorthCap University embodies the zeal to make the university an epitome of academics and research par excellence. Institutional meetings are held regularly. The Management leadership adopts a hands on approach to managing all affairs of the university and is involved in participative decision making processes, while ensuring a close and rigorous follow up and its implementations. The university's perspective plan is discussed during Annual Academic Advisory Board Meetings held in Jan-Feb each year. The outcomes are identified for implementation during the course of the year on an ongoing basis. Some of the areas which are revisited keeping our vision & mission in mind are Teaching & Learning, Research & Development, Community engagement & Industry interaction. The Governing Body, Board of Management, Academic Advisory Board, Academic Council, Committee of Research Development and Industry Liaison, Internal Quality Assurance Cell (IQAC), and the operational committees at the School & Department Levels work in synchronization, revamping the process & practice to make them up to date.

During the reporting year, the University has taken a number of steps to develop the culture of entrepreneurship amongst the students. The university participated in the Atal ranking of Institutions on Innovation & achievements for the year 2019 and was felicitated by the Ministry of HRD, Govt of India. The University established an Institution Innovation council (IIC) for the calendar year 2019-20 as per the norms of MHRDs Innovation cell, Govt. of India. New specialization options were introduced in the Computer Science Engineering Dept, which included Full Stack Development., Cyber Security, Internet of Things (IoT) & Cloud Computing, Data Science, Artificial Intelligence, Game Technology, Augmented Reality (AR), and Virtual Reality. In the sphere of Liberal Arts the University has decided to introduce the Courses in a phased manner which will help develop well rounded individuals who possesses critical 21st century capacities in fields across Engineering, Management, Law, Arts, humanities and Social Sciences. Such a Liberal education shall be, in the long term implemented for all UG Programmes including professional, vocational & technical disciplines. We have also reinforced Industry – Academia Cooperation at the National and International level.

Meetings of various statutory bodies have been regularly held during the reporting year, as shown below:

Academic Council	Board of Management	Governing Body
16 March 2019	29 March 2019	26 April 2019
19 October 2019	30 July 2019	29 August 2019
	31 October 2019	29 November 2019

HR Conclave

Two Departments of the School of Engineering & Technology namely, Department of Mechanical Engineering & Department of Electrical, Electronics and Communication Engineering jointly organised "HR Conclave 2019" on 05 March 2019.

The event brought together eminent HR Professional from the industry on a common platform. The participants shared their experiences and best practices on the topic "Hiring Trends of Corporate for Campus." Mr Shouvik Nandi, HR Head Siemens Energy & Automation, along with eminent HR Professionals from Daikin Air Condition Pvt. Ltd, Napino Auto Electronics, TrueChip Solutions, GMR Infrastructure, Exicom Tele systems among other, attended the Conclave and shared their view points.

ICCIDS 2019

The Department of Computer Science organized the International Conference on Computational Intelligence and Data Science, ICCIDS 2019 on 6-7th September 2019 in collaboration with Elsevier and University of Dayton, Ohio, USA. The conference was inaugurated by the Chief Guest, Prof. BK Kuthiala, Chairperson Haryana State Higher Education Council. 800 submissions were received from reputed universities of various countries out of which only 275 research papers were accepted. The event brought together renowned experts in their respective fields to address the vital areas of Computational Intelligence and Data Science. The keynote speakers were Prof. Yaw-ling Lin, Distinguished Professor, Department of Computer Science and Information Engineering at Providence University, Taichung, Taiwan and Prof. B K Murthy, Senior Director (Scientist G), Ministry of Electronics and IT (MeitY), Government of India. They highlighted the relevance of big data for businesses and showcased various case studies highlighting the importance of computational intelligence along with data science in real time scenarios. As the field matures, it is becoming an operational requirement in day to day lives of individuals. Dr Vijendra Singh and Dr Meghna Sharma were the organizing chairs of this conference. Dr Kavita Khanna, Head of Computer Science Department welcomed and also thanked the delegates for the successful deliberations in the conference.

Innovation and Entrepreneurship

An awareness session on 'Innovation and Entrepreneurship' was organized by Master Jagannath Centre of Excellence and Incubation on 28 March 2019 attended by 492 students from SOET, SOM and SOL. The eminent speakers like Mr Praveen Dwivedi, Chief Sales Officer – Novatium Solutions Pvt Ltd, Mr Ankur Mishra, Founder & Director - ForeanTech & Mr Sameer Talwar, Founder & Director – 3 Online Hospitality Educating and Consulting Firms were called with an aim to expose the students to an entrepreneurship development process and give them the basic understanding on strength and opportunity identification and a framework a starting a new enterprise.

ICETMIE 2019

The Department of Mechanical Engineering organized an International Conference on 'Emerging Trends in Mechanical and Industrial Engineering', ICETMIE 2019 on 10-11 October 2019 in association with Springer as publication partner. The conference was inaugurated by Chief Guest Dr Sivaji Chadaram, Scientist F, Director DST, New Delhi. Renowned keynote speakers addressed the researchers, scholars, students and scientists about new innovations in the field of Mechanical and Industrial engineering on both days. The keynote speakers were Prof. (Dr) Prem Vrat, Pro-Chancellor & Chief Mentor, Prof. (Dr) Richard Degenhardt, Scientist, German Aerospace Center (DLR), Germany, Dr. C R Prasad, Chairman & Managing Director, Everest Power Ltd (former Chairman GAIL), Prof. (Dr) L M Das, Centre for Energy Studies, IIT Delhi, Prof. (Dr) R Ramesh Kumar, Government College Kerela (former Sr. Scientist ISRO). Total 126 manuscripts were submitted from India and abroad out of which only 59 manuscripts were accepted. The proceedings of the Conference will be indexed by Scopus via Lecture Notes in Mechanical Engineering, Springer.

•   The Conference was Sponsored by GAIL India Ltd, Delhi, Beijing Wave Spectrum, China and TCA (Training and Development) Gurugram. Dr Vikas Sharma acted as Convener and Dr Rohit Singh Lather acted as Co-Convener of the conference.

    Dr Pramod Bhatia, Head of Mechanical Engineering Department welcomed the delegates and thanked them for their presence. The event was successful due to the efforts of each and every member of the organizing team.

International Conference on Emerging Trends in Mechanical & Industrial Engineering - Oct 2019

International Conference on Winning in VUCA World

The School of Management of the NorthCap University, Gurugram organized an International Conference on Management having the theme, "Winning in a VUCA World." The event was held on 4 October, 2019 in the University auditorium. The keynote addresses were delivered by Hon'ble Pro-Chancellor, Professor of Eminence and Chief Mentor, Prof. Prem Vrat; and the Dean, School of Management, Prof. (Dr) Hemant Trivedi. More than 500 faculty delegates, experts, practitioners and students were a part of this International Conference. DrSwaranjeet Arora and Dr Poonam Arora were conference conveners.

The International conference was a fruitful amalgamation of empirical and conceptual research papers from academicians, professionals, consultants, practitioners, scholars and students. The opening ceremony began with the lighting of Lamp, followed by the welcome of chief guests.

International Conference on VUCA - Oct 2019

National Seminars

- One national seminar on 'Future of Finance' has been organised by the School of Management in association with Chartered Institute of Management Accountants (CIMA) London, UK on 11 January 2019 in which eminent speakers from the industry participated. The seminar was attended by 207 NCU students and 67 external participants from different places. Mr Debasish Roy – Vice President (Finance) at Bertelsmann Marketing services India Pvt Ltd, CA Deepti Gupta - Associate Director (Finance and Internal Control) at PepsiCo, CA Rahul Chawla - Director & Tax Practitioner at Rahul Chawla and Associates, Mr Shiva Botchu - Senior Manager (Technology Strategy and Architecture) at Deloitte Touche Tohmatsu LLC, Mr Vinit Pawar- Regional Manager (North and East India) at CIMA, and Mr Ankit Talwar - Marketing Specialist (North India) at CIMA were the main speakers.

National Seminar - Future of Finance Jan 2019

- On 3 & 4 June 2019, a workshop was conducted on NAAC, SSR (Self Study Report). The workshop was conducted by hon'ble Vice Chancellor, Prof. HB Raghavendra and coordinated by Dr Pramod Bhatia for the faculty members. It aimed at familiarizing the participants with the process of SSR of NAAC and also to identify the areas of improvement. It helped in developing the understanding of NAAC-SSR and filling the process of SSR report.

Accreditations and Statutory Approvals

The NorthCap University was established under the Haryana Private University (Third amendment) Act No 25 of 2009, Ordinance No 2 of 2015 dated 22 July 2015, Legislative Department Haryana Government. The University is recognised by the University Grants Commission, Govt of India Under Section 2 (f) of the UGC Act 1956 and empowered to grant degrees under section 22 of the Act. The University is also recognised by the Bar Council of India.

- **National Assessment and Accreditation Council (NAAC)** has accredited The NorthCap University for five years vide their Certificate No. EC(SC)/15/A&A/85.1 dated 25 May 2016 from 2016-2021.

- **Bar Council of India** (BCI) approval for our School of Law has been received for five year BBA LLB (H) programme for the academic year 2019-20, vide BCI Letter No. BCI:D:541/2019(LE/Afflin) dated: 09 July 2019.

- **Accreditation Services for International Colleges (ASIC) UK:** A respected international accreditation body for academic institutions worldwide re-accredited The NorthCap University with a status of 'Premier University' with 'Commendable' grades for 2016-2020.

- **Association of Indian Universities (AIU):** The University is a member of the Association of Indian Universities (AIU). This has enabled us to refer to AIU for educational guidance to help improve standards of instruction, examination and research.

Total Publications (2019)

November 2018-December 2019

Publications	Number
Journal Research Papers	141
Conference Proceedings	22
Books	1
Book Chapters	10
Total Publications	**174**

Publications	Number
International	**157**
National	**17**
Total	**174**
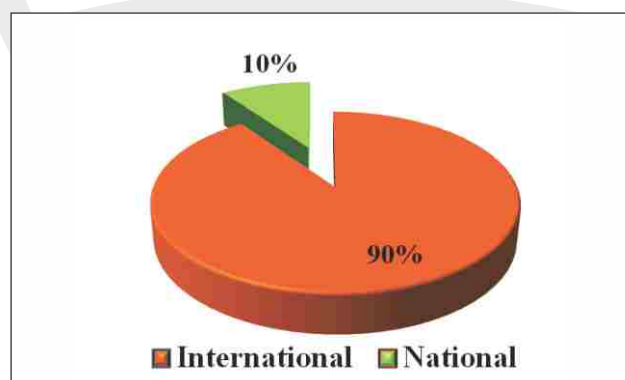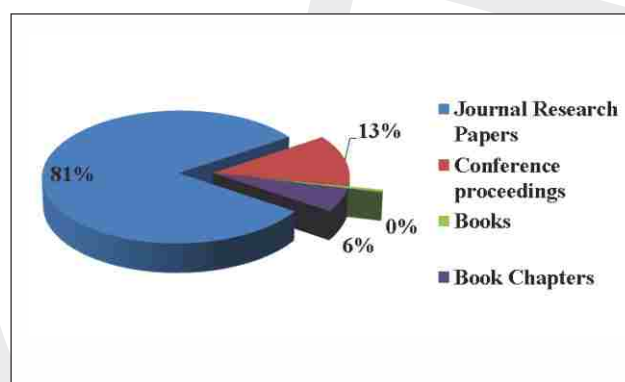
(Details at the end of the Report)

Dean's List of Students

To promote excellence in academics and to recognize outperformers, students scoring a CGPA of 9.5 and above or securing top position (First position) in the batch of that programme (across all sections) with a minimum CGPA of 9.00 are included in a selected Dean's List. This achievement is reflected in their degrees. They form a think tank for the University's academic reforms, and enjoy special privileges and pride of place in the University. They are specially invited to conduct distinguished visitors to the University. This policy has worked significantly to encourage students to strive towards making the grade in order to be on the Dean's list.

Odd Semester 2018

Even Semester 2019

Recent Initiatives at the University

Board of Management's Initiatives

- A committee namely "General Board of Studies has been constituted on the directive of the Academic Council (under the provision of Statute No. 21) to discuss and take up matters related to general studies, which are interdisciplinary and Inter School/Department in nature.

- Various sub committees constituted in the previous year have been functioning efficiently and a lot of suggestions specially from the student members are being implemented to resolve the day to day problems faced by the students.

- A new Marketing & Communication department has been established and is responsible for various duties assigned for admission of new students, media management including press release and managing content on social portals, newsletters and University website.

Based on regular feedbacks received from students, faculty and our stake holders, the following issues have been addressed by the management during the reporting year

- Online the booking of the Seminar hall & the Professional society room.

- Installation of A/c in Tinkering Lab, at a cost of Rs. 1.2 Laks.

- Installation of Laptop & Charging points 530 points use.

- Installation of coffee vending machine @ Cost of Rs. 1.3 lakhs.

- Rs 4,53,190/- have been provided through the Vice-Chancellor's Innovation Fund for students' projects during the reporting year.

- The First ordinance of the University was approved by the Govt. of Haryana dated 01 March 2012. A number of issues, including the name change of the University necessitated a review, which has been completed, and will be forwarded to the Deptt. of Higher Education, Govt. of Haryana, soon.

- Consequent to offering various specializations in Computer Science & Engineering department, a new Design Centre has been established with new high end computers, at a cost Rs. 35 Lakh.

- To prevent asphyxiation in case of fire in lifts, air ducts have been installed at a cost of Rs. 1.73 Lakh

- To upgrade the online UPS system, Rs, 6.2 lakh was spent.

- To enhance the illumination of the Corridoors and bathrooms, Rs. 20 lakhs was expended.

- University upgraded its classrooms in the main building by purchasing new furniture (Tables/Chairs) for a sum of Rs. 25 Lakhs.

- To strengthen the electronic surveillance the university has Installated additional cameras incurring and expenditure of Rs. 10.5 Laks.

- University entered into an agreement with M/s Eduvanz Finance Pvt Ltd. (NBFC) for providing education loans to the students.

- **Establishment of Centre for Emerging Technologies :**A Centre for Emerging Technologies has been setup at NCU to promote research and development in emerging areas like Artificial Intelligence, Cybersecurity, Internet of things, Augmented and Virtual Reality etc. The center is equipped with high speed computing facilities (GPUs) to carry out research in these areas. The computing facilities are being used by research scholars, UG and PG students working in the areas of Deep Leaning and Virtual / Augmented Reality etc. The center is also providing short term training modules in these emerging technology areas to students and faculty from NCU as well as from outside.

Faculty

Number of new members of faculty who joined during the year   - 30

Number of members of faculty promoted during the year   - 21

Number of members of faculty awarded PhD degree during the year - 15

Academic Initiatives

During the year, several innovations in curriculum design and teaching pedagogy have been implemented at NCU to enhance employability of students. In all B Tech programs, specializations have been introduced to make these programs keep pace with new developments in technology. Several other features for holistic development of students have also been added. New programs on liberal education have been introduced to expand our portfolio and meet the market demand. The focus is on identifying student's aptitude and also on contemporary teaching pedagogy that includes experiential learning, industry exposure and hands on projects to bridge the gap between class room and industry requirement. Some of the initiatives recently introduced are as follows:

Introducing Specialisations

New specialisations have been introduced across all engineering programs at NCU to improve student readiness for future jobs, employment value and career progression.

The earlier phase of the technological revolution transformed operational automation across almost every imaginable industry, from banking to construction, leading to an insatiable strive for higher productivity and efficiency. Over time, this revolution has been well understood and well exploited, eventually leading to a natural stabilization of growth and innovation in this phase of technology.

However, lately there has been another technology revolution sweeping across the world, the revolution that has brought us phenomenon such as User Experience, Artificial Intelligence, Data Science, Internet of Things and Cyber Security and so on. This revolution has created additional layers of career opportunities for our students. To extend the benefit of these developments to our students all the B Tech programs have been upgraded with new specializations as given below :

1. Computer Science and Engineering

    i)   Data Science & Artificial Intelligence

    ii)   Full Stack Development

    iii)   Internet of Things & Cloud computing

    iv)   Cyber Security

    v)   Game Tech, Augmented Reality & Virtual Reality

2.   Electronics and Communication Engineering

    i)   VLSI Design

    ii)   Embedded Systems & Internet of Things

3.   Mechanical Engineering

    i)   Thermal Engineering

    ii)   Mechanical Engineering Design

    iii)   Industrial and Production Engineering

4.   Civil Engineering

    i)   Smart Infrastructure Development

    ii)   Construction & Project Management

Introduction of these specializations is aimed at making our engineering graduates industry ready and making them directly deployable. The response to these upgradations by the student community has been very encouraging as indicated by the number of students opting for these specializations and also the healthy increase in number of admissions.

Launch of New Programmes

Liberal studies are becoming increasingly important areas of studies of higher education. Accordingly NCU has also taken initiatives in this direction by expanding its portfolio and introduced two new programs namely ,

    i)   B.A (Hons) Economics and

    ii)   B.A (Hons) Psychology

These programs are being offered by our School of Management which is already successfully

running similar programs like B.Com (Hons). The introduction of these programs has been done after extensive market survey regarding the demand for these courses. The success of B. Com (Hons) program has also prompted NCU to expand the portfolio.

These courses aim at developing an understanding of the growing discipline of Economics and Psychology and promoting skill based education. An important goal is to facilitate self-discovery in the students and ensure their enthusiastic and effective participation in responding to the needs and challenges of the Society. The courses intend to enable students in developing knowledge and skills to meet day-to-day challenges and work on abundant career opportunities. The syllabus has been created keeping in mind the changing nature of the society, educational institutions and the workplace and inculcate the required competencies in students. The curriculum complies with the regulatory requirement of UGC.

Innovations in Teaching Pedagogy- Project based modular teaching

Updating the curriculum alone is not adequate, its delivery & implementation is equally important. Therefore the teaching pedagogy also needs to be upgraded & aligned to industry needs for improving the quality & making our students employable. Several Innovations in Teaching Pedagogy are proposed and implemented at NCU to enhance the employability of students. The focus is on identifying students' aptitude and on also on practical work, industry exposure and hands on training to bridge the gap between class room and industry requirement. One of the initiatives recently introduced is as follows:

Extending the concept of Context Learning or experiential learning, a new paradigm in teaching learning process is introduced with project based learning. This is done with the close involvement of relevant industry experts in the teaching learning process. The expected outcome of this pedagogical innovation is industry ready graduates who can directly be deployed on jobs by industry without the need of any further rigorous training after their graduation.

The courses suitable for this mode in the program and in demand by industry are identified for project based learning. The delivery methodology is also changed to module based to facilitate association of industry experts with course delivery and proper execution of the project work. The work flow in the project based delivery is as follows:

i)   Association of suitable industry expert at the start of the course.

ii)   Project identification & assignment jointly by faculty and industry expert.

iii) Course delivery jointly by faculty and industry experts.

iv)   Weekly / fortnightly progress review of project work.

v)   Evaluation of the outcome through the realized gains in terms of live project and conceptual understanding.

Since the project identified is expected to be a live industry work and involves conceptualization to design, this delivery methodology is also expected to enhance analytical ability & critical thinking of students. It produces readily deployable graduates.

Offering Skill based courses

NCU believes that each student admitted to the University would have his/her own strengths and facilitation by the University to further development could probably make him a successful student and human being. An innovative method to understand strength and weakness of student by the way of tracking their previous learning curve is through the creation of Student Portfolio System. The portfolio enables the University to identify and provide the student an opportunity to pursue his interest in his curriculum or other areas of improvement under a mentor through constant interaction and support as well as make up for any gaps in skills. For achieving full employability, it is important that all students including slow learners are provided with opportunities to be able to compete for the job market. Each student including slow learners are given an opportunity to learn some special skill modules particularly oriented towards industry needs which help them

at the time of placements.

NCU has introduced several job oriented skill modules for slow learners as well as other interested students in all departments last year. Some of these modules include web development, Staad Pro design, Arduino platform, Cadence software for VLSI design, CAD & 3D printing, enhancing employability skills, CNC Programming, Basic & Advanced Pneumatics & Hydraulics (by Maruti Suzuki), Air-conditioning & Refrigeration (by Daikins) and Automobile Engg. (by BMW) and several more. These modules are offered to students based on their interests. Equipping the students with these in demand skills is expected to improve the profile and enhance employability of the students, particularly slow learners.

Integrating MOOC Courses in Curriculum

As per UGC guidelines , students are required to be exposed to MOOC (Massively Open Online Courses) to develop self directed and life long learning skills in them. Upto 20 % of courses in a program may be implemented through MOOC using UGC recommended like Swayam , NPTEL etc.

However, keeping in view the limited availability of such relevant quality courses including their evaluation methodology, NCU has taken an approach to implement these guidelines in a phased manner starting with up to 2-3 MOOC courses in each program. To start with, these courses are being offered in blended mode to progressively initiate students into this mode of learning as well as maintain required standards in evaluation processes. All Depts./ Schools have offered MOOC courses and in the current semester more than70 such courses have been offered across all disciplines. Although at present these courses are being offered in blended mode and the students are being encouraged to obtain certification also from approved platforms for facilitating credit transfer, subject to Academic Council approvals.

Innovation, Incubation and Entrepreneurship Development

The Govt of India is giving high priority to entrepreneurship development and start up culture for the employment generation. MHRD, Govt of India is also encouraging Universities to actively engage students in activities leading to entrepreneurship development. In line with this national priority, NCU has established 'The Master Jagannath Centre for Excellence & Incubation' (MJCEI) the new start-up incubation platform at the University campus. The Incubation Centre has been established to advance innovation and thus provide opportunities to students to innovate and invent, thereby building special technical skills in them and hand-hold to meet their entrepreneurial dreams. The vision of the Centre is to provide a research based platform for incubation across disciplines thus ultimately serving the industry and the society. The Centre has taken up an Online Food Aggregator project in collaboration with a start-up company, City Innovates Pvt Ltd, Gurugram. University has also identified several student projects to incubate further, through University's internal tech fest 'Technovation'.

The University is conducting regular entrepreneurship awareness and pitch sessions for students through lectures by invited experts in association with companies like Boudhik Vetures, UIncept, Intellicom etc. which are engaged in start up training & other promotional activities. NCU is also registering with MHRD – IIC (Institutions Innovation Council) for support in our student entrepreneurship development programs.

Teaching Learning Initiatives

NCU has introduced several innovations in its teaching learning process to make it more practical oriented with focus on deployability. Some of these are:

- Industry association through Context Learning wherein classroom learning is related to real world and consists of some relevant part of the syllabus in a course delivered by industry experts, video demonstrations, industry visits to see the demonstration of concepts, mini projects, guest lectures etc.

- LMS system for 100% courses & other ICT tools to afford self-paced learning for students

- Programme flow charts have been developed for each curriculum to clearly indicate the flow of courses to students and help them in choosing various electives.

- Thousands of e-books and e-journals with Wi-Fi campus for easy access to information resources such as video lectures through Swayam, NPTEL, Swayam Prabha, E-Pathshala, Coursera etc.

- Plagiarism check on all project reports and research publications as per new UGC guidelines

- High emphasis on industry connect through multiple internships for students via strong industry academia interface

- Industry live projects for students to keep them abreast with newer technologies

- Special focus on improvement of weak students through counselling and remedial classes and so on

Induction Programme

One week Induction Programme were conducted from 22 - 26 July 2019. A total of 853 students participated in this programme. The objective of the programme was to help the new 1st year students adjust in the new environment, promote bonding amongst students, freshers and faculty members. The programme was also designed to sensitize the students towards their academic interests and activities, besides inculcating in them the ethos of our University, with a larger sense of purpose. The programme started with address by Mr K K Jadav, Director UPSC and Mr Vivek Dahiya, Director Baudhik Ventures on the first day. Introduction to basic computer skills, fundamentals of mathematics, mini projects, creation of student portfolio, visit to industry / other educational sites, aptitude tests & analysis, sports, extra and co-curricular activities were conducted during the programme. 82% of the participating students found the programme to the excellent/very good. The induction module is a very good initiative that focusses on familiarizing the newly admitted students with each and every aspect of the University be it clubs, professional and cultural societies, labs, library, sports activities etc.

New Labs

Cisco Lab

Cisco Networking Academy has been established in NCU with the main objective to meet the growing demand for ICT Professionals and to improve the career prospects of the students.

The Cisco networking programme aims to inculcate networking and IT skills in students who want to expand their IT knowledge and become industry ready. It includes innovative IT curricula that comprises of four modules. CCNA certifications cover all important networking aspects which is the first step in a Cisco career certification path. These modules are:

CCNA1 — Networking Basics

CCNA2 — Routers and Routing Basics

CCNA3 — Switching Basics and Intermediate Routing

CCNA4 — WAN Technologies

A dedicated CISCO lab has been set up and more than 100 students have already benefited from this programme.

NavIC Lab

The NavIC Lab at the University records data from IRNSS satellites 24*7 and after analyzing the data sends it to SA-ISRO, Ahmedabad, on a weekly basis. Three research scholars have been working in the lab under the guidance of Prof Amitava Sen Gupta and Dr Sharda Vashisth. Following are their broad areas of research:

- Time Synchronization technology using IRNSS
- IRNSS disciplined Oscillator
- Common view time transfer
- Difference in positioning accuracy with and without 7th satellite IRNSS-1I
- Positioning accuracy using IRNSS
- Study of ionosphere using IRNSS

Incubation Centre

The purpose of establishing Incubation Centre is to help students incubate innovative ideas by facilitating skills like Creative Thinking, Problem Solving and Data Generation. The objective is to help students float projects and incubate ideas through industry participation and University augmentation. Currently, projects and industry problems related to a start-up company, City Innovates Pvt. Ltd., Gurugram has been taken up and the company is our main funding partner. University has also identified several student projects to incubate further through a University internal Technovation.

Tinkering Lab

The dedicated technical staff and faculty members provide hands on support on different emerging areas such as IoT, Big data, cloud computing, robotics etc. to students working in this lab on different projects. Approximately, 450 projects were made in the Tinkering lab in the last semester and almost 400 students of the CSE, ECE, Mechanical and the Civil Departments made electronics based and mechanical projects using electronic circuits, Arduino boards, other micro-controllers, different types of sensors, motors, ICs and control circuit modules. Some of the projects on which students have worked in the Tinkering lab are Earthquake resistance building, Drone delivery system, Smart classroom with automatic room lock and light on-off system, Gesture controlled car, Automatic smart car parking system, Automatic hand wash tap and many more.

Thought Lab

The thought Lab was established to help students overcome anxiety, stress, fear and help them develop positive attitude towards life. First year students from the School of Management attend classes twice a week as a part of General proficiency class.

NCU renews MoU with Mitsubishi Electric

The MoU between NCU and Mitsubishi Electric India Pvt Ltd was renewed for a further period of one year on 29 Nov 2018. Consequent to this MoU, Supervisory Control & Data Acquisition (SCADA) equipment costing Rs 5,91,300/- has been provided by Mitsubishi to the University in addition to the existing equipment provided by it earlier. The MoU was signed by the Vice-Chancellor, Prof. HB Raghavendra and General Manager, Mitsubishi, Mr Vikram Mattoo in the presence of NCU's Registrar, Col Bikram Mohanty (Retd), Mitsubishi Coordinator, Dr Anjali Garg, and officials of Mitsubishi.

Exchange of MoU with Mitsubishi Electric

Academic Collaboration with n+i

Dr Manoj Gopaliya (Dy Dean Academics) and Dr Divyabha (Coordinator n+i) attended a meeting on behalf of the NorthCap University with EPF Graduate School of Engineering on 19 Feb 2019 at the French Embassy for Academic Collaboration and signing of MOU with n+i. Dr Jean-Michel Nicolle, President of EPF Graduate School of Engineering and President of Network n+i, cordially invited NCU to develop academic and scientific cooperation.

Exchange of MoU with n+i

Letter of Agreement with India Meteorological Department, Government of India, New Delhi

A letter of agreement was signed with India Meteorological Department to utilize meteorological & environment data for academic and research purpose and to help the public of the region for general awareness. In the agreement, NCU & IMD have agreed to jointly explore weather monitoring requirements and the facilities of NCU to be used by IMD for providing capacity building training to farmers.

IMD has informed us that the Automatic Weather Station (AWS) will be established in the NCU Campus by June 2020.

MOU with UIncept

An MOU was signed with UIncept - a startup incubator and accelerator in September, 2019 to help students incubate innovative ideas. Mr Karan Singh Chauhan - Head of Marketing & Business Development was here at NCU for the MOU. UIncept envisions to support entrepreneurs in building great enterprises through mentorship, infrastructure and a network of potential investors and aiding government institutions.

MoU Signing with UIncept

- **Shibaura Institute of Technology**

In its pursuit of academic excellence and to provide global exposure to students and faculty, on 7 Aug 2018 NCU signed a Partnership Agreement for academic exchange and cooperation with Shibaura Institute of Technology (SIT), Tokyo, a leading university of Japan, which firmly believes in the philosophy 'learning through practice'. Both the universities have agreed to undertake joint collaborative research, exchange of students and faculty, exchange of information and publications etc. SIT maintains a strong industry academia relationship with more than 250 state-of-the-art laboratories engaged in several multidisciplinary projects. NCU being a partner university of SIT, students from NCU shall get full programme and tuition fee waiver.

- **National Technical Research Organization (NTRO)**

The University signed an MoU with National Technical Research Organization, New Delhi, on 12 Sept 2018. The MoU shall provide collaborative working arrangement on specific research and development projects. In addition, NCU interns may be considered by NTRO for involving young talent in relevant fields.

Other Initiatives

AICTE conducted Examination Reforms workshop at NCU

All India Council for Technical Education (AICTE), North Western Regional office, Chandigarh conducted a one-day Workshop on Examination Reforms in The NorthCap University Gurugram on 08 Feb 2019 attended by about 90 External Faculty from various Universities and Colleges of Haryana and NCR. The main aim of this workshop was to explain the importance of assessment in outcome-based education, to design strategy for outcome-based assessment at course level, to use Bloom's taxonomy in designing assessments tools and question papers, to choose appropriate method and to critique a given assessment design with respect to quality and structure. The workshop was inaugurated by Prof. Anil D Sahasrabudhe, Chairman AICTE along with Prof Ashok Shettar, Vice-Chancellor, KLE University, Belagavi, Karnataka, Prof. Rajive Kumar, Advisor AICTE, Prof. Prem Vrat, Pro-Chancellor, NCU and Col Bikram Mohanty, Registrar, NCU.

Chairman AICTE Prof. Sahasrabudhe attending the AICTE workshop at NCU

- **Parent Information System**

The University recently started a Parent Information System which keeps the parents informed about the progress of their wards. A portal has been set up which provides information on the academic progress and other achievements/activities of students including extra and co-curricular activities and so on. Corrective actions if required can be taken in consultation with the faculty. Parents have been informed of this facility through SMS, website etc.

- **Student E – Portfolio Generation**

E-portfolio is a unique initiative of the University to identify students' interests in the first year itself and encourage them to develop these areas. Students shall continue to develop this portfolio during their stay at NCU and also record their achievements and rewards using multimedia so as to showcase their portfolio to potential employers for enhanced employability. It will work as a complete repository for a student's resumé along with all her/his academic documents which can be kept by the student for future reference purpose also. This activity is being coordinated and overseen by Student Mentors in association with SPA. 1st Year students were initiated into preparation of their E-portfolio during the induction programme.

- **Office of International Relationship**

To increase diversity on the campus and to attract the best talent, the University has come up with several Partnership Agreements with foreign universities. To facilitate students who want to study abroad and for student and faculty exchange, an Office of International Relationship has been established at the University this year. The major activities of this Office of International Relationship include, facilitating students in getting admission abroad, collaborating in exchange of faculty members, organizing seminars and conferences.

Faculty Development

The Department of CSE organized an Expert Lecture on "Recent Trends in Cryptography" for CSE 3rd year students by Dr A K Mohapatra on 18 April, 2019. Dr. A K Mohapatra is currently appointed as Chief Technical Officer (CTO) at Delhi Police. His areas of specialization are Cryptography, Information Security and Network Security.

- A new course on Web Application development using MEAN Stack for the B-Tech CSE Students was introduced. To accomplish this, the Department conducted a 17 days FDP on Web Development from 21 Feb, 2019 – 30 March, 2019. The FDP was conducted by industry experts from Brain Mentors pvt. Ltd. Mr Ravi shared his expertise on HTML5, CSS3 and Bootstrap.

- The Department of Computer Science and Engineering organized a meet-up on Agile Principles, entitled as "Agile BootCamp@Gurugram" on 21September, 2019 with the collaboration of Agile Network India. Agile Network India (ANI) is a Thought Leadership community and contributes to domains like Organization Improvement, Skill Development, and Innovation. The event was attended by 23 participants including various industry experts.

More faculty members are being encouraged to contribute to this national initiative and the work is in progress.

Strategic Plans for Schools & Departments

To ensure full commitment and participation of all faculty members in realizing the vision, growth and development of the University, all the Departments have laid down their goals and targets for the year. These targets are based on the individual targets (one year deliverables) given by each faculty. Therefore, accountability for the work to be carried out by each staff member from the beginning of the academic year is fixed. Periodic review about the progress is monitored. Faculty appraisal form has been redesigned and made inclusive so that strength of each faculty can be captured and recognized not only in teaching and research but also in outreach and skill development.

Faculty Recognitions and Awards

Prof. Prem Vrat was invited by the Vice-Chancellor of Dr APJ Abdul Kalam Technical University (formerly UPTU) to participate in the Foundation Day celebrations at Lucknow on 26 July 2019. He planted a tree in the new campus of AKTU which was inaugurated by the Prime Minister last year.

As a former Vice-Chancellor of then UPTU, he was felicitated by the Chief Minister of Uttar Pradesh, Hon'ble Yogi Adityanath Ji at the inaugural session for his contribution as VC of then UPTU. The inaugural session was attended by the Minister of Technical Education, Minister of State Technical Education, Uttar Pradesh in addition to the CM as the Chief Guest.
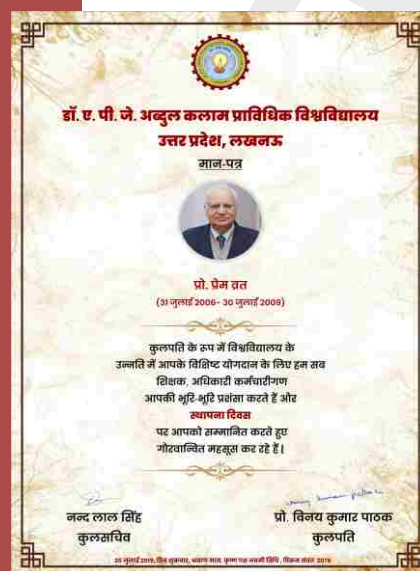
Vice-Chancellor, Prof. H B Raghavendra attended SIU-AIU, Third Edition of the Internationalization of Higher Education (IHE 2019) International Conference on 'Building Partnerships towards Collaborative International Learning' in collaboration with the Association of Indian Universities (AIU) and UNESCO, New Delhi held at Symbiosis International (Deemed University) SIU, Pune from 4-6 April 2019. The Conference also included Round Table on 'Health Promoting Universities (HPU)' convened by the University Grants Commission (UGC). Shri R Subrahmanyam, Secretary (HE), Ministry of Human Resource Development, Government of India inaugurated the International Conference. The Conference deliberated on several concepts, and initiatives including 'Study India', MHRD support for diversity and outreach programmes.

Dr Rekha Vig, was invited as a session chair at ICCCS-2019, a Taylor and Francis conference at Dronacharya College of Engineering, Gurgaon on Dec 01-02, 2018.

Dr Anjali Garg reviewed a book Basic Electrical and Electronics Engineering by Kothari by Tata Mc Grawhill in October 2018.

Dr Sharda Vashisth and Prof. D C Dube have published a book titled " Digital Electronics and Devices"with Narosa Publishers.

Dr Kavita Khanna, Head of Department, CSE was invited to Chair a technical Session in the International Conference on "ICT for Digital, Smart, and Sustainable Development" organized by the Department of Computer Science and Engineering, School of Engineering Sciences & Technologies, Jamia Hamdard, New Delhi on 15 March, 2019.

The Department of CSE strives to establish collaborations with premier universities out of India, in order to provide global exposure to its students and adopt their best practices. Tunku Abdul Rahman University College (TAR UC), Malaysia invited **Dr Kavita Khanna and Ms Prerna Singal** from the Department of CSE to visit their campus and explore opportunities for further collaboration.

Dr Kavita Khanna, HoD CSE being felicitated by students of Jamia Hamdard, New Delhi

Dr Rita Chhikara presented a paper titled 'Hybrid Genetic Algorithm for Feature Selection in Image Steganalysis' which was bestowed with the best paper award at 20th International Conference on Contemporary Issues in Science, Engineering & Management held at Singapore on 06-07 April 2019.

Ms Hitesh Yadav received an award from CISCO Networking Academy for Five Years of active participation and dedicated service in CISCO Networking Academy.

Ms Jyotika Pruthi received an award from Indian Education Awards organized by IIT Patna under the category of "Top 10 Young Teachers of the Year" for her contributions in the field of teaching in May 2019.

Dr Rita Chhikara receiving the best paper award at International Conference held in April 2019

Webinar on 'How Civil Engineers can thrive in smart city world'

Mr Lokesh Choudhary, Faculty, Civil & Environmental Engineering Department, delivered a live webinar on 'How Civil Engineers can thrive in smart city world'. The webinar was focused on the opportunities a Civil Engineer has in Smart cities, with advent of new technologies like BIM, GNSS Surveying, AI etc. He also discussed about the skill set which needs to be tailored to blend into the requirements of smart, digital and intelligent cities of the future.

Faculty Felicitated with Global Education Award at Global Education Summit

The Global Education Summit was organized by International Youth Fellowship and International Chamber of Media and Entertainment Industry and Centre for Education and Growth and Research on 10 Sep 2019. The topic of the forum was "Character Education: The importance and necessity of Mind Education". The main focus of this summit was to discuss the direction in which the university should progress to educate skilled human resources who also possess an upright mind set. The resource person for the same was internationally renowned speaker Dr Kim Jae Hong, Director Education, International Youth Fellowship and President of International Mind Education Institute. Senior dignitaries from various institutions across India were invited in the summit. From The NorthCap University, Gurgaon, Prof. H B Raghavendra, Hon'ble Vice Chancellor and Dr Ram Karan Singh, the Dean of RDIL and PhD studies and the Chairman of International Relations Office attended the same. Prof. HB Raghavendra & Dr Ram Karan Singh were honored with Global Education award at the summit for their untiring contribution towards higher Education at the ceremony held at Marwah Studios, Film City, NOIDA .

Prof. H B Raghavendra inaugurating the Global Education Summit

Dr Archana Dongre, Officiating Head, Civil Dept. co-chairing a Technical Session at IIIT Hyderabad

Dr Archanaa Dongre was invited to Co Chair a technical session in 17th International Symposium on "New Technologies for Urban Safety of Mega Cities in Asia", (USMCA 2018) from 12-14 Dec. in IIIT Hyderabad, organised by

IIIT Hyderabad, India and International Center for Urban Safety Engineering, Institute of Industrial Science, The University of Tokyo, JAPAN.

Deokaran Award for "Glass" – 2018

Dr Hukum Singh received prestigious Deokaran Award for "Glass"–2018 on January 09, 2019 at "The Wave International", Steel City (Jamshedpur), India, during the Society's 82nd annual session as one of the authors for "Stability and Percolation Threshold of $Ge_{42-x}Pb_xSe_{58}$ ($9 \le x \le 20$) Glasses" — Deepika, Hukum Singh & N. S. Saxena — published in the Transactions of the Indian Ceramic Society,(Taylor & Francis)) Vol. 75 (1), pp. 20-24 (2016). A cheque amount of Rs. 5000 and citation certificate were received during the society's annual session.

Dr Sunita Sharma participated and presented her research work on perovskite solar cells in International Conference on Advanced and Basic Sciences (ICABS 2019) in GDC Memorial College, Bahal on February 07-09, 2019. Dr Sharma was awarded the best paper oral presentation award in ICABS 2019.

Dr Hukum Singh has been awarded certificates of reviewing by two prestigious Elsevier Journals (OPTICS AND LASERS TECHNOLOGY & OPTIK) in calendar year 2018. These certificates have been given in recognition of the contributions made to the quality of the Journals. The current impact factors of these journals are 2.503 and 1.191 respectvely.

Dr Tejpal Singh Chundawat received an honour as "Bentham Ambassador" for the year of 2019-2020 by Bentham Science Publishers, UAE. He received this honour for his contribution to quality of research work in Bentham Science Journals.

Dr Hukum Singh receving the Deokaran Award - Jan 2019

International Conference on STEM

ICSTEMVG-2019: The Education Department and Department of Science and Technology of Government of Gujarat organised an International Conference on STEM during a Vibrant Gujarat Summit 2019 on 17 Jan 2019. A paper was submitted with the title 'Innovations & Interventions in Teaching Pedagogy in Higher Education to promote STEM by Prof. H B Raghavendra and Prof. Swaran Ahuja. The paper was awarded the Second Best paper of the Conference.

Prof. Raghavendra was also invited to present the paper at the International Conference on STEM as the First Author and also to receive the Award on 17 Jan 2019 at Ahmedabad Science City.

Senior Appointments

- **Dr Hemant C Trivedi**, joined as Professor, Dean & Officiating Head, School of Management on 15 April 2019.

- **Prof. Ram Karan Singh**, joined as Professor, Dy Dean-RDIL and Industrial Liaison & PhD Studies, School of Engineering on 1 July 2019.

- **Dr Nalini Deka,** Joined as Professor of Psychology, Dept. of Pshchology on 22 July 2019.

Engineers' Day

Engineering for change for good, It develops a balanced growth in the society and to enhance the system one must not forget the contribution of the core branches of engineering says Prof. Prem Vrat, Pro Chancellor, Professor of Eminence.

Commemorating life and efforts of one of the greatest Indian Engineers, & Bharat Ratna Sir M Visvesvaraya, The NorthCap University celebrated 52nd Engineer's Day with the theme 'Engineering for Change' dated 19 September 2019. Mr Sandeep Handa, Honorary Secretary, IE(I) Faridabad Local Centre, Chief Guest incited the audience to the need of large number of engineers in the coming time.

Engineers' Day celebrations - Sep 2019

Teachers Day Celebration 2019

A good teacher can inspire hope, ignite imagination and instill love for learning'. The event began with a mesmerizing traditional dance "Alaripu". This was followed by welcome address by the Pro. Chancellor Prof. Prem Vrat on the importance of a teacher in the development of the society. The Vice Chancellor. Prof. HB Raghavendra, delivered an inspirational talk on the life of Sarvepalli Radhakrishnan, the second President of India who was a renowned academic philosopher, well-known diplomat, acclaimed scholar, and above all a great teacher.

The students of School of Management added fervour to the programme with electrifying dance performance, soulful song and staging an emotional skit. The skit highlighted the role of a teacher in shaping the life of a human being.

Vice-Chancellor & Registrar inaugurating the Teachers Day Function - Sep 2019

Women's Day 2019

The NorthCap University celebrated International Women's Day on 8 March 2019 where the faculty, staff and students rejoiced together. To honour the theme #BalanceforBetter, dress code of blue-men and pink -women was followed which lent an aesthetic appeal to the crowd. Laced with performances from enthusiastic students, the event generated a lot of buzz with the dancing and soulful music with the excitement of games and activities. Students addressed the issue of domestic violence through a spirited theme dance and to create an awareness about healthy lifestyle, free consultation was given by Dr Shalini Bliss- Dietician from Columbia Asia.

Women's Day Celebrations - March 2019

World Environment Day

"The green we sow, the more we grow", with the will and dedication, the department of Civil and Environmental Engineering celebrated the World Environment Day on 5 June 2019. Dr Archanaa Dongre, HOD, C&EE stressed upon the segregation of dry waste, starting from our homes. Mr Lokesh Choudhary, Faculty, C&EE addressed everyone, expressing how important the day is. It brought together the staff and faculty members to a pledge towards growing more, and taking a step towards reducing pollution. Everyone contributed by planting saplings as a mark towards a new beginning.

Tree plantation on World Environment Day

International Yoga Day 19 June 2019

Yoga is supreme harmonization of physical. mental & psychological and spiritual aspects of an individual. The University celebrated International Yoga Day on 19 June 2019, where in it engaged all Faculty, Technical and Admin Staff members to learn some basic asanas, practice them with a certified yoga trainer.

NCU Law Review

The NCU Law Review, Vol.1, No. 1, March 2018, (ISSN 2581-7124), a peer reviewed biannual academic publication of the Centre of Post Graduate Legal Studies (CPGLS), School of Law, NCU, was published in Dec 2018. This publication is an endeavour to foster research and serves as a forum for the promotion and circulation of views on contemporary legal issues among members of the legal profession, academicians and students. Dr Subhradipta Sarkar, Assistant Professor (Sel Grade), SOL, is the Editor of this academic journal.

Medical

Health Check-up

Preventive screening remain controversial and confusing topics for general public. While the advantages of preventive screening for diseases is hard to counter, there are arguments that screening does not always lead to better health. We can leave these arguments aside for the moment because it is a fact that preventive health check-ups help catch health scares and diseases early. It is always better to check the status of health even if one is in normal health. Through the last 12 months, The NorthCap University led various health & well-being associated specialized camps on campus.

With a view to promote Oral Health, the university kicked off in the right earnest by organizing a free Awareness & Wellness Camp on university campus in November 2018. The camp was held in partnership with Clove Dental - India's largest and most respected chain of super-specialty Dental clinics.

The Members of support staff, administrative staff, teaching staff and the students participated enthusiastically in demonstration of basics of maintaining oral hygiene by using Teeth models, sharing of details of special membership plans for RVG X-Ray, Scaling & polishing.

To promote 'Disease free' society, 'निवारण'– IV, Preventive Health Check Camp was held on 12 February 2019 at university campus to make people aware about their role in prevention of several diseases and maintaining a healthy lifestyle. The screening/diagnostic campaign was conducted in association with Vijaya Diagnostic, a major Diagnostic Centre bringing specialized investigations at preferred rates. Several complimentary facilities were extended during the camp, including TANITA MACHINE examination (8 vitals) - Body Mass Index (BMI), Visceral fat, Basal Metabolic Rate (BMR/DCI), Metabolic age, Bone mass, Muscle mass, Body fat & Body Water %, Blood Glucose (Random) & Body Saturation Monitor (SPO2) etc.

To commemorate International Women's Day, a free of cost camp was organised in partnership with Vijaya Diagnostic Centre on 8th March 2018. The camp was undertaken in the format of a diagnostic campaign for Blood Sugar sampling & Blood Pressure Checkup as a mark of reverence to womanhood and their role in prevention of several diseases by maintaining a healthy lifestyle. Members of our fraternity which included students and members of faculty, including participants of the March Past benefitted from the camp.

A free of cost Eyesight Check-up Camp was conducted on 9th March 2018 at university campus as a part of spreading awareness about ideal vision. The camp was undertaken by LENSKART, India's premier Vision Accessories brand. The camp was conducted by LENSKART Optometrist and a range of accessories were also made available. Another Eyesight Check-up Camp was organized on 7th August 2019 in conjunction with Bausch & Lomb, World's premier Vision Accessories brand. The camp comprised of Free Eye Screening, Refraction of Participant employees, Contact lens trial to prospective customers, Contact lens Care Maintenance, Myths about Contact Lens & Distribution of Discount Coupons.

RichFeel held a hair and scalp preventive care and free check-up camp on 27 September 2019.

Breast Cancer Awareness talk by Ms Neeti Leekha Chhabra was organised on 19th October 2019 in university campus. Ms Neeti Leekha Chhabra is the founder of Yes to Life is a breast cancer winner who dealt with the disease at the age of 31 with positive attitude and strength. Members of our fraternity which included lady faculty members and lady administrative staff benefited from the camp.

Dr Shilpy Wadhwa, Senior Medical Consultant at The NorthCap University facilitated all these camps and made modern diagnostic facilities arrive right at doorstep.

Facilities for faculty and staff

In keeping with past practice, various statutory and non-statutory facilities continue to be provided:

- PF, Gratuity Benefits as per Act and University Rules
- Cashless Mediclaim to Self and Family (medical cover upto Rs 5.00 lakhs)
- Faculty Lunch Room & Tea Club facility
- Faculty Awards
- Mentor-Mentee Scheme for faculty
- Special Casual Leave; Sabbatical Leave, Vacation Leave
- Faculty encouraged to pursue PhD (25 % faculty are pursuing PhD & 49 % faculty are PhDs)
- Equal opportunity employer; current female ratio is 70%
- Ethics & Anti Plagiarism Policy in place
- Day Care crèche for children
- A structured induction programme for faculty
- Medical Care Centre

Faculty Development Programmes

The University Level FDP was organized from 14 -15 Dec 2018. It was conducted by Major General GG Dwivedi (Retd) (Sena Medal, Vishisht Seva Medal*) on 'Redefining the role of teacher in the era of disruption' on 14 Dec 2018 and 'Excellence in Education through disruptive Innovation' on 15 Dec 2018. Citing from his own personal and professional experiences he discussed the role of a teacher in the new era and changing environment. Relevant case studies were also discussed.

The Dept of CSE&IT organized the FDP on 'Machine Learning and Deep Learning', sub-areas of Artificial Intelligence. The technical sessions were conducted by experts from IBM Research Lab and Brain Mentors Pvt Ltd, New Delhi. The FDP also included soft skill training, yagyopathy and meditation sessions in the 'Thought Lab'.

The Department of CEE held the six day FDP on skill enhancement. It comprised of special lectures on various topics by industry experts and academicians, trainings, meditation and yagyopathy sessions, motivational movie and a webinar on 'Interview and Interpersonal Skills'.

The FDP in the Department of APS focused on the strategic plan of the Department for the year ahead. Faculty interacted with scientists such as Dr Sailesh Narayan Sharma, NPL, Delhi and Mr Yogesh Adhana, DRDO, Delhi. There were talks on 'Health and Happiness Program,''Science of yogapathy' and a meditation session by Brahma Kumaris on 'Our Thought Process'.

The Dept of ME conducted its FDP to attain in-depth understanding about pedagogy of teaching Engineering and enhancing the research capabilities of faculty members. They interacted with learned experts from the industry and academia and learnt to prepare quality research proposals for various ministries in the field of science and technology. The FDP also included sessions on meditation and yagyopathy.

FDP on 'Emerging Trends in Teaching and Learning' was organized by CLL from 1-7 June 2018. Eminent speakers delivered expert lectures such as Mr Rajeev Bansal, Sr Consultant TCS on 'Financial Literacy'; Ms Chanda Sindhwani, Corporate Trainer, on 'Team Building'; Mr Allan Anderson, Programme Manager, Chetanalaya, New Delhi on 'Educating Young Minds'. There were sessions on meditation and yagyopathy also.

The School of Management FDP consisted of sessions on Mentoring, Quality check for PhD, writing a brief case study, Instructional Design etc. Eminent academicians delivered expert lectures such as Dr Girish Tripathi, Dy Director General (Academic), NTPC School of Business, on 'Application of Regression Analysis in Research'; Prof. J Mitra, Former Dean FMS, University of Delhi on 'Case development and case teaching'. A Board of Studies (BOS) meeting was held on 5 June 2018.

The Centre for Post Graduate Legal Studies (CPGL) organized the FDP in the School of Law to inculcate the spirit of capacity and team building, social emotional assessment and community perspective, social inclusivity, dependability as well as refining the thought process etc. so that all these methods can be utilized as a step towards enhancing the future of students in a better way. Subject experts delivered lectures such as Prof. GS Bajpai, Registrar, NLU, Delhi, on 'Drafting of Legal research proposals and insight of appropriate funding agencies'; Ms Lata Singh Dasila, ICF Certified Life Coach, on 'Social Emotional Assessment vis-à-vis Community Perspective' and Mr Anurag Arya, Superintendent of Police, Kanpur East, on 'Maintenance of Law and Order situations: Case analysis of ground realities'.

Induction Programme for new faculty members

A Faculty Orientation Programme to interact with all new joinees on one common platform was organized on 18 Aug 2018. The programme acquainted the 18 new faculty members with key aspects of various processes and their functioning in different domains at the University.

International Faculty Academic Visits

Prof. Mark Jolly, Professor of Sustainable Manufacturing, Sustainable Manufacturing Systems Centre, Cranfield University, delivered a guest lecture on "Sustainable Manufacturing: The Future" to BTech 3rd year ME students on 12 Feb 2019. The event was coordinated by Dr Abhishek Pratap Singh. (MED2019G001)

Dr Rushikesh Khire, from Providence University, Taiwan visited at The NorthCap University, Gurugram under partnership programme between both the universities on January 30, 2019. He delivered a talk on "Higher Education Opportunities for students at Providence University, Taiwan

B K Sister Vedanti from Nairobi, Kenya visited our Thought Lab and appreciated the efforts taken by the University in this regards.

Students attend classes twice a week as part of their General Proficiency class.

The Thought lab was established to manage stress, to encourage pure, positive and creative environment for the betterment of the students. B K Sister Denise from UK, visited the Thought Lab on 11 Feb 2019. The visit was coordinated by Dr Payal Khurana.

International Youth fellowship (IYF) organized mind creation workshop for the students of The NorthCap University on 26 Sep 2019. IYF is a worldwide youth organization with its headquarteres in South Korea and spread in more than 100 countries around the world. IYF works for giving best mind education for the betterment of the society. Professor Ahn Kye Hyun, Director IYF South Korea gave a talk on the importance of developing mind and understanding precious human life. He was accompanied by Prof. Paul Song, Director IYF India.

Prof. Ahn Kye Hyun, Director IYF South Korea receiving memento from Dr. Archana Dongre

Students' Achievements and Activities

Professional Societies

IEI (Institution of Engineers, India) CSE NCU chapter organized a lecture which was delivered By Manuj Chandra on Environmental Awareness on 13th March, 2019 under the guidance of Ms Hitesh Yadav and Ms Neeti Kashyap. The main objective of the event was to inculcate the responsibilities towards the environment in the students.

Visit to Providence University Taiwan

Eleven students from the Department of CSE & ME, alongwith Dr Vijender Singh, Associate Prof. participated in a 10 days workshop on Big data & Artificial Intelligence (AI), 3D Printing, Unnamed Aerial Vehicles (UAV) under summer immersion Programme 2019, at **Providence University Taiwan from 16 June to 26 June 2019.**

Main aim of this Immersion programme was to promote regional exchange and collaboration between Providence University, Taiwan and The NorthCap University, Gurugram. The objective of Big Data and AI workshop was to provide modern technologies like Data Science, and AI that are key components of modern digital eco system.
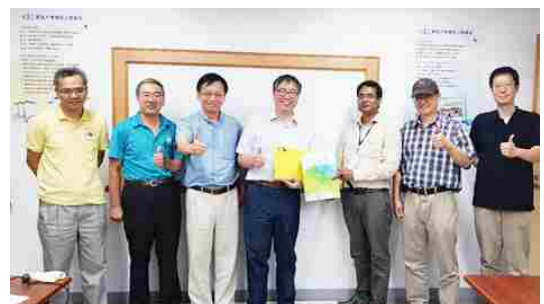
The Department of Computer Science & Engineering introduced three new Skill Development Courses for BTech (CSE) Students in June 2019.

A national level competition 'TCS Extended Reality 2019' was organized in Chennai by TCS for Augmented and Virtual Reality based projects in different applications with an objective to inspire students for a career in an area of Augmented and Virtual Reality (AR/VR Technology).

The competition started with the participation of 250 teams from across the nation in which top 5 teams were shortlisted for the final round. Our students designed an AR Core multiplayer game on Vuforia and bagged Second Prize along with a PlayStation and a certificate of appreciation.

The students were already a part of TCS, completed their final year project under VC innovation fund.

CSE Deptt conducted a Cloud Literacy Month in August 2019 with a aim to make students understand Cloud Technology skills. This was conducted in association with AWS educate.

Divyanshu Verma (16CSU110), BTech CSE being the youngest member among the participants along with Mr Rahul Yadav, CEO of Voxogrenic Pvt. Ltd won a prize money of Rs 1,75,000 for preparing and presenting a project based on Alexa in one of the most reputed coding competitions, TechGig Code Gladiators 2019, organised by TechGig and sponsored by Amazon.

SLC (Student Leadership Conference) And FiO + LS Annual Meeting in Washington DC, USA

Nishant Sachdeva 16CSU230 was invited to attend the OSA Student Leadership Conference and Frontiers in Optics + Laser Science (FIO + LS) conference 2018 in Washington, DC, USA during 14-21 September 2018.

Convening 1,300 scientific and industry leaders, this year's meeting provided attendees with innovative programming, spanning the content areas giving rise to tomorrow's technological breakthroughs. To that end, the conference was built around transformative technologies being developed under four key topics: automotive optics, nanophononics and plasmonic, quantum technologies and virtual reality and augmented vision.

From the thematic organization of the conference to the selection of speakers, FiO + LS was designed to be a forward-looking program that effectively coupled research with realization. It was amazing to be a part of that realization.

The futuristic focus inspired discussions that addressed not only the evolution of the science, but also explored the future of the optics and photonics community.

Nishant Sachdeva at the OSA student leadership Conference in USA-2018

Participation of BTech students in SPEED2018

Btech students showcased their Physics projects (under the supervision of Dr Sunita Sharma) in an annual technical event -SPEED 2018 at GD Goenka university, Gurgaon. It was an inter university event where students from schools were also given a chance to present their scientific ideas in the form of projects.

Khushbu Gupta presented her abstract "Evaluation of Antimicrobial and Antioxidant activity of Biogenically Synthesized Silver Nanoparticles using Fusarium oxysporum" in the national conference on Chemistry for Human Health and Environment held on 15-16 Dec, 2018 at Delhi University, Delhi.
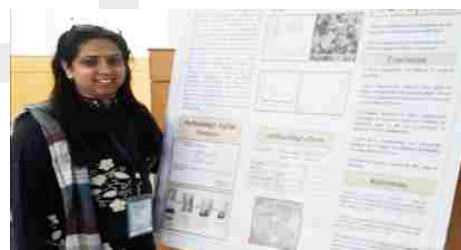
Students Yadvendra Ahlawat, Sartaj Singh, Sarthak Singhal (3rd Year) and Udit Sengar, (2nd Year), CEE, accompanied by Dr Archanaa Dongre, Head, Dept of CEE, were invited for an internship on 'Internationalization and Research Collaboration Program' at Linton University College, Negeri Sembilan, Malaysia, from 10-24 Dec 2018. The programme provides NCU students and faculty collaborative research enrichment, exposure to international standards in learning, Civil Engineering and professional ethics. The activities are designed to offer a Malaysian experience with a global perspective.

This internship programme aimed at initiating collaboration between The NorthCap University and Linton University College, Malaysia, for students and faculty exchange programme as well as research activities.

Electric Go-kart Design Challenge

Students from the Department of Mechanical Engineering(Team Alacrity) recently participated in EGKDC (Electric Go-Kart Design Challenge) drivers training program under the organisation ISNEE (Indian Society of New Era Engineers) which was held from 7 Jan 2019 to 8 Jan 2019 at RPM Go-Karting, Bhopal.

Three students Praful Thakur, Sambhav Dalal and Tarun Gautam participated in the event.

IEEE WiT Summit 2018

The Women in Technology (WiT) Summit aims to embolden delegates who are currently in the STEM fields to make a change in the community by lending enthusiasm and inspiration from successful women leaders. The summit was held at National Institute of Technology Karnataka Surathkal from 21-24 Dec 2018. The four-day Congress started with a pre-networking session and many activities were held to interact with other delegates and volunteers

Six students from IEEE-NCU went as delegates and one student as volunteer to represent the university at the summit. The students who went as delegates: Prabal Goyal, Vinayak Gupta, Yatharth Piplani, Yashdeep Lamba, Sachin Yadav, and Sudhanshu Sharma. The student who went as a volunteer: Virendra Pratap Singh Rathore.

NCU organized a Road Safety Week from 4-10 Feb 2019. Awareness about various causes of road accidents and measures to prevent them were highlighted by screening a movie, posters on E-notice boards, street play, quiz competition and a lecture on Road Safety by Dr Rohit Singh Lather, at the campus. To promote road safety habits among the community, and to encourage all travellers to follow traffic rules, wear helmets, seat belts, follow speed limits for vehicles, flex boards were displayed throughout Gurugram and students, faculty and staff participated in a Road Safety Walk in the neighbourhood.

Rijul Aery and Shivam Sharma final year students of Mechanical Engineering Department won 1st prize in a debate competition organized by HAREDA (Department of Renewable Energy Haryana) at NIT Kurukshetra.

ESVC

Students of the Department of Mechanical Engineering (Team Alacrity) participated in the ELECTRIC SOLAR Vehicle Championship, which included introduction to both design & Manufacturing of the hybrid vehicle. Series of tests were performed under the guidance of trained personnel. The students attained 3rd rank in endurance at the All India Level & won the people's choice award with a cash prize of Rs. 10,000/-.

45

Hybrid Vehicle Challenge (HVC)
The Students from the Department of Mechanical Engineering (Team Alacrity) participated in HVC (Hybrid Vehicle Championship) under the organization ISIE (Imperial Society for Innovative Engineers), from 5th to 10th February.
The team stood 1st in theoretical test conducted at the end of pre-virtual round. The final event took place in GALGOTIAS UNIVERSITY, GREATER NOIDA, UTTAR PRADESH.

Rijul Arey and Shivam Sharma, Mechanical Engineering students received 1st position award and a cash prize of five thousand rupees in Zonal Debate Competition, Gurugram zone, from Dr BanwariLal, Hon'ble Minister for State, New & Renewable Energy Department, Haryana.

Anju Arya presented abstract "In Vitro Antimicrobial and Antioxidant activity of Biogenically Synthesized Palladium and Platinum Nanoparticles using Botryococcus braunii" in the national conference on Chemistry for Human Health and Environment held on 15-16 Dec, 2018 at Delhi University, Delhi and also in the International Conference on Mircobes for Biotechnological Innovations on 07 Dec 2018.

Vaibhav Mishra, (Department of Applied Sciences) presented a paper on "Silica supported piperazine sulfosalicylic acid as recyclable and environment friendly catalyst for synthesis of 2-substituted benzimidazoles" at University of Delhi in national conference on Chemistry for human health and environment, organized by Green chemistry network centre D.U. and Royal society of chemistry (RSC) held on 15-16 December 2018.

OSA STUDENT CHAPTER - CLUB FIESTA
Club Fiesta was organised at The NorthCap University on 10 April,2019.
OSA Student Chapter organised educational as well entertaining events .There were both technical and non-technical events that was enjoyed by The NorthCap University students, free of charge.

Technical game:
1. Laser Archery
In this game participants had to pass the laser light through 3 glass obstacles through the phenomenon of multiple reflections and diffraction so that it targets the bull's eye.

Non-technical games:
1. Beat the Clock
Participants had to solve the questions and mark the answers in the crossword grid given in least time.

2. Be an Emoji:
Participants had to enact the same facial expressions as some of the emojis.
The winners were given free entry in our next event with a special advantage.

OSA NCR Brainstorming session

An interactive session was held on 27 April 2019 among the active OSA student chapters across the NCR region. The meet-up was led and hosted by Mr Amol Choudhary, OSA ambassador at 38 Barracks, Connaught Place, Delhi. So, OSA NCU chapter's officers, Geetanjali Sachdev (Vice-President) and Mayank Jain (Treasurer) represented the chapter in the meeting along with five other student chapters from AIT, BVP, DCE(DTU), IITD, JIIT.

OSA QUIZ 2019' Competition

On 5th March 2019, The Minerva Quizzing Society of NCU organized a General/Science Quiz, OSA Quiz 2019. This quiz was conducted in collaboration with the Optical Society of America (OSA) Student Chapter at NCU. Students from BTech.and Bsc participated in the quiz. The objective of the quiz was to provide the participants with exposure to quizzes, their various scoring patterns and to allow them to show off their quizzing skills.

SPIC MACAY NCU Club

SPIC MACAY, the Society for the Promotion of Indian Classical Music and Culture Amongst Youth organized the student chapter 'SPIC MACAY VIRASAT', by Mallick Brothers on 10 April 2019 at the NorthCap University. The intension was to enrich the quality of formal education by increasing awareness of Indian Heritage and inspire youth to imbibe the values embedded in it. Belonging to the tradition of Illustrious Darbhanga Dhrupad, holding the position of the torch-bearers of Dhrupad music, encompassing a lineage, 450 years old, the event explored the colours of Indian Classical Music accompanying the dance performances.

The NorthCap University Testing Centre (NCUTC) featured in Hindustan Times

The belief of the department has already been established in shaping student's approach using state of the art facilities in laboratory and infrastructure. On 16 August 2019, The NorthCap University Testing Centre (NCUTC), an NABL accredited center run by the Civil & Environmental Engineering Department, NCU for Consultancy and Testing of Building Materials for external agencies within its scope, got featured with a comment in Hindustan Times.

Society Fest

The professional subcommittee organized a society fest for this session on 30 January 2019. Stalls of all professional societies were arranged in front of Café 10. This event gave a platform to the students across the university to know about the various professional societies active in our University.

Societies showcased their past events and achievements. Students displayed their projects made for the different events under the society activities. The students were informed about events planned in this semester. They interacted with the society coordinators and members about the benefits of joining their respective societies.

Neelam from BTech ECE was invited to attend OSA Student Leadership Conference and Frontiers in Optics + Laser Science (FIO + LS) 2019, featuring latest optics and photonics research and technology and workshops on career development. It was held in Washington DC, USA from 13-19 September 2019.

"It has been a great experience attending the Student Leadership Conference and FiO + LS Annual Meeting as University Chapter Representative. I extend my heartiest thanks to OSA for inviting me" says Neelam (17ECU026), BTech ECE, Student Secretary, OSA NCU Student Chapter.

NCU ENACTUS Society Wins The KPMG Business Ethics Award

NCU Enactus society has been selected for KPMG Business ethics grant of 50,000/- for the year 2019-20. KPMG International is a global sponsor for Enactus and has been supporting the programme in more than 30 member firms.

Our Enactus society has been selected amongst 20 teams that were shortlisted all over the country.

Fest

The Subcommittee of Professional Society organized a society fest for the current session on 30 Jan 2019. Stalls of all professional societies were arranged so that the students were aware of the societies at NCU. This gave a platform to the students to showcase their achievements. Students displayed their projects made for the different events under the society activities. About 130 students showed interest in registering and registered during the fest. This event was coordinated by Dr Akanksha Mathur, (Mechanical Engineering department).

Mathemactive Society

Mathemactive Society of NCU organized a multi round aptitude as well as math quiz named 'MATHOGENICS' competition for the students of first year from all schools on 21 August, 2019 and 27 August 2019 in the Seminar Hall. 'NUMBER'S JUNGLE', 'TEXT TWIST', 'FIND ME IF YOU CAN' were the quiz-based rounds in which around 125 students participated. The winners of the competition were given certificates as well as facilitated with trophies by the head of the department of APS. Jhalkesh Pathak (19CSU381), Rohit Dalal (19CSU260) and Aman Prakash (19CSU019) were the winner, first runner up and second runner up respectively. The event was coordinated by Aayush Jindal (President - Mathemactive team), Shreya Khurana (Vice president- Mathemactive team) under supervision of faculty coordinator Prof. Kalika Srivastava.

TEDx

In an effort to take audience through the plethora of ideas, TEDx The NorthCap University, where x = independently organized TED event was organized on 16 Feb 2019 at The NorthCap University, Gurugram around the theme Envision: Express: Enact. in the spirit of ideas worth spreading, self-organized events that bring people together to share a TED-like experience.

The speakers included Baba Sehgal, Smita Jayakar, Vani Kabir, RJ Jassi, Gurpreet Singh Tikku, Vikramjit Singh Rooprai, Vanky Kataria, Zenobia Khodaiji, Himanshu Bakshi, Shantanu Prakash, Rajat Chauhan and Devender Khari. "The beauty of this platform lies in the ways; it brings together the blend of diverse groups of high calibre speakers to generate new exciting ideas" says Jyotika Pruthi, Curator, TEDx The NorthCap University.

IDEATHON 2019

On 23 April 2019, an annual Ideathon was held at JC Bose University of Science and Technology, YMCA. A total of 130 teams participated and brought upon their ideas in which a team from The NorthCap University, NeX comprising of Shrey Malhotra and Vishal Sharai bagged first prize and received a cheque of Rs 50000, adjudged by Mr Rajiv Gulati, Head, Hartron multiskill development centre, Start-up Incubator & CoE IoT Gurugram.

Shrey Malhotra receiving cheque of Rs. 50,000/- from Head Hartron

Aptathon

Aptathon (Series of Aptitude Tests) was organized by the Institution of Engineers India- IEI Student's Chapter, the Department of EECE from 14-20 Feb 2019 in which 44 students participated. The aptitude tests consisted of quantitative, logical reasoning, verbal reasoning, GK and coding questions. The top 3 participants were awarded with the certificates.

Aptathon organized by Institution of Engineers India- Feb 2019

Installation ceremony of Rotaract Club

On 26 September, 2019 the installation ceremony of Rotaract Club of The NorthCap University "Agaaz" was organised in the NCU Seminar hall for the Rota year 2019-20 with the support of the Rotary Club Gurgaon as its parent club.

The ceremony was graced by Rotarian Mr Surinder Khullar, President, Parent Club; Rotarian Mr Mohit Khullar, Joint Secretary, Parent Club; Rotarian Mr Mandeep Kishore Goel, Assistant Governor; Rotarian Mr. Dilip Grover; Rotarian Mr Hitesh Jain; Dr Subhradipta Sarkar, Faculty Advisor, Rotaract Club NCU; and other distinguished Rotarians and Rotaractors.

Installation ceremony of Rotaract Club members

- The CSE department is pleased to announce that 33 students have successfully completed CCNA module 2 and students were given certificates in March 2019.

Award of certificate to students who have successfully completed CCNA module - March 2019

"MATHVISORS" Quiz Competition

MATHEMACTIVE Society of the Department of Applied Sciences organized a Multi round aptitude as well as Math quiz named "MATHVISORS" competition for all the students of BTech, Law, Bsc (H) Maths, Bsc (H)Physics and Msc (H) Maths on 9 October, 2019 in the Auditorium. All the three rounds were held on 9 October, 2019. The event was a Multilevel quiz based on Mathematics and Mental ability. The participants were judged on the basis of their skill and ability to cope up with time. The first round was "ALRIGHT APTITUDE" quiz based on basic aptitude and reasoning questions having 20 questions with a limited time of 10 minutes. Around 350 students participated in the event out of which 40 students were qualified for the second round. The second round was "BRAIN MATRIX" in which students had to solve puzzles and logical reasoning questions. Only 10 students qualified for the third round. The third round was "FASTEST FINGER FIRST" based on KAHOOT GAME. The rounds were appreciated by all. The winners of the competition were awarded with trophies and certificates along with cash prize by Dr Ambika Sharma (HOD APS) to Shubham Sharma (1st)(17CSU215), Naveen Kumar (2nd)(19CSU186) and Pratham Kapoor (3rd)(19CSU420). Participation certificates were given to all.

"MATHVISORS" Quiz Competition - Oct 2019

Momentum 2019

Momentum 2019, the Annual Cultural Festival of the NorthCap University was held on October 16-18, 2019 with fervor and gaiety. The Inaugural Ceremony on the first day set the tone for the three-day Festival, which witnessed a vibrant exhibition and amalgamation of technical and cultural events with great enthusiasm among the students. Some of the highlights of the Inaugural ceremony were enthralling musical performance by Encore Music Society, a vivid presentation of a contemporary issue i.e. drug abuse among youth by Abhimanch Theatre Society, beautifully choreographed dance performance by Morphinated Dance Club, a powerful skit on the need for protection of our environment by the children of Yukti apart from a mesmerizing Bhangra performance. Around 500 participants from various universities participated and put up a magnificent display on the stage. 'The Star Night' was the main attraction of the fest, Punjabi sensation Maninder Bhuttar gave a scintillating performance and audience came in multitudes and danced to the tunes of Punjabi fusion music.

Live Streaming: 'Fit India Campaign'

A lifestyle that promotes positivity, good health and peace of mind is what 'Fit India Movement' focuses on. In the honour of National Sports Day which was held on 29 August 2019, this campaign was launched by our Hon'ble Prime Minister of India Shri Narendra Modi. To capture the initiative, The NorthCap University organized a live streaming session in the auditorium where 450 students, staff and the faculty members took pledge, to walk 10,000 steps everyday, encouraging a healthier tomorrow.

Students listening to live streaming of Prime Minister Address on Fit India Campaign - Aug 2019

The Gurgaon Model United Nations Conference

The NorthCap University organized the maiden edition of The Gurgaon Model United Nations Conference on 26-27 July 2019. The guest of honour was Dr Ashok Divakar, Vice-Chancellor: Starex University, Gurgaon; Ms Jyoti Sharma, HOD Social Science DAV PS Gurgaon and Adv Sanjeev Saini, President SS Tax Consultancy Pvt Ltd. The guiding idea of TGMUNC was to allow students to experience multilateral negotiations, acquaint them with the United Nations principles and procedures and help them to comprehend how members of the UN achieve resolutions. The event was coordinated by Dr Divyabha.

Students participating in the Gurgaon Model United Nations Conference - July 2019

Inauguration: NCU Bridge Club

Game of Bridge is the king of mind sport, recognized by the Government of India and Association of Indian Universities. The NCU Bridge Club was inaugurated by Shri. Kanwaljit Singh, Vice President, Bridge Federation of India on 6 Feb 2019 in the University. He explained, that the game is meant for all ages as it can help in improving skills in maths, logical thinking, inferential and sequential reasoning, problem solving and decision making among the students.

Inauguration of Bridge Club by Shri. Kanwaljit Singh, Vice President Bridge Federation of India - Feb 2019

Village Visit under MHRD SAP Programme

A visit to village Dhundahera and village Choma was conducted on 21 September 2019 to create awareness among people regarding the sanitation and ODF in the area. Dr Esha Jain from the School of Management along with Dr Shatrughan Bhardwaj (Delegate from MHRD) and Arpil Sharma, President, NSS NCU Chapter conducted a visit to both the adopted villages of The NorthCap University and explored markets, chaupals, dispensaries, primary health care centres, Anganwadis, and Government schools in the villages to check the ground reality of the areas.

Prof. Ahuja, Dean Academics felicitating Dr Shatrughan Bhardwaj delegate from MHRD under SAP Programme - Sep 2019

Social Service

Social Club

The Social club of the School of Management organized a three day's donation drive from 10-12 April 2019 with the motto #Bringonegiveone. Students, faculty and other members from the staff joined hands for this nobel cause by donating non-perishable food items, stationery, used toys, clothing, medicines and other useful items which were then supplied to the Slums in Gurugram. The event was coordinated by Dr Jahanvi Bansal and Ms Mahima Anand.

Synergy Club

The synergy club, (School of Management) organized a business quiz competition on 10 April 2019. It encouraged students to look beyond their textual knowledge and establish a relationship between theory and practical application of the learnt concepts. The students of BBA and Bcom (Hons) participated in the quiz competition.

The Synergy Club of the School of Management organized Ad-Mad, Situation Based Events and Case Study Analysis competition on 16 April 2019 in which students of BBA and Bcom (Hons) participated. This enabled students to demonstrate their understanding of the world of media and to be acquainted with the promotional strategies in marketing through advertisements.

NSS

The NCU Chapter of National Service Scheme (NSS) organized an Education Drive in three Government Schools of Gurugram namely, Government Senior Secondary School Sarhaul, Government Senior Secondary School Dundahera and Government Middle School, Sector 14 on 11 April 2019 in which 78 NSS Volunteers participated under the supervision of 9 core members. A Drawing Competition was also held in all the three schools on different topics to spread awareness among students about Importance of education and the winners were awarded with goodies.

Rotaract Club NCU

The club completed its first phase of an ongoing project 'Share a book, Share a smile' on 25 April 2019. The project was based on a collection drive aiming at collecting books from different parts of the city and setting up a library in low income schools. A total of 350 books were collected and given to the primary students in Government Boys Primary School, Gurgaon.

Legal Aid Camp

School of Law organised a Legal Aid Camp in association with the District Legal Services Authority, Sonipat at Girls Government Senior Secondary School, village Nahara, Sonipat on 16 Feb 2019, coordinated by Ms Anushka Choudhary.

The camp was addressed by Mr Prashant Kumar (Panel Lawyer DLSA Sonipat); Ms Meenu kumari (Panel Lawyer DLSA Sonipat); Mr Deepak Kumar (Para Legal Volunteer DLSA Sonipat); Ms Anushka Choudhary; Dr Shubradipta Sarkar; Dr Balwindar Singh; Dr Praveen Lochab, Ms Pallavi Bajpai and Mr Anil Goyal, District Science Specialist to spread awareness about women's rights with various schemes and policies to empower them. The camp was concluded by providing legal aid to the village locals.

SPORTS

NCU Student mark a make at International sporting Event

The NorthCap University has been actively motivating the students to enrol themselves in the extra curriculars. With that impetus, one of our student Chitranjan Kumar, BBA-LLB (H), School of Law participated in the World Indoor Archery Championship which was held from 1-3 Dec 2018 at The Venetian Macao, China, sponsored by the World Archery Federation.

The event witnessed the participants from all over the world in which our student was ranked 39. Being a member of the National Archery Team, he has won 52 Gold medals, 2 Silver medals and a Bronze medal.

Chitranjan Kumar

Bhuwan Dutt, CSE final year student, participated in Students Delhi Olympics 2019 for State Level Boxing and fought under Featherweight Category (Under 22) on 7th July, 2019 at Najafgarh Stadium and secured silver medal.

Bhuwan Dutt,

National University Game

The NorthCap University Table Tennis team participated in the National University Game 2018-19 (organized by AIU) for Table Tennis (Men) Tournament at Chitkara University, HP from 16-18 Nov 2018 in which sixty five universities participated.

Reliance Foundation Youth Sports

The men's football team of The NorthCap University made its presence felt in the Delhi Region through the qualifying rounds of the Reliance Foundation Youth Sports by beating SGT University in the first round and Amity University in the second round. The University applauds its team, coach and supporting staff for their efforts and hopes for a better performance in the coming years.

University Football Team at the Reliance Foundation Youth Sports Championship - Jan 2019

Inter-Departmental Football Tournament

The Inter-Department Football Tournament 2018-19 was held from 06-08 Feb 2019. The runners-up were from the LLB team and the winners were the students from CSE team namely, Aryan Malhotra, Harmeet Thukran, Harsh Khandelwal, Surya Pratap Singh, Hemanshu Chatterjee, Ashant Yadav, Tanish Uppal, Heemal Yadav, Yash Vardhan Parashar, Tushar Thanur, Udbhav Sharma, Soumye Kumar.

CSE team winners and School of Law team Runner-up in the Inter Departmental Football Tournament - S2019

Inter-Departmental Volleyball Tournament

The Inter-Department Volleyball Tournament for boys & Girls was held from 24 to 26 Oct 2019. The winner in the boys team was the Department of ME while the School of Law was declared winner in the girls' section. The Runner's-up were the SOL team .

Inter Departmental Volley Ball Tournament - 2019

SCHOLARSHIPS

Merit Certificate and Scholarship
Distribution Ceremony at NCU

The NorthCap University's 8th Fee Concession and Merit Scholarship Distribution Ceremony was held on 22 Jan 2019. It was attended by Shri A S Kiran Kumar, as the chief guest, Padma Shri, Member of Scientific Advisory Committee to the Prime Minister and Former Chairman, ISRO. With 208 potential achievers and the fee concession amounting to Rs. 1.47 Crore, it was a huge success. Prof. HB Raghavendra, Vice-Chancellor of NCU, motivated the students by addressing the importance of being socially active with a helping attitude. He congratulated every student while giving the scholarships to the meritorious students and later by giving a moving speech where he mentioned that "Technology is changing very fast so you have to learn the process of learning to learn. You have gained acceptance in one of the finest universities so make it fruitful and bring the difference".

Later, he appreciated the students seeing the display of projects and achievements from the School of Engineering & Technology, the School of Management and the School of Law.

Shri A S Kiran Kumar, Member Scientific Advisory Committee to the Prime Minister, distributing Scholarships to students on 22 Jan 2019

Fee Concessions & Scholarships Awarded by NCU-Year Wise

■ No. of students / Amount in Crores

Year	No. of students / Amount
2006-2007	47 / 0.19 Cr
2007-2008	80 / 0.92 Cr
2008-2009	98 / 0.77 Cr
2009-2010	127 / 1.02 Cr
2010-2011	149 / 0.94 Cr
2011-2012	168 / 1.08 Cr
2012-2013	199 / 1.32 Cr
2013-2014	217 / 1.61 Cr
2014-2015	210 / 1.76 Cr
2015-2016	222 / 1.60 Cr
2016-17	266 / 1.41 Cr
2017-18	387 / 1.58 Cr
2018-19	208 / 1.47 Cr
2019-20	200 / 1.70 Cr
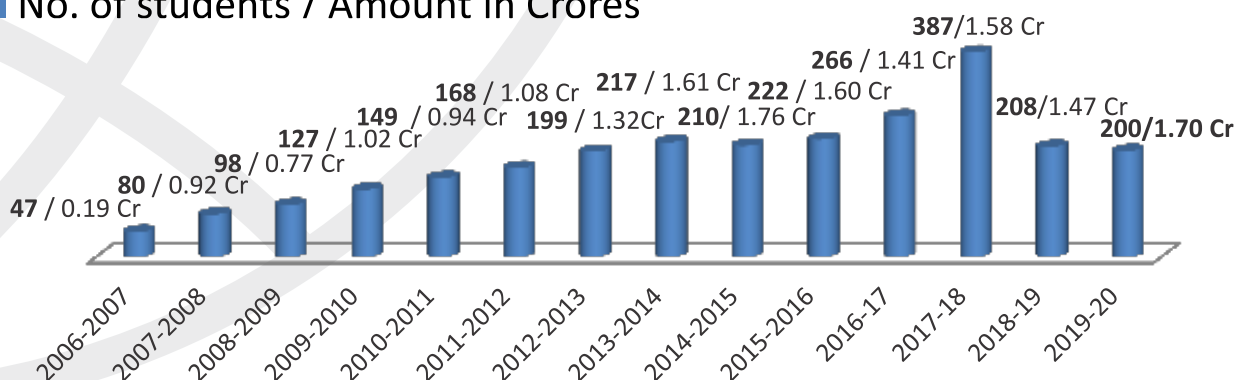
Collaborations

Besides obtaining recognition by accreditation agencies and statutory associations, the University has been collaborating to share knowledge and resources with other universities and academic communities throughout the world. This is a part of an important strategy to accelerate and sustain success. The University is committed to providing students and faculty a unique life changing experience that will help them remain competitive and relevant to society. Our endeavour in this direction has resulted in successfully forging progressive alliances with premier institutions round the globe, a brief of which is presented in the succeeding paragraphs.

	ISRO: MoU between ISRO, Dept of Space, Govt. of India, Ahmedabad, and The NorthCap University for IRNSS Navigation Receiver Field Trial and Data Collection that will enhance research and innovation at the University.
	Michigan Technological University: A Partnership Agreement with the University of Michigan Technological University Houghton, Michigan, USA was signed in March 2016, to implement the 3+1+1 programme in Computer Science & Engineering.
	NCU students of MTech ECE and CSE are eligible to apply for a Master of Engineering degree in Electronics Systems Engineering and in Software Systems Engineering, respectively. The Selected students proceed to University of Regina, Canada after 2 semesters and get a Canadian degree in Master of Engineering.
	University of Chester: A Partnership Agreement with the University of Chester, UK, was signed in 2012. The Chester Business School has over 1500 students with campuses at Chester and Warrington, and has a good reputation at undergraduate and postgraduate-level courses.
	ITB Ireland: The University has an effective Partnership Agreement in place with ITB Ireland and is collaborating significantly in the mobility of students and faculty. The first students exchange started in September 2011 for a semester abroad programme. Various collaborative schemes for UG and PG students continue to be rolled out.
	Keeping pace with rapid technological advancement, the University has tied up with IBM Career Education and has set up an IBM Lab for Emerging technologies. Besides conducting Faculty Development Programmes, IBM conducts courses for ECE, CSE, MBA students, to give them a cutting edge in their professional courses.
	Chartered Institute of Arbitrators (India): Students from the School of Law would benefit a great deal by this tie-up with ClArB. While doing their BBA-LLB (Hons) course, they would be in a position to add to their professional graph, one of the most sought-after futuristic areas-the field of arbitration.

The Association of Commonwealth Universities	**The Association of Commonwealth Universities:** We are a proud member of the Association of Commonwealth Universities and are actively participating in all its affairs. The University won the prize in the Social Outreach category in a competition held in the UK. It also bagged an Honourable Mention prize for its 2012 Annual Report.
QASQ AMERICAN SOCIETY FOR QUALITY	**American Society of Quality (ASQ) India Ltd:** A students' chapter has been established with The American Society of Quality (ASQ) India Ltd to provide a certificate programme for students. We are the first university in India to be selected by ASQ to form a thriving Students' Chapter.
ASSOCIATION OF INDIAN UNIVERSITIES	**Association of Indian Universities (AIU):** The University is now a member of the Association of Indian Universities (AIU). This has enabled us to refer to AIU for educational guidance to help improve standards of instruction, examination, research, textbooks, scholarly publications, participation in youth festivals or sports activities, publishing bibliographies of doctoral theses, and other such programmes which may contribute to the growth and propagation of knowledge.
n+i ENGINEERING INSTITUTES nplusi.com	**n+I:** The n+i engineering network, which is a consortium of over 70 French Grandes Ecoles (elite engineering institutes), is the largest network in France and offers student exchange programmes under an MoU with NCU.
ASIC ACCREDITED 2012 - 2016	**Accreditation Services for International Colleges (ASIC) UK:** A respected international accreditation body for academic institutions worldwide, reaccredited The NorthCap University with a status of 'Premier University' for a period of four years from Nov 2016. The University was awarded a grade of 'Commendable' in seven out of eight measurable areas of the university's operations.
NAAC	**National Assessment and Accreditation Council (NAAC):** The University has been accredited by NAAC for a period of five years from 25 May 2016.
Spoken Tutorials	**Spoken Tutorials IIT Bombay:** Spoken Tutorials, IIT Bombay: An MoU has been signed between Spoken Tutorial Project, IIT Bombay and The NorthCap University. The agreement helps the University in conducting software training programmes in collaboration with IIT Bombay.

	ISEP: We are direct members of ISEP, under which the students can be sent for a semester or a year to over 54 ISEP universities in 30 countries at an affordable cost. The host universities transfer credits after students complete all requirements. Students who have cleared their first two semesters at The NorthCap University are entitled to apply.
	An MoU was signed between NCU and Maruti Center for Excellence (MACE) in April 2018 to collaborate in the field of Training and Development of NCU students through practicals, theoretical trainings and projects during their internships. The collaboration extends to technical seminars and guest lectures also. The MoU will provide a platform to the students Department of Mechanical Engineering to enhance their technical skills followed by employability.
	Collaboration with American Society of Civil Engineers (ASCE), Reston, Virginia, United States for conducting ASCE's recorded / on demand webinars (with a local expert present) as well as holding conferences and continuing education activities at the NorthCap University, Gurgaon.
	University of Dayton, Ohio, USA signed a partnership agreement to undertake joint collaborative research and also for student and faculty exchange programme. The agreement was signed in May 2017.
	An MoU was signed between The NorthCap University and Daikin Air-Conditioning India Pvt Ltd (DAIPL) on 26 March 2018 to establish a 'Centre of Excellence' on HVAC Systems at the university that will impart practical skill training and industrial exposure to the students on the campus. The Centre of Excellence (CoE) is one of its kind set up by the Japanese Company – Daikin India in any educational institution in Gurugram.
	Collaboration with Delta Power Solutions India Pvt Ltd to develop and execute education and research projects, promote development of syllabi and activities that support research and development through work-integrated learning programmes– Cooperative Education. The partnership agreement was signed in January 2017.
	The NorthCap University has become a part of the BMW India's 'Skill Next' programme aimed at imparting hands-on expertise and practical training to automobile engineering students across the country.

INFRASTRUCTURE

Design Centre @NCU

A digital revolution is currently underway, which permeates to every domain of our society like: communication, education, medicine, transportation, farming and manufacturing. Crypto currencies are disrupting banking systems. Hyper connectivity through communication systems, sensors, wearables and smart devices has blurred the boundary between the physical and digital worlds. With an aim to bring all the emerging technologies like Data Science, Full Stack, Cybersecurity, Internet of Things, Cloud Computing, Game Technology, AR and VR under one roof, university has setup a unique Design Centre at the campus. The objective is to help students and parents understand the basics of these technologies through visualizations, infographics and interactive AR applications with a VR demo zone. The walls of the centre have been designed in a way that visitors get a fair idea about the USP's, curriculum and career aspects associated with the domain.

Central Research Facility

A Central Research Facility (CRF) has been established at The NorthCap University with the objective of providing a central facility with the latest and advanced analytical instruments for research in the areas of physics, chemistry, engineering and interdisciplinary sciences. A total amount of Rs 1.2 crore has been spent on establishing this facility at the University. It is equipped with the latest state-of-the-art equipments such as UV-Vis-NIR Spectrophotometer, LCR Meter, I-V Pico-meter, Vacuum Coating Unit, Scanning Electron Microscope (SEM) etc.

The facility has been strengthened by adding new equipments viz, spin coating unit and solar simulator in the academic year 2017-18. The Holography set up was also made functional by adding some more accessories in the current academic year. At present, around 30 UG and PG students and 20 research scholars are using this facility to pursue their projects/research work. Three research projects worth Rs 95 Lakhs, owned by various faculty members, are being developed at CRF. Members of the faculty have also submitted five more research projects, worth Rs 1.31 crore, in which the facilities of CRF have been projected to be used in the near future. A total number of 25 research papers have also been published by using this facility in the current academic year. Researchers from other reputed organizations are also using this facility to pursue their research work.

Information Technology
IT Vision

- *Identify a long term, sustainable and accessible solution that addresses increasing demands for storage and the integration and the interoperability of our ICT systems.*

- *Address user demand for sophisticated, high quality, ubiquitous and reliable ICT provision whilst recognizing economic constraints.*

- *Create additional efficiencies, whilst improving service quality through core ICT provision.*

- *Enable capacity to meet increasing network bandwidth demands and reduce single points of failure that would threaten the availability of network connectivity.*

- *Improve information security provision i.e. the confidentiality, reliability and availability of ICT systems.*

Resource	Available
Computers	966
System & Application Software	55
Printers	115
LAN & Internet	available on systems
Mail Server & Client	Using Google Apps from Google
Internet Bandwidth	300 MBPS
Wi-Fi Facility	Campus and Hostel has full Wi-Fi coverage through 125 access points
Surveillance	180 Cameras are placed the Campus for monitoring

NCU network has a backbone of optical fibre cable. Use of Unified Threat Management & Centralized Anti-Virus Server, Windows Update Server, Virtual Private Network Services, Learning Management System, Virtual Labs, Video Conferencing is provided. Access to the network from home – 24X7. Campus and hostels are fully Wi-Fi.

ICT Facility

The University has a fully Wi-Fi enabled campus providing uninterrupted access to Internet for all students and staff. The university is connected with fibre optics on a network which is wide, robust and secure. The NorthCap University has a 300 MBPS dedicated leased line, digital and multimedia library, networked computer labs and Wi-Fi hostels. The core and distribution switches have been upgraded to enhance the network performance.

There is a central computing facility at the university along with computers in the main library, bringing the total number of computers available on campus to 966. Classrooms are equipped with LCD and LED projectors, with a common UPS to ensure undisturbed presentations.

Committed to the automation of various academic, financial and administrative processes, the university is at an advanced stage of completion of Enterprise Resource Planning (ERP) implementation based on cloud computing, in a tie-up with Digiuniv.

Virtual Labs

NCU is a nodal centre for Virtual Labs, an initiative of the Ministry of Human Resource Development under the National Mission on Education through Information and Communication Technology, wherein eight IITs are currently involved. The aim of Virtual Labs is to provide remote access to labs in various disciplines of science and engineering, where the students can avail and share costly equipment and resources for learning, including additional web resources, video lectures, animated demonstrations and self-evaluation through remote triggering.

Cisco Networking Academy

The Cisco Networking Academy at the university continues to meet the growing demand for ICT professionals and also improves the career prospects of IT students. Cisco certification is sought by IT professionals and greatly improves the prospects of students who want to build a career in the IT industry.

Learning Management System

NCU offers an innovative learning system as a supplement to classroom teaching – an e-learning portal. The Learning Management System (LMS) provides students with online access to the course content offered at the university and to important academic information including lecture notes, recommended reading, tutorial sheets and assignments. LMS is provided through 'Moodle' as an institutional repository and as a content management system for e-learning. We want students to use this portal to prepare themselves before coming to the class, so as to have a better understanding of complex concepts.

Enterprise Resource Planning (ERP)

NCU is an IT driven university where nearly all its processes are IT driven. Enterprise Resource Planning System (ERP) is based on Cloud computing, and a tie-up with Digiuniv Nyasa has added substantial efficiencies with the following modules in use:

Admission and Fee Module
- Form Collection and Verification
- Fee Management System
- Student Records
- Class Management
- Related Reports

Academic Module
- Semester Registration
- Time Table Generation
- Faculty Feedback
- Related Reports

Attendance Module
- Bio-metric Attendance System
- Linking with ERP
- Related Reports

Examination Module
- Admit Card Generation
- Grading and Results
- Related Reports

Administrative Module
- HRMS
- Student Placement

Physical Infrastructure

The university campus located in a clean and pollution-free environment is spread over 10 acres, with a covered area of over 32,000 square metres which amply caters to all its academic and administrative needs. The excellent academic infrastructure consists of over 60 classrooms, 18 tutorial rooms, 71 labs, 25 workshops, faculty cabins, seminar hall, conference rooms, media room, a 430 seat state-of-the-art auditorium with a well-equipped green room for participants and a double basement parking. Departments, laboratories and facilities have been further strengthened during the reporting year.

The open-air amphitheatre next to the sports ground is used extensively for various university functions, club and professional society activities. Many student groups are dedicated to community service and social action. The office of students' activities serves as a living-learning centre for students to coordinate a broad range of social, cultural, intellectual, educational and leadership programmes which are conducted throughout the year. It has sports facilities for nearly all indoor and outdoor sports. The cricket-cum-football ground is arguably one of the finest grounds in the NCR, with floodlight facilities for night sports. An air-conditioned two-storeyed cafeteria, student centre and incubation centre, covering an area of more than 15,000 sq ft, provides a unique experience to faculty and students . It has been designed with modern interiors and energy efficient concepts. NCU also has a branch of the Syndicate Bank with an ATM operating from its premises for the convenience of its faculty and students. In addition, there is also a Nestle and a Coco Cola outlet. The university provides hostel facilities to over 125 students. The rooms are well-furnished, and the hostels also have 24-hours power back-up system, treated water, Wi-Fi, intercom, indoor sports facilities, a central kitchen, entertainment and recreational facilities, and a bus to carry students to and from the university. The new building provides state-of-the-art classrooms, area for student activities and faculty rooms.

NCU is committed to the green movement. Campus-wide initiatives at reducing, reusing and recycling are helping it achieve a green code of living:

- **Use of renewable energy:** Based on green audit, installation of 150 KW rooftop solar PV system with net metering facility - possibly the first and only university to install it.

- **Energy Conservation:** LED lighting, false ceilings to reduce heat load, as well as abundant natural light makes the building energy efficient.

- **Water harvesting:** Rain water harvesting system with pipes going to 300 feet below ground level.

- **Sewage management:** 100 KLD sewage treatment plant to ensure zero discharge to municipal sewer line with plans to use treated water for horticulture. Garbage handed over to MCG for proper disposal. No hazardous waste produced on campus.

- **Efforts for Carbon neutrality:** Green footprint through 6 acres of green area out of 10 acre campus area.

- **Plantations:** Lush green gardens all around the campus. NCU is the winner of HUDA garden competition in Gurugram for 17 consecutive years.

- **Odd-even scheme for vehicles:** Ongoing scheme for reducing emissions thereby reducing air pollution.

- **E-waste management:** Disposal of e-waste is an emerging global environment and a public health issue. All loosely discarded e-waste is collected at the university and handed over to external vendors.

  The Indian Meteorological Department, Ministry of Earth Sciences, GOI, has selected NCU for setting up an Automatic Weather Station (AWS). It will provide accurate and real time data of minimum and maximum temperatures, rain measurement, humidity, wind speed and direction, pressure, solar radiation etc. This will be beneficial to the residents of Gurugram especially farmers as they will get to know about the weather conditions in advance. It will help students and faculty in research and developmental activities of atmospheric studies. AWS is expected to be installed in June 2020.

Library & Information Resource Centre

The Library and Information Resource Centre (LIRC) at The NorthCap University, a vanguard of its ever-growing infrastructure development, consistently receives principal attention from the university's management. It has a rich collection of books, journals and online resources. Currently, the LIRC has a collection of over 1,00,000 volumes (including Book Bank) in all areas of Engineering, Law, Sciences and Management. The LIRC subscribes to over 174 print journals from reputable publishers, institutions, societies, like the Indian Academy of Science Journals, IIMB Management Review, Decision, Vision, Harvard Business Review, BCI Journal, etc. LIRC updated its computerized services from Libsys 4 Software to Libsys 10 Software, during the reporting year. The circulation of books is done with the bar-coded system placed on each book and an RFID system is planned in the future.

Salient facilities provided to readers are as follows:

- Extending support to the Government's campaign of 'Digital India', LIRC launched the first University Library Android mobile app which is available free of cost for download at Google Play Store so that users can access library resources 24x7 through their mobiles.

- Regular information and update on 'New Arrivals' is provided through group e-mails and also uploaded on the university's website.

- Remote access facility through VPN provides 24X7 access to library resources.

- NCU library can be accessed 24*7 online through LSearch Mobile app which is available on Google Play Store. Through this app users can check his/her account and access the collection.

- Notification through SMS/Email on every transaction is sent to the borrower.

- Library has WEBOPAC which offers students the facility to reissue their books from anywhere.

- LIRC joined INFLIBNET Shodhganga theses repository (an initiative of UGC). It provides full text access to the theses published in Indian universities, including those recently completed at NCU.

- LIRC is a member of DELNET (Developing Libraries Network) which offers students the Inter Library Loan Facility.

- LIRC is also a member of the American Centre Library, New Delhi. The American Centre Library is a part of US consulate in India and provides library and education consultancy services to students.

- The library is subscribing to various e-resources to fulfill user's information needs and to support undergoing research activities. Recently LIRC subscribed to new e-resources such as WestLaw, Ebsco Business Source Elite and Tata Mc Graw Hill.

- To facilitate students to prepare for their examinations, both internal/external, the library timings have been extended to 10.00 pm on all teaching days.

- LIRC Photocopier machines have been replaced with new digital machines which provide faster and accurate services.

- LIRC has a separate reading room with a capacity for 250 students. This reading room has been equipped with comfortable seating arrangements.

- The library has also been organizing training programmes and workshops for students and faculty members from time to time particularly in the areas of using e-resources.

- To maintain the library collection up-to-date, LIRC distributes old outdated editions of books to students and faculty members, free of cost.

- The library has started biometric punching to manage entry and exit of students to the library. It is in practice and functioning smoothly. Earlier it was being done manually.

- The library has started checking of books at the library gate through Libsys software and barcode scanner. This has increased accuracy, efficiency, decreased chances of error and saves time. Earlier it was being done manually.

- To keep the users aware about the facilities and services offered by the library, all important activities, notices, services and facilities etc. are displayed on a Digital Notice Board at the library gate.

- A card swipe machine has been installed in the library which provides the facility of paying fine through Debit/Credit card.

- To promote the reading habit and to increase the use of resources and facilities among users, the Library has put up posters, distributed flyers etc. to students.

- Facility for Tea/Coffee has also been made available by LIRC adjacent to the library, at a very nominal price.

Discipline	No. of Books	No. of Journals		
		National Printed	International Printed	Online
Engineering & Sciences	55143	67	31	ASME: 27, ASCE : 36
Management	6193	30	12	SAGE : 19, Ebsco Business Source Elite: 851
Law	5083	24	04	WestLAw: 1200+, SCC Online-150 MANUPATRA : 07

In Addition 28 E-Books are also available.

Details of facilities provided by LIRC are as under:

- **Online Renewal of Books:** LIRC provides the facility of online renewal of books to all its users. A borrower can reissue library books issued to their account from anywhere through the WEBOPAC facility. The link to use this facility on the library page is http://opac.ncuindia.edu:8380/opac/search/ search.html

- **Reservation of Books:** This facility allows users to reserve books which are issued out and thus not available in the library. Users fill the reservation form available at the entrance of the library, and submit it to the gatekeeper. Users can find out about the availability of the book the next day.

- **Back Volumes of Print Journals:** LIRC has enriched its collection by compiling volumes of print journals coming to the library. These volumes are available for reading and issue (only for overnight use).

- **Multimedia Section:** This section allows users to access the electronic resources subscribed by LIRC. Twenty dual core machines with printer and scanner facility have been installed for users. Head phones for access to audio-video materials are provided.

- **Special Collections:** The LIRC has a special collection of theses gifted by Professor PremVrat, Pro-Chancellor of The NorthCap University. These theses are available for reading in the library. The LIRC has also procured a complete set of 'McGraw Hill Encyclopaedia of Science and Technology' and many other important reference books for users.

- **DELNET (Developing Libraries Network):** In this information age, no library is completely sufficient to provide all the services to users on its own. Delnet is a national network of libraries established with a mission to support the member libraries and promote the culture of resource sharing. NCU LIRC is also a member of Delnet. Any user can request access to books and journal articles which are not available in the library through Delnet.

- **Tata Mc Graw Hill E-Books:** LIRC subscribes to the TMH e-books database. These books are related to the areas of engineering, management, applied sciences, computer science etc. This database has many advanced features like download of books, creating bookshelves within the database etc.

- **Online Resources:** LIRC subscribes to online electronic resources such as the American Society of Civil Engineers (ASCE), American Society of Mechanical Engineers (ASME), SAGE Journals, Ebsco Business Source Elite, Westlaw, MANUPATRA etc.

- **Notification on Every Transaction:** Library offers its students a user alert service. Users get notification through email and SMS on every transaction.

- **Library Mobile App:** Users can access the library database anytime from anywhere on their phone with the help of LSearch mobile app by installing it from Google play store.

SCHOOLS

In keeping with the changing demands in education, NCU offers a redesigned curriculum that prepares students for the future workplace. The learning methodology integrates multidisciplinary and contemporary global pedagogy across Applied Sciences, Engineering & Technology, Law and Management along with skills and competencies such as critical thinking, problem solving and working in cross-functional teams that are essential constituents of modern day success. Academic life is full of opportunities that offers horizontal and vertical mobility and we also ensure the professional development of our students through engaging modules in personal development, communication and leadership.

OUR WORLD OF

EXCELLENCE

School of Engineering and Technology

The NorthCap University's, School of Engineering & Technology (SOET) with its five academic departments of Applied Sciences (APS), Civil & Environmental Engineering (CEE), Computer Science Engineering (CSE), Electrical, Electronics, & Communication Engineering (EECE) and Mechanical Engineering (ME), forms the largest component of its academic arena. The school has recently revised its curriculum for a closer alliance with industries, and provide necessary skills to students to face the challenges of the real word. Each programme offered at SOET blends critical thinking and analysis with innovation, application and leadership qualities, theory and industrial practice in such a way that its graduates are ready to take on the rapid changes taking place in the field of industry and higher education both at the national and international level.

Student achievements

A. Shrey Malhotra (BTech ECE) 3rd year, was invited to showcase his product NeX Box in the event organized by the MHRD Innovation Cell at AICTE HQ - Nelson Mandela Marg which was inaugurated by the Hon'ble HRD Minister Shri Prakash Javadekar on 30 August 2019, his start up got position in top 10 startups.

B. Divyam Sachdeva (BTech ECE) 2nd year participated in robot race competition on 9th Jan 2019 at IP university

C. **The annual Student Awards Ceremony of IEEE Delhi Section was held on Monday, 3rd June 2019**

   3 Students of IEEE society got awards in the following categories

   JK Pal Award: Ritika Sharma

   Outstanding Student Volunteer: Virendra Pratap Singh

   Outstanding WIE Volunteer : Esha Changotra

D. Ms Yashika Chauhan and Ms. Chinmayi (BTech ECE) Final Year, attended the SPIE Student Chapter Leadership Workshop in YOKOHAMA, JAPAN from 21st to 23rd April 2019. The students were granted funding from SPIE.

E. 4 students (Shrey Malhotra and team) have developed prototype of customized big data tool from 14th to 22nd Feb 2019 which is used for data cleaning purpose for the program ARIIA.

F. 3 teams comprising of the following students attended the 6th International exhibition & conference GRIDTECH-2019 (POWERGRID with the support of Ministry of Power and in association with CBIP and IEEMA) which was held from 3 to 5 April 2019 and won a Cash prize of Rs. 20,000/- along with a Certificate /Memento:

S.No.	NAME	PROJECT TITLES
1.	Yashika Monali	"Iot Based Air Pollution Monitoring System"
2.	Srishti, Sachin	"Agrobot- An Autonomous Agriculture Multi-Purpose Robot"
3.	Aakansha, Isha	"Hand Gesture Recognition System For Speech Impaired People"

Programmes

The new scheme of study (2018-19) now incorporates more credits for project based learning and has provision for MOOCs, Learning through Tinkering and General Proficiency for promoting self-learning and enhancing employability of the students. Details are as follows :

MOOC Courses

Department		Course Name	No of Students
CSE		Introduction to Cyber Security- SWAYAM	45
		Penetration Testing and Ethical Hacking-Cybrary	38
		Cloud Computing- SWAYAM	73
		Cloud Computing-Udemy	30
		Cloud Computing-Coursera	12
		Python for Data Science- SWAYAM	08
ECE		Advanced Digital System Design	04
		ICA	32
		Image Processing	34
APS	Bsc (H) Maths	Statistical Data Analysis	13
	Msc (H) Maths	Time Series Analysis	9
	Bsc (H) Physics	Electromagnetic Theory	7
	Bsc (H) Physics	Waves and Oscillations	14
	Bsc (H) Maths	Algebra 1	17
	Bsc (H) Maths	Operations Research	17
	Bsc (H) Maths	Numerical Analysis	26

Mapping of Co-Curricular Activities with courses has been introduced in the Dept of EECE. During odd

semester of Jan-June 2019, 3 courses were linked with co-curricular activities

S. NO.	COURSE NAME	CO-CURRICULAR ACTIVITIES IDENTIFED FOR INCLUSION IN CONTINUOUS EVALUATION
1	Optical Communication	SPIE
2	Digital Electronics and Computer Architecture	Project through Tinkering Lab/IEEE/IEI
3	Digital Signal Processing	IEEE

In current semester (July-Dec 2019) the following courses were linked with co-curricular activities with active participation.

S. No.	Course Name	Co-curriculum Activities Identified for inclusion In Continuous Evaluation
1	Analog Electronics	IEEE/IEI society
2	FAW	SPIE, National/International competitions
3	BEEE	IEEE/IEI/SPIE society, National/International competitions
4	DCS	IEEE/IEI society
5	AWP	SPIE, National/International competitions
6	OCS	SPIE, National/International competitions
7	IoT/Machine Learning	IEEE/IEI society

Skill Development Courses

Branch	Course Name	Course Hours	Number of Students
APS Jan. 2018-2019	C-programming	20	5
	Data Analysis using R Software	20	4
APS July 2019-20	Python	20	15
	Experimental Techniques	20	15

Spoken Tutorials IIT Bombay: Various new courses have been introduced and students are getting blended learning experience through online courses as well like C, CPP, Advanced CPP, PHP, etc

Publications
November 2018- December 2019

A large no of faculty members receive recognition for working as member reviewers. They presented research papers in journals and conferences at national and international levels, details of which are given below and at the end of the report:

S.No	Department	Total No. of Publications	Book/Book Chapter National/International	Journal National/International	Conference Proceedings National/International
1.	Applied Science	35	1	31	3
2.	CSE Eng.	34	4	24	6
3.	Mech Eng.	14	-	14	-
4.	ECE Eng.	31	2	24	5
5.	Civil Eng.	9	-	7	2

Some of the outstanding student achievements are highlighted below:

GATE EXAMINATION 2019

**Sarthak Agarwal
(15CVU025)
Percentile: 99.2**

**Deepak Garg
(15CVU009)
Percentile: 95**

**Pulkit Choudhary
(15CVU023)
Percentile: 91.55**

**Hitesh Kumar
(15CVU014)
Percentile: 91.4**

**Anchit
(15CVU006)
Percentile: 87**

**Gaurav Yadav
(15CVU012)
Percentile: 85.2**

**Swaraj
(15CVU027)
Percentile: 85**

90% of our Faculty members are either PhD or pursuing PhD, of which 18 PhD Scholars will be awarded degree in the convocation ceremony.

S.NO	NAME	BROAD AREA
1	Pradeep Rohilla	Fuzzy Logic Control Techniques for Compensation of Stiction in a Pneumatic Control Valve
2	Manoj Kumar	Digital Image Forgery Detection Using 3D Lighting Fingerprints
3	Neeta Sharma	Analysis and Modeling of Stock-induced Consumption Phenomenon and its Impact on Wastage of Resources
4	Ajay Bohtan	Analysis of Indian Public Distribution System: A Supply Chain Perspective
5	Suman Bhatia	Modeling and Simulation of Action Potential in Axoplasmic Fluid: A Computational Study
6	Naresh Kumari	Load Frequency Control of Multi-area Interconnected Power System Networks Using Different Control Techniques
7	Mehak Khurana	Secure Optical Image Encryption Schemes Using Different Transforms for Information Security
8	R. Girija	Development of Optical Image Encryption Techniques with the Construction of Different Phase Masks in Canonical Transforms
9	Sandeep Singh	Study of Tumour Growth Under Immunotherapy and Chemotherapy: Modelling and Simulation
10	Rubi Khan	Contingent Impact of Service Advertising on Consumer Response
11	Ruchi Gupta	Evaluation, Delineation and Remediation of Contaminated Groundwater Resources in Jhajjar District, Haryana, India
12	Jyotika Pruthi	Edge Detection and Medical Image Segmentation Using Metaheuristics
13	Rakhi Nangia	Synthesis And Characterization Of Polymer Nanocomposites And Polymer Blends For Organic Electronic Devices
14	Shilpa Jain	Improved Soft Computing Techniques in Prediction of Groundwater Level
15	Gaurav Aggarwal	Evaluation of Machine Learning Algorithms Based On Speech Features As Predictors To The Classification Of Intellectual Disability
16	Pankaj Rakheja	Enhanced Image Encryption and Watermarking Systems Using Hybrid Techniques
17	Himanshu Khanna	Performance Evaluation of FSO and Mixed Rf-fsosystems Using Various Relaying Protocols for Different Channel Conditions
18	Vaibhav Mishra	Design and Synthesis of Piperazine based Scaffolds to Explore their Catalytic and Antimicrobial Activity

Research Orientation

VC Innovation Fund

The university continues to encourage innovative ideas of students. Following are the details of the projects and award amounts:

September 2019

S. No.	Project Title	Student Details	Mentor	Fund Granted
1	Navigation with Indian Constellation (NavIC) Disciplined Oscillator	Preeti (18ECD006) Raisy (18ECD001) Pankaj (16ECU041) Shubham (17ECU021) Uttpal (17ECU025) Arup (18ECU001) Ishan (19ECU013)	Ms. Kusum Dangi Dr. Sharda Vashisth Mr. Nikhilesh Kumar Prof. Amitava Sen Gupta	Rs 2,50,000/-
2	Synthesis and Electrochemical Characterisation of NiCo2O4@MnO2/N-doped Graphene as Composite Electrode Material for Supercapacitor Applications	Sarita (18ASD002)	Dr. Ambika Devi and Dr. Aditya Sharma	Rs 1,99,090/-
3	Automatic Domestic Gas Stove Controller for Boiling Liquids	Ritik (18MEU015)	Dr. Satnam Singh	Rs 4,100/-
Total funds granted under VCIF Scheme				**Rs 4,53,190/-**

Best BTech Project Awards

To encourage young minds to strive for excellence and recognize the innovative application of technical ideas of BTech Final-year students, the Best BTech Project Award Committee at the university declared the Best BTech Projects on 3 June 2019. The projects by BTech students are evaluated by the committee keeping in mind 'FOCUSS', an acronym of Financial viability of the project, Originality-Innovativeness, Customer-end applicability/takers, Usefulness to society, Sustainability of the environment and Structured approach. The best project was awarded with Rs 50,000 cash prize and certificates.

The Best BTech Project for 2019:

• **Mango Project: Development of Electric Two-Wheelers**

Main Features

The project is partenered with ISH Procision Tools which aims to develop in-house electric vehicles as a sequal to Make in India initiatives by the Government.

Best BTech Project - Development of Electric Two-Wheelers

Sponsored Research Projects till October 2019

S.No	PI & Department	Project Title	Scheme	Duration (yrs)	Date of Sanction	Total Funds received (Rs. Lakhs)	Status
1	Dr Deepika Chaoudhary **Mentor: Dr Hukum Singh** (APS)	Study of Optical and Electrical Properties of Nanostructured Glasses for Application in Optical Recording Media	DST (WOSA)	3	13.05.15	₹ 28.50	Completed
2	**Dr. Vaishali Sahu** (CEE)	Experimental and Numerical Study of Single Pile Capacity Adjacent to Existing Buried Pile System	DST (WOSA)	3	16.11.15	₹ 19.34	Completed
3	**Dr. Rita Chhikara** (CSE)	Neural Network Based Steganalysis	DST (WOSA)	3	26.06.15	₹ 13.87	Completed
4	**Dr. Phool Singh** (APS) and Co-PI: Ms Jyotsna Singh (CSE)	A Computational Model for STN (sub thalamic nucleus) in Parkinson Disease to Investigate the Discharge Patterns	DST (CSRI)	3	09.07.15	₹ 15.58	Ongoing
5	**Dr. Akansha Singh**, Co-PI: Ms. Sumanlata Gautam (CSE)	Emotion Recognition System for Autistic Children	DST (CSRI)	3	11.05.16	₹ 7.40	Ongoing
6	**Dr. Chetna Tyagi, Dr. Ambika Sharma** (APS)	Study of Polymer Nanocomposites for Solar Cell Applications	DST (WOSA)	3	31.05.16	₹ 17.44	Ongoing
7	**Dr. Aditya Sharma** (APS)	Lateral Flow Assay Strip Sensor Development for Non-Invasive Point of Care Diagnosis of Urinary Tract Infection	DST (SERB) Young Scientist	3	29.06.16	₹ 35.00	Ongoing
8	**Ms. Geetika** (CSE)	Phylogenetic Model for Cancer Classification	DST (WOSA)	3	16.08.16	₹ 7.35	Ongoing
9	**Ms. Pooja Sabharwal** (ECE)	Delineation of QRS Complex for Feature Extraction of Myocardial Infarction in Single Lead ECG Signal	DST (WOSA)	3	12.05.16	₹ 6.05	Ongoing
10	**Dr. Kavita Khanna** Co-PI: **Dr. Rita Chhikara** (CSE) and Dr. Rakesh Kumar Dua (Max Hospital shalimarbagh)	Detecting Dementia Using Deep Neural Networks	DST (CSRI)	3	28.06.2018	₹ 9.10	Ongoing
11	**Dr. Anjali Garg** (ECE) **Mentor: Prof. B.K Das**	Power Generation and Control of Solar Energy	DST (WOSA	3	11.03.2019	₹ 15.98	Ongoing
		Total in Crore				₹ **1.75**	

- During the reporting year, eleven research projects for a total amount of Rs 2.68crore have been sanctioned by funding agency and Rs1.75crore has been received till date. Three DST (WOS-A)project of 75.95 Lakh have been completed in 2019.In addition to these, 12 research projects (from Jan to October 2019) have been submitted to various funding agencies.

- Our faculty members have been actively participating in national and international conferences and seminars in India during the year. As a result, 124 journal papers have been published in refereed journals (from January to October 2019) .Year 2019 has been a productive year for books, book chapters and journal publications by the faculty, the details of which are placed at 'Appendix – C' for reference.

Consultancy Details

Following Consultancy projects were undertaken at SOET in aforesaid period:

S.No	Details of the Consultancy	Title of Consultancy	Name of Faculty and Dept.	Number of consultancy	Amount Received (Rs/-)
1.	CISCO (CCNA Module)	CCNA Module	CSE	2	1,06,000
2.	Website Consultancy	B Ace Consulere LLP	CSE	1	30,000
Total (in Rs. Lakhs)					1,36,000

The NorthCap University Testing Center

The NorthCap University Testing Center (NCUTC), established by Department of Civil & Environmental Engineering recently obtained NABL accreditation. NCUTC is involved in the mechanical testing of the building and construction materials.

NCUTC follows the managerial and testing procedure guidelines as per International standard ISO:17025 - 2005 and NABL guidelines, which is National Accreditation Board for Testing and Calibration Laboratories (NABL) and is a Constituent Board of Quality Council of India.

NCUTC provides third party assessment of quality in the area of mechanical testing of building and construction materials, such as, cement, aggregate, concrete, soil, bitumen, etc.

One Consultancy of Rs. 4,500 has been completed for Mix Design of OPC & PPC.

Patents published/awarded during the year

Sr. No	Name of Patent	Patent Filed Date	Name of the Faculty
1.	"SOABER" SOAP WITH SCRUBBER AT THE BACK	10 / 05 /2019	Dr Esha Jain Dr Satnam Singh Mr Praveen Singh Dr Akansha Mathur
2.	"ASB WATER DISTRIBUTION AND AUTOMATIC BIOMETRIC REGISTRATION"	12 /06/2019	Dr Esha Jain
3.	IOT BASED FERTILIZATION TEST	25 /06 /2019	Dr Esha Jain

PhD Programme

No of Students	Department	Broad Area
31	Computer Sciences & Engineering and Information Technology	Wireless Sensor networks, Software Engineering, Internet of Things BioInformatics, Image Encryption, Digital Image, Optical Image Encryption, Cyber Security/ Malware Detetcion, Image Processing, Data Mining, Cyber Crime Investigation and Remediation, Computational Neuroscience, Fog computing and IoT, Computational Neuroscience, Machine learning, Big Data, Artificial Intelligence, Software Engineering, Information Security, Speech Processing and Cognitive ScienceBig Data and Cloud Computing
23	Applied Sciences	Optimization Technique & Applications, Mathematics, Chemistry, Mathematics, Image Processing, Nano Materials and solar cells, MicroBiology, Nano Chemistry, Applied and Pure Mathematics, Nanotechnology, Condensed matter physics (glasses), Organic Chemistry, Coding Theory, Data Analytics, Nano Material Sysnthesis
28	Electrical, Electronics & Communication Engineering	Wireless Communication, VLSI, Memristors, Optical Transport Network, Power System Reliability, Face Recognisation, Image Processing, Electric Power System, Control Systems, Signal, Speech and Image Processing, Power Systems, Wireless Communication & Navigation System, Renewable Energy, Optical Wireless Communication, Load Frequency Control, Biomedical Electronics
3	Mechanical Engineering	Thermo Fluid, Industrial Engineering, Mechatronics, Mechanical Engineering Design
7	Civil Engineering	Geotechnical Engineering, Concrete Technology, Structural Engineering, Earthquake Engineering, Water resources, Environmental Engineering
1	Centre for language learning	American Literature, British Literature, Indian Writing in English, English Language Teaching
16	Management	NLP(Neuro-Linguistic Programming Knowledge, Talent Management, Finance, Human Resource Management, Marketing, Operations Management/Supply Chain Management, Entrepreneurship, Advertising, Operations Management
09	Law	Human Rights, Constitutional Law, Intellectual Property Rights, Civil laws, Foster law, Science and Technology Law, Environmental Law, Corporate Law, Administrative Law, Criminal Law, Business Law

118 doctoral students are currently registered with the University to carry out their doctoral dissertation research work: SOET – 93, SOL - 09, SOM - 16. Ten students have submitted Ph. D. thesis and six have submitted Ph.D synopsis during the year.

- 118 Doctoral students are currently registered

    School of Engineering and Technology   -   93

    School of Law   -   09

    School of Management   -   16

- 11 Students submitted PhD Thesis during the year.

- 2 Students have submitted PhD synopsis during the year.

Daikin Industrial Training Programme

Students of Mechanical Engineering attended forty five days industrial training on completion of their sixth semester. Daikin is conducting this programme with the intent to identity high potential candidates, who can be groomed and considered for hiring. 3 students of Mechanical Engineering department, who attended this programme, were shortlisted by Daikin.

NavIC Lab

The NavIC Lab at the university, which was inaugurated last year is continuously recording data from IRNSS satellites 24*7 and after analyzing it, sends it to SAC-ISRO, Ahmedabad weekly basis. Research work on the following topics is planned in the NavIC Lab:

- IRNSS disciplined Oscillator
- Common view time transfer
- Positioning accuracy using IRNSS
- Time Synchronization technology using IRNSS
- Study of ionosphere using IRNSS
- Difference in positioning accuracy with and without 7th satellite IRNSS-1I.

Upgradation of Labs

Two computer science labs were upgraded with the configuration: DELL i5 7500 3.4 GhZ, 16GB RAM, 1TB HDD

30 licences of Solidworks software have been integrated in CAD lab and installed on 25 high performance workstations. The software has added value to learning in terms of modelling, designing, and analysis of new products. It will also help in designing projects, research work, skill development, and consultancy. Planning for faculty training, student workshops, and integration with courses is under progress.

Internship/Higher Education/Placements

4th and 6th semester students went on summer industrial internship in core companies and leading industries like L&T, Airport Authority of India, Huawei Telecom, Airtel, Ericsson, Siemens, BSNL, Mentor Graphics, Power Grid, C&S Electric India Ltd., DMRC, Exicom, Minda, Reliance Jio, DLF and many more. Several students did project based training. For a group of 10 students, a faculty mentor was assigned for counselling and feedback.

Ministry of Human Resource Development (MHRD), GOI, launched 'Swachh Bharat Summer Internship – 100 Hours of Swachhata' under which college students were to perform at least 100 hours of 'Swachata' related activities in rural areas from 1 May to 31 July 2018. 13 students from SOET successfully completed the internship in 19 selected villages. All participants received a 'Swachh Bharat Internship Certificate' along with two curriculum credits. To ensure better employment opportunities for students in both the local and overseas job market, the university in association with MAGES Institute of Excellence, Singapore, provided six weeks of summer internship in Virtual and Augmented Reality to 20 students of BTech, CSE and ECE, from 4 June to 13 July 2018. Students created solutions for the healthcare industry in Singapore using emerging technologies and thereby gained an industry relevant portfolio.

To ensure value addition and enhance employability of students, under the MoU with Maruti Centre for Excellence (MACE), the Dept of ME organised six weeks of summer internship in engineering analysis (using ANSYS Software), PLC programming, and CNC programming modules for 19 students of BTech from 4 June to 13 July 2018. The programme included four weeks of training at NCU and two weeks of training at the MACE centre. The IIIC Cell in the Dept of CSE&IT facilitated 17 internships in Ansyst Consulting, eSecForte, MMB, LendBox and other companies in Feb 2018 and facilitated 11 internships in March 2018. Vivek Thakur, Final-year, BTech CEE, bagged a paid summer internship with Environment Design Solutions Pvt Ltd, New Delhi, through the efforts of the student and the Dept of CEE. He received a total stipend of Rs 22,000/- for his excellent performance. Laveena Garg, BSc Maths (H), 3Year, secured All India 20th Rank in IIT-JAM 2018 (Joint admission test for MSc at IIT's, NIT's, IISER) conducted by IIT Bombay and is pursuing MSc from IIT Bombay.

Results

UG Courses

DISCIPLINE	TOTAL STRENGTH	TOTAL PASSED	FIRST CLASS WITH DISTINCTION	FIRST CLASS	SECOND CLASS
B Tech CSE	260	256	43	200	13
B Tech CV	32	31	5	18	8
B Tech ECE	62	61	7	46	8
B Tech EE	1	1	0	0	1
B Tech ME	101	97	9	74	14
BSc(Maths)	23	21	1	18	2

PG Courses

Discipline	Total Strength	Total Passed	First Class with Distinction	First Class	Second Class
MTech	18	14	4	10	0
MSc (Maths)	10	10	1	7	2
PhD	-	**14**			

Medals Awarded

Programmes	Gold Medal	Silver Medal	Bronze Medal	Total
BTech (All branches)	4	3	3	10
BSc(Maths)	1	-	-	1
MSc (Maths)	1	-	-	1
MTech (All branches)	4	-	-	4

Dean's List

Students with outstanding performance across the university are included in the Dean's List every year. The Dean's List of School of Engineering & Technology is as follows:

UNDER GRADUATE
1. Aashima Sachdeva
2. Ananta
3. Sachi Chandna
4. Aakansha Jain
5. Arunima Dahiya
6. Eshita Mann
7. Mahima Munjal
8. Sahil Khurana
9. Aaditya Verma
10. Abhishek Jain
11. Archita Raj
12. Charisha Phirani
13. Geetika Singh
14. Ishita Mehta
15. Piyush
16. Pranav Garg
17. Smirithi Ramasubramanian
18. Yogesh Kataria
19. Dinky Khatri
20. Madhur Bahl
21. Ruchi Arora
22. Sakshi Garg
23. Sahil Sehrawat
24. Aditya Varshney
25. Sarthak Agarwal
26. Nishant Yadav
27. Vibhu Mehta
28. Srishti Singhal
29. Aman Sharma
30. Vinit
31. Baljinder Singh
32. Mayank Juneja
33. Nikhil Juneja
34. Yazur Garg
35. Sanskar Bansal
36. Aman Haritash

POST GRADUATE
1. Monika Arora
2. A Nisha Rani
3. Karishma Yadav
4. Utsav Vohra
5. Akanksha

Technovation 2019

Project Day 2019 - 'TECHNOVATION' was celebrated on 15 March 2019 in The NorthCap University, Gurugram to help students showcase their innovative ideas in the form of projects. A total of 19 ideas were converted to projects from all the three schools SOET (EECE, CSE, ME, CIVIL), SOM and SOL involving NEX, Design and Fabrication of low cost 3D Printer, Foamed Fly Ash Bricks and Smart-Lab System Based on Alexa etc. Prof. K L Chopra, Prof. Prem Vrat, Prof. H B Raghavendra, Prof. B Chandra, Prof. Swaran Ahuja and Dr Sharda Vashisth reviewed and appreciated the projects of the students. The event was coordinated by Dr Sharda Vashisth, Head EECE and Ms Amanpreet Kaur, Assistant Professor, Department of EECE. The projects were coordinated by Mr Pankaj Rakheja, Dr Yogita, Dr Satnam Singh, Mr Shuham Bansal, Ms Aditi and Ms Pallavi Bajpai.

Centre for Languages Learning

The Centre for Languages Learning (CLL) offers courses on Effective Communication as well as compulsory foreign languages viz., German, Spanish and French to students across all schools of The NorthCap University. The CLL also offers value based course Human Values and Professional Ethics and skill based course of Campus to Corporate. The CLL is offering PhD program in English since 2017. During the reporting year, it has put in concerted efforts to achieve all round excellence in academics as well as extracurricular activities.

- A faculty development programme was organized by the Centre for languages Learning (CLL) from 1-7 June 2019 at The NorthCap University. The program started with the inauguration and followed by a video of Sundar Pichai's Top 10 Rules for Success. A Session on "Reframing Leadership-Role of Teacher" was conducted by Maj. Gen G G Dwivedi. Two days NAAC Workshop was conducted by Vice Chancellor. Eminent people delivered expert lectures like Major. Gen (Retd.) C M SETH on "Communication Skills and Dependability", 'Mind Matter' by Ms Bhavna Bhira, Senior Art of Living Facilitator' and Work-Life Balance by Dr Archanaa Dongre, HOD Civil Engineering. In addition, CLL also organized webinars on Advancing Learning Webinar, 'Developing a growth mindset amongst teachers' by Chia Suan Chong. The aim of this FDP was to motivate and inspire faculty members.
- **Choose France Tour** A 'Choose France Tour' was organized on 9 Feb 2019 at Le Méridien, New Delhi by The French Embassy and The French Institute, India, for the students of second and third year to facilitate higher studies in France.
- Dr Manoj Gopaliya (Dy Dean Academics) and Dr Divyabha (Coordinator n+i) attended a meeting on behalf of the NorthCap University with EPF Graduate School of Engineering on 19 Feb 2019 at the French Embassy for Academic Collaboration and signing of MOU with n+i. Dr Jean-Michel Nicolle, President of EPF Graduate School of Engineering and President of Network N+I, cordially invited NCU to develop academic and scientific cooperation.
- The Thought Lab was established last year to help students overcome anxiety, stress, fear and develop positive attitude towards life. It has been appreciated by our students and faculty members. BCom first year students have attended classes twice a week as a part of their General Proficiency class.
- On 5 April 2019 the Centre for Languages Learning organized a guest lecture on 'Corporate Social Responsibility' under Human Values and Professional Ethics The speaker was Devender Khari, Founder and CEO DKOP Lab, and TedX speaker.
- An awareness session on POSH Act for 7th semester students was organized on 13 November 2019. The speaker was Ms Pavni Puri, Trainer & Learning & Development Manager at Intercontinental Consultants & Technocrats Private Limited.
- The CLL in collaboration with the School of Professional Attachment (SPA) guided students for interviews, group discussions, writing CVs and résumés and developing their soft skills to enhance their placement prospects.
- Students used the CLL Language Lab extensively to familiarize themselves with content from different sources and media such as text, images, audio, and video. The idea has been to offer students an alternative way of teaching to promote the practice of skills taught in class by using technology as a tool.
- Faculty members presented research papers in various international conferences and published their research papers in journals of repute. A talk on 'Effective Communication skills' was delivered at Hitachi Chemical India Pvt Ltd., Also, POSCO- IDPC India invited faculty member to take sessions on 'Interpersonal Skills' for their Managers on 12-13 December 2018. A talk was delivered on 'Build Harmony and Interpersonal Relationships at Work'. Members of the faculty judged debates and literary fests in various schools in Delhi-NCR.
- The centre for Languages learning carried out a feasibility study for introducing BA (H) English Programme from the academic year 2020-21 and a course 'Introduction to English Literature' as a open elective. Experts from Delhi University and Jamia Milia University had reviewed the course during the board of studies meeting.

School of Management

The vision of the School of Management (SOM) is to be a leading management school emphasizing on academic excellence, research, innovation, entrepreneurship and developing socially sensitive managers. The School of Management draws upon the faculty resource and knowledge base of the School of Engineering and Technology and the School of Law so that its students get holistic pedagogical support, which is vital for today's fast changing business world.

Collaboration/MoU

The NorthCap University has signed a Letter of Intent with Chartered Institute of Management Accountants (CIMA), London on 29 March 2019 to offer CIMA's Certifications and Diplomas in Management Accounting to its students. These courses are open to students of all schools of The NorthCap University on major exemptions.

Signing of Letter of Intent with CIMA London

New Programmes Initiated

The School is successfully running the three-year UG programmes of BBA, BCom (H), BA (H) Ecnonomics and BA (H) Psychology, two year full time MBA programme and PhD in Management. The admission criteria of the various programmes is as under:

BBA: Minimum 50% in Classes XII - best of five

B. Com (H): Minimum 50% in Class XII with 50% marks in either Accountancy or Mathematics - best of five

BA (H) Economics: Minimum 50% in Class XII with 50% marks in either Economics or Mathematics - best of five

BA (H) Psychology: Minimum 50% in Classes XII - best of five

MBA: Minimum 50% in bachelor's degree (best of five) and in any one of the National Tests viz., CAT/XAT/CMAT/ATMA/MAT/GMAT (Sept 2018-May 2019)

PhD: Post-Graduate with 60% marks

Admission to MBA and other programmes were successfully conducted including the University's Management Entrance Test (NMET). The PhD (Management) programme is progressing well.

Board of Studies

A meeting of Board of Studies comprising of renowned external experts such as Prof Rahashree Chandra and Prof. Ruby Bhardwaj, Associate Professors of Janki Devi Memo College was held on 17 October 2019. Introduction of two new three-year full-time degree undergraduate program, Bachelor of Arts (Hons) in Sociology and Bachelor of Arts (Hons) in Political Science in the School of Management, starting with academic year 2019-20. It is proposed to have common subjects in the first and second semesters (First Year) of BA (H) Sociology and BA (H) Political Science. The objective is to ensure that the first year will be a foundation course covering components of liberal studies and UGC mandated courses. This pattern is already followed in the existing programs viz. BBA, B.Com (H) and BA (Hons) Psychology, and BA (Hons) Economics.

Induction for New Joinees at SOM NCU

Prof. Hemant C. Trivedi joined as Senior Professor and Officiating Dean, SOM on 15 April 2019. Dr Akshat Aditya Rao (Marketing) & Dr Poonam Arora (HR) joined as Assistant Professors in December 2018 and January 2019 respectively and Dr Swaranjeet Arora (Finance) joined as Associate Professor in July 2019. Orientation Session for new and visiting members of the faculty was organized on 7 September 2019. Members of the faculty were apprised about the different policies and practices of the University/School and were given initial training on LMS, OTMS, ERP etc. A faculty development programme was organized on 'Capability Building Leading to Better Performance' from 25 May - 2 June 2019. A faculty development workshop on 'Ranking Strategies' was organized on 16 July 2019. A Parent Faculty Interaction Meet was organized in SOM on 16 November 2019. Parents came in large numbers and discussed the performance of their wards with faculty mentors.

Research Orientation

Two members of the faculty are pursuing PhD. 18 scholars are currently pursuing PhD in the areas of Finance, Human Resource Management, Retail Marketing, Marketing, Entrepreneurship, Knowledge Management, Rural Marketing, Operations Management, Advertising and Entrepreneurship. Four research fellows are receiving a contingency grant of Rs 25,000 per month, to facilitate their research.

Interactive Session By Prof. Subhadip Roy

The SOM organised a session with Prof. Subhadip Roy, Faculty Marketing at IIM Ahmedabad for faculty and PhD scholars of The NorthCap University on 09 Jan 2019. The topic of interaction was "Getting high quality research published". Prof. Roy talked about relevance of research in today's scenario and discussed how one should proceed for quality research. He shared his experiences with the participants and suggested the manner in which research should be taken forward. Around 30 faculty members and PhD research scholars from various departments of NCU participated in the session.

Internship/Higher Studies/ Placements

Minor project for post-first year students have been started in order to give them an understanding of basics of research and using elementary statistical tools on generic topics to convert their theoretical knowledge into project-based learning. 184 students have presented their minor projects in total.

An orientation session for summer internships was organized at the School on 21 May 2019. Students of BBA and B.Com (H) 4th Sem and MBA 2nd Sem were briefed about the entire process of internship, starting from offers till submission of report. The diary and guidelines were shared with the students and their queries related to the forthcoming internships were addressed in the session. Thereafter, a total of 176 students underwent summer internship at companies like Hero Cycles, Maruti Suzuki, PolicyBazaar, HDFC Bank, UAS International, Lumax Industries, Pearl Global, Asahi, Lemon Tree, Hero Motor Corp., Axis Bank, Dedicated Freight Corridor Corp. of India etc. Each student did the summer internship training for 6-8 weeks.

Results

Discipline	Total Strength	Total Passed	First Class with Distinction	First Class	Second Class
BBA	129	125	10	89	26
BCom (H)	30	29	7	15	7
MBA	28	27	2	17	8
PhD					

School	Programmes	Gold Medal	Silver Medal	Bronze Medal	Total
SOM	BBA	1	1	1	3
	BCom(Hons)	1	-	-	1
	MBA	1	-	-	1

Dean's List

Under Graduate	
1. Ritika Rajesh	8. Shivam Chawla
2. Himanshi Sharma	9. Aarushi Gilotra
3. Muskaan	
4. Sandhya	**Post Graduate**
5. Shivani Vashisht	1. Rohit Bhola
6. Gul Pulyani	2. Shubhangi Bhardwaj
7. Radhika Singla	

Publications

Faculty members published 33 research papers in various national and international journals out of which seven are indexed in Scopus, fourteen are indexed in Google Scholar and six are indexed in Indian Citation Index; made presentations in two conferences and published one article in book. The detailed data of publication and research activities is maintained at the office of Dean – Research, Development and Industrial Liaison (RDIL). They attended number of workshops, judged events, session chair in conferences etc. in other reputed universities as well like Christ University, Bangalore, Jamia Hamdard University, Amity University, Noida, etc.

Seminars, Conferences, Workshops

National Seminars

A national seminar was organized on 'Prospects of Business Analytics' by the School of Management in association with Max Life Insurance Co. on 15 February 2019 in which 58 internal participants from NCU and 54 external participants from different places like Central University of Rajasthan, GD Goenka University, Delhi Technical Campus, MDU Rohtak, Aryabhatta College, University of Delhi, KR Mangalam University, IILM University, Alpha Arts and Science College Chennai, NIMS Jaipur, Starex University, Amity University, Rajdhani College, GGSIPU, Govt Girls College, Manav Rachna International Institute of Research and Studies, Faridabad, Sharda University Greater Noida, Tecnia Institute of Advanced Studies, Jamia Millia Islamia University, Jamia Hamdard University, JK Business School, BVIMR, BCIPS, Jesus and Mary College, CCS Meerut, etc. had participated. In this seminar, Hon'ble Pro-Chancellor of NCU, Prof. Prem Vrat, Mr Indranath Mukharjee - AVP at AXA XL India and Mr Atul Kulshreshtha - Vice President at Capgemini were the keynote speakers. There was also a panel discussion on the theme of the seminar from the industry experts which included Mr Manish Malhotra - Director Analytics & Data Science at Startup Genome, Mr Anurag Dixit - Director Analytics at WNS; Mr Nitin Jain - Business Analytics Manager at Google India, and Mr. Karan Chadha - Director Data Science at Dunnhumby. The main aim of this seminar was to provide students with the comprehensive overview of what it takes to build and deploy business analytics solutions in an organization and the job prospects in near future.

Industry Interface

Seventeen seminars and workshops have been conducted in the SOM including two days workshop on Future of Finance, an Economic Conclave, a FinArgument, a Quality Conclave and an AICTE sponsored workshop on Examination Reforms at regional level. Eighteen expert sessions have been organized in the school in which eminent speakers from corporates were invited. Nine industrial visits have taken place including visit to industries of NCR as well as industries outside NCR.

Societies and Clubs

Various activities like business quiz competition, donation drive, Ad-Mad competition, situation based events and case study analysis competition have been taken place time to time in four clubs and societies of the SOM viz. synergy club, economic collective club, social club and exuberance.

The Social Club of the School of Management celebrated International Women's Day on 8 March 2019, a day that honors the achievements of women and calls attention to equality of gender for having a better and prosperous world. It also organized a three days donation drive from 10 -12 April 2019. The drive started with motto '#Bringonegiveone'. The students, faculty and other staff members joined hands for this Nobel cause by donating non-perishable food items, stationery, used toys, clothing, medicines, and other useful items. The donated items were supplied by the students to the slum areas in Gurgaon region.

Exuberance- The Extra Curricular Club of the School of Management organized Panorama on 10 April 2019 in which the two events were simultaneously organized. One was Capture NCU in which students clicked pictures covering various spots at NCU. There were many entries for the same and the photographs were judged by experts and the best photograph was awarded. Another was 'Iwakeup2makeup' in which students showcased their talent with exclusive Hair Do and Makeup. The Economic Collective & Synergy Club, the School of Management also organized "Arthargument", on 20 August 2019 for students to have deeper knowledge through exchange of thoughts in the given platform and demonstrate them with parliamentary debate and policy debate styles.

Entrepreneurship Development Cell

One Entrepreneurship Awareness Camp (EAC) sponsored by DST and coordinated by Entrepreneurship Development Institute of India (EDII), Ahmedabad, was organized to motivate students towards entrepreneurship. 60 students participated in the EAC from 6-8 March 2019. The topics discussed were related to Rural Marketing, IPR, Business Continuity Planning, Creativity and Innovation.

The Entrepreneurship Development Cell organized an awareness session on 'Innovation and Entrepreneurship' on 28 March 2019, another awareness session on 'Idea Launching Strategies' on 8 August 2019. A workshop was also organized on IPR on 30 September 2019.

Mini Marathon

The District Administration, Gurugram and the School of Management, The NorthCap University jointly organized a mini marathon at Leisure Valley Park to sensitize Gurgaon residents about their voting rights and duties. On this occasion, the Chief Guest Mr Subhash Yadav (IPS), IG State Vigilance Bureau flagged off the marathon. Mr Yadav while addressing the participants said that election is the Mahakumbh of democracy and urged them to cast vote according to their conscience without having any consideration of caste, creed, and religion. The marathon witnessed the participation of large number of students and faculty members. Several morning walkers also joined in for this social cause. The marathon concluded with signing of the signature campaign "I Pledge to Vote" by the participants.

School of Law

The vision of the School of Law is to be ranked amongst some of the best law schools in India and the most preferred private university destination for law aspirants. The School of Law at The NorthCap University provides the highest quality professional law courses in Gurugram to equip the students for a transnational practice and to face the challenges posed by the internationalization of the legal profession.

Programmes & Admission Criteria

The School of Law offers three programmes viz., the five-year integrated BBA-LLB (Hons.) at the undergraduate level, one-year LLM with specialization in Human Rights and Corporate Law at the postgraduate level, and a full-time/part time PhD programme at the doctoral level to pursue research in contemporary legal areas like Environmental Laws, IPR, Civil Laws, Criminal Laws, Corporate Laws, Labour Laws, Constitutional Laws etc. The admission criterion is as follows:

- **BBA-LLB (H) -** CLAT/LSAT/AILET/NCU-LET with 55% marks in 10+ aggregate and 50% marks in English
- **LLM** - LLB degree
- **PhD** - LLM degree

During the year faculty members were involved in outreach activities to deliver lectures, judge Moot Court competitions, attending conferences and conduct workshops at reputed Law universities and up skilled and expanded their capabilities to remain contemporary and relevant.

Four new faculty have joined at the school of law. Dr TapobrataPakrashi, Ms ShikshaDahiya, Ms Mahima Mahajan and Mr Himangshu Rathee.

Research Orientation

Four members of the faculty are pursuing research. Dr Archana Sarma, Asst. Professor (Sr. Scale) was conferred PhD in Law by the National Law University, Delhi. The title of her thesis was "Computer Forensics in Criminal Investigation and Admissibility of Electronic Evidence in India: Issues and Challenges".

7 research scholars are pursuing PhD in the SOL in the field of Human Rights, Constitutional Law, Intellectual Property Rights, Civil laws, Foster law, Science and Technology Law, Environmental Law, Corporate Law, Administrative Law, Criminal Law, Business Law.

The School of Law, NCU organized release ceremony of NCU Law Review (ISSN 2581-7124) on January 31, 2019. The release ceremony witnessed the august presence of the Chief Guest, Prof. (Dr) K. Elumalai, Head, School of Law, IGNOU. The NCU Law Review journal (Vol. I Issue I, March 2018) was released.

Students' Achievements

1. Mayank Dahiya and Amardeep Chahal of third year had participated in the Symfiesta, National Negotiation Competition organized by the Symbiosis Law School, Noida on 15 to17 February, 2019 and emerged as the Runners Up in the competition.

2. Saubhagya Chauriha (16LLB070) and Paratyush Arora (18LLB035) from School of Law, participated in the 1st Delhi Metropolitan National Client Competition on 5 April, 2019 and has been adjudged as the Winners of the Competition.

3. Karan Kataria (student of BBA-LLB 2nd Year) was awarded as best delegate award at International Model United Nation (MUN) organised by JamiaMiliaIslamia University, Delhi on 6 & 7 April 2019.

4. Drishti Dadu, a student of fourth year law, attended a summer course (June-July) on Public International Law at The Hague Academy of International Law.

5. Congratulations to Shuvankar Mohanty, BBA.LL.B (H), pass-out batch of 2016 from The NorthCap University, creating a record of being the first from the University to qualify in the Odisha Judicial Services Examination 2019 with the 15th rank.

Suvankar Mohanty
Batch 2011-2016
BBA LLB (Hons)

Conferences, Seminars & Workshops

1. The School of law organised International Conference on the theme "Interface between Technology and Law: Moving towards Digital India" held on 5 November 2018. The Conference was inaugurated by Jozef Drofenik, Ambassador and Plenipotentiary, Republic of Slovenia accompanied by First Lady Dr Ala Adamia from Romania.

2. The School of Law organized a Workshop on "Introduction to Juvenile Justice Act: Lawand Principles" in association with Bachpan BachaoAndolan and LatestLaws.Com on 7 February 2019. The Workshop was conducted by Ms Jyoti Mathur, Director-Training, Kailash Satyarthi Children's Foundation, and Ms ChhayaKhosla, Advocate, LatestLaws.com

3. SOL organized an exclusive and unique education and career building initiative with Microsoft Corporation's 'Computer Se Karo Computer Se Badho' Programme (https://computersebadho.com/) on 13 February 2019.

4. SOL organised a Workshop on Gender Sensitization and Progress towards Gender Equality, held on 7-8 March 2019.

5. Two-Day Advance Regional Workshop on Biological Diversity Laws organized by the School of Law, (NCU), in association with the prestigious National Law School of India University (NLSIU), Bengaluru and United Nations Development Programme (UNDP) on 14-15 March 2019.

Moot Court

The School of Law (SOL) organised its VI NCU National Moot Court Competition (NMCC) from 6-7 April 2019. It is one of the finest competitions in India which is being held on a pressing issue of environmental law. The theme for this year's is moot court competition was illegal sand mining. The event was inaugurated by Hon'ble Chief Guest Mr Abhishek Manu Singhvi, M.P. RajyaSabha, Senior Advocate at Supreme Court. The Moot Court Competition witnessed participation by 22 teams from Central and State Universities, National and Private Law Schools from all across the country. Amity Law School, Noida emerged as the Winner of the competition and awarded a trophy, certificate and a cash prize of Rs 15,000 and Army Law College, Mohali were the Runners-up and awarded a cash prize of Rs 10,000

Legal Aid Clinic

1. School of Law, organized a Legal Aid Camp in association with District Legal Services Authority, Sonipat at Girls Government Senior Secondary School, village Nahara, Sonipat on 16 February 2019.

2. A legal awareness quiz was organized by school of law in association with DLSA, Gurugram held at various schools across Delhi NCR on 30th April 2019. Approximately 500 students participated in the same.

Internship/Placement/Higher Studies

Despite stiff competition in the market, with the efforts of SPA and SOL's Recruitment Coordination Committee the graduating batch of Law students were placed at reputed organizations such as Karanjawala & Co, Juris Corp, Chadha & Co, Chadha & Chadha Associates, Mind Merchants, Glehman, Legal League Consulting, etc.

The School of Law is having a formal arrangement with the Prosecutors' Offices in Gurgaon and New Delhi for providing internships to the law students. In total, 10 students interned at different District courts in Delhi through Directorate of Public Prosecution, New Delhi. 30 students interned in District court in Gurgaon under the supervision of District Attorney, Gurgaon.

Centres at School of Law

- **The Centre of Intellectual Property Rights Advocacy, Research and Training (CIPRART)**

CIPRAAT, School of Law, The NorthCap University, Gurugram on 24 January 2019 organised a workshop on the theme 'Changing Paradigm of IPR in India. The workshop was attended by the students as well as faculty all across the University.

- CIPRAAT organised an expert lecture on 'Pros and Cons of Protecting Intellectual Property Rights' for the students of law on 16 April 2019. The speaker of the Lecture was Ms Abha Kashyap, International Patent Agent and Managing Partner, Kashyap Partners and Associates. The lecture dealt with the recent developments on IPR with negative and positive effects of technology on IPR.

- Organised workshop on 'StartUp's and the Practical approach to Patents' for Mechanical engineering students on 18 April 2019.

- On 2 May 2019 organised workshop on 'Intellectual Property Rights: Boon or Bane' at Delhi Public School Ghaziabad, Palam Vihar for 11th and 12th class students.

Results

Discipline	Total Strength	Total Passed	First Class with Distinction	First Class	Second Class
BBA LLB (Hons) Final Year	91	84	11	62	11
LLM	19	19	**1**	**16**	**2**

Programmes	Gold Medal	Silver Medal	Bronze Medal	Total
BBA LLB (Hons)	1	1	1	3
LLM (1Yr)	1	-	-	1

Dean's List 2019

Under Graduate
1. Ayush Rai
2. Divya Singhal
3. Priyanshi Sharda
4. Karan
5. Ojaswi Kulshresthah
6. Mukul Sharma
7. Arohi Kashyap
8. Mohit Vats
9. Tashi Vaish

Post Graduate
1. Ekta Yadav

Publications

Faculty members published book chapters and papers in national and international journals and made presentations in conferences.

Research Papers in UGC approved journals	:	23
Book Chapters	:	03
Research Paper presentation by faculty	:	14

(Details at the end of the Report)

Induction Programme

A full week Induction Programme was organized for 1st Year students from 22 July to 26 July 2019 in which various events were organized for the freshers at SOL such as visit to the Thought Lab and Tinkering Lab, guest lectures and lectures on research writing, interaction with Alumni, Moot and Legal Aid sessions, Clubs and Societies Fest, yoga and sports, cultural activities and recreational activities such as, Talent Hunt, documentary screening, industrial visit, Mentoring sessions, Basic English, Basic Computers, lecture on General Proficiency, etc. Further, the newly admitted students were asked to plant trees in their vicinity and prepare a report for the same. The initiative is called PARYAVARAN PRAHARI (plantation drive).

School of Professional Attachment (SPA)

The School of Professional Attachment (SPA) ensures regular interface and dialogue with the industry for professional enrichment and better job opportunities of students. SPA is engaged in building and enriching the potential of each student and helps them plan their careers ahead. SPA nurtures students from induction to placement and acts as a bridge between a student and his / her first job. SPA strives for the holistic development of students making them industry ready for a smooth transition from campus-to-corporate.

SPA enhances the employability of students through improved industry internship attachment often culminating in placements, increased students' ownership, career counselling and gap analysis, obtaining higher and better job placements with a wider industry reach and obtaining industry feedback for improving the curriculum. SPA equips students with the right kind of skills and attitude so that they can become more effective, efficient and productive in their employer's organization.

NCU facilitates evaluation of students' employment readiness and gap analysis by outsourcing it to the company 'Aon CoCubes' who does third party assessments for BTech graduating students, on behalf of hiring companies. In addition to providing student-centric deliverables like assessment scores and improvement areas, it also helps to generate employment leads for the students with its empanelled companies.

NCU has been associated with Youth4Works for the assessment of students starting from 1st year till the final year to improve the proficiency in the following three broad areas.

– Communication Skill

– Aptitude &

– Domain Area

The North Cap University, Gurugram is in continuous pursuit of all-round excellence in Technical, management & Law education through narrowing the gap between academia and industry.

Glimpse of Campus Placements season 2019

Deloitte Campus Placement Drive

Optum - UHGFidelity

Express Roadways

Real Time Data Services

Job placements are arranged by inviting companies for on-campus selection process as well as nominating students to prospective employers for their in-house selection process. Focus is on widening industry reach and getting better salary packages for our students. Efforts are made to reach out to a large number of companies across all verticals and invite them to the campus for carrying out their placement process. Currently there are 170 companies recruiting from the University.

Relentless efforts of SPA resulted in over 90% placements of eligible students from all the three Schools –School of Engineering& Technology, School of Management and School of Law, Class of 2019. Placements were achieved in premier companies like Deloitte, United Health Group-Optum, Ernst & Young, IBM, Fidelity, Sapient, Newgen, Reliance, Protiviti, Square Yards, Wipro, Nagarro, TCS, HSBC, JLL, Oyo Rooms, McDermott, Zomato, KPMG, Ameriprise Financials etc. A positive feedback of the previously employed students from the employer organisations resulted in these companies continuing to return for campus placements with more inclusions each year.

As regards internships, Yash Yadav, Vaibhav Rajput, Chhavi Jain and Aadish Goel (Class of 2019) were selected as interns at Fidelity International and laterall four were got the Pre Placement Offer with the salary package of Rs 4.5 LPA.

Besides placements, a number of our students have gone in for higher studies in India, including IITs, and abroad to University of Reading, UK; University of Limerick, Ireland; University of Florida, New York University, University of California, Arizona State University USA; University of Windsor, Canada; University of Melbourne, Australia amongst others.

S.No	CAMPUS 2019	CSE	EECE	ME	CV	B.Tech (Total)	MBA	LAW
1	STRENGTH	262	59	92	29	442	26	84
2	NOT ELIGIBLE	35	11	21	7	74	12	25
3	NOT APPLYING DUE TO FAMILY BUSINESS or HIGHER STUDIES	10	13	15	15	53	3	11
4	ELIGIBLE & INTERESTED FOR PLACEMENT	217	35	56	7	315	11	48
5	NO OF STUDENTS PLACED	209	32	50	7	298	11	45
6	% PLACEMENTS	97%	92%	90%	100%	95%	100%	94%

Some Leading Recruiters

Students Strength and Intake 2019

S No	School	Admitted in 2019	Students strength other than fresh intakes	Total Strength
1	School of Engineering & Technology	507	1204	1711
2	School of Management	337	330	667
3	School of Law	130	313	443
4	PhD	19	106	125
	Total	**993**	**1953**	**2946**

BTech Admission Profile

Ratio of applicant to intake seats indicates a healthy demand trend at THE NORTHCAP UNIVERSITY.
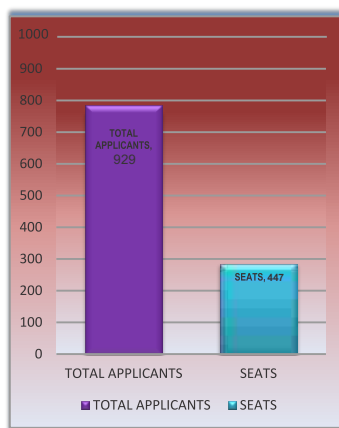
Top marks in JEE Main & 10+2 establish continued high merit levels at the intake stage for BTech

SL. NO.	BRANCH	Top Marks	
		%age of Best of Jan/Apr JEE 2019	10+2
1	CSE	95.878	92.00%
2	MECH	84.655	92.80%
3	ECE	82.665	79.40%
4	CV	83.441	66.8%

Conferences, Workshops and Training Programmes

S.No.	Department	Conference	Dates
1.	IEEE-NCU	Workshop on C with LINUX	4 Oct 2018
2.	EECE	Workshop on Interfacing of Wi-Fi modules for IoT applications	4 Oct 2018
3.	IEI CSE NCU	A gaming event	4 Oct 2018
4.	SPIE NCU	A Quiz on Verbal and Non-Verbal Reasoning	4 Oct 2018
5.	ME	Workshop on Automation Technologies	4 Oct 2018
6.	SOL	Workshop on Emerging Contemporary issues under Copyright Law: National and International Perspectives for Law students	5 Oct 2018
7.	IEEE NCU	Arduino workshop	8 Oct 2018
8.	Mathemactive Society-NCU	MATH-A-HOLIC	8 Oct 2018
9.	IEI CSE NCU	'Technothon' - A Technical Quiz	9 Oct 2018
10.	ME	Workshop on Hands-on AutoCAD-3D	12 Oct 2018
11.	APS	Workshop on MATHLAB	16 Oct 2018
12.	IEEE-NCU	International hackathon IEEEXtreme 12.0	20 Oct 2018
13.	IEI NCU	Quiz competition	25 Oct 2018
14.	CE	Workshop on Analysis and Design of determinate and indeterminate structures with Staad Pro V8i	31 Oct-1 Nov 2018
15.	EECE	Workshop on Antenna Array Design through MATLAB	2 Nov 2018
16.	SOM	Seminar on Transitioning from Corporate Social Responsibility to Corporate Sustainability Education	2 Nov 2018
17.	IEI Society	Hands-on workshop on Raspberry Pi	2 Nov 2018
18.	IEEE NCU	Nothing Can stop a Great Idea	3 Nov 2018
19.	SOL	International Conference on Interface between Technology and Law: Moving towards Digital India'	5 Nov2018
20.	Rotaract Club	Diwali collection & donation drive on Joy of Giving	6 Nov 2018
21.	CSE	Workshop on Augmented Reality	9 Nov 2018
22.	CE	Seminar on Project Management using Primavera	14 Nov 2018
23.	APS	Hands-on training on Chemical Drawing Software	16 Nov 2018
24.	ASQ NCU	A training on Lean and Six Sigma Insights	16 Nov 2018
25.	CLL	Seminar on Corporate Governance and Role of CII towards the governance of businesses in India	17 Nov 2018
26.	ME	Workshop on Latest Technologies in Air Conditioning System	20 Dec 2018
27.	SOM	Workshop on Case Study Analysis	7 Jan 2019
28.	SOM	National seminar on Future of Finance	11 Jan 2019
29.	ME	Workshop on Primavera Software	15 Jan 2019
30.	SOM	National seminar on Future of Finance	24 Jan 2019
31.	SOL	Workshop on Changing Paradigm of IPR in India	24 Jan 2019

Conferences, Workshops and Training Programmes

S.No.	Department	Conference	Dates
32.	Mathemactive Society-NCU	Mathagascar- Multi Round Aptitude & Maths Quiz	28 Jan 2019
33.	SOM	Annual Conclave on Leveraging Quality to Drive Innovation	30 Jan 2019
34.	NCU	A Yoga meditation workshop	31 Jan 2019
35.	Rotaract Club	DRR official visit (DOV)	31 Jan 2019
36.	IEI-Chapter-CE	Workshop on the design of G+4 building	5 Feb 2019
37.	SOL	Workshop on Introduction to Juvenile Justice Act: Law & Principles	7 Feb 2019
38.	SOL	Seminar on Computer Se Karo Computer Se Badho	13 Feb 2019
39.	SOM	National Seminar on Prospects of Business Analytics	15 Feb 2019
40.	NCU	TEDx	16 Feb 2019
41.	SOL	Workshop on Changing Paradigms of Environmental Law in India	27 Feb 2019
42.	The Minerva Quizzing Society NCU	Ent Quiz 2019' competition	28 Feb 2019
43.	OSA Chapter	Quiz on Science and General Awareness	5 Mar 2019
44.	SOM	Camp on Entrepreneurship Awareness	6-8 Mar 2019
45.	SOL	Workshop on Gender Sensitization & Progress towards Gender Equality	7 – 8 Mar 2019
46.	SOL	Workshop on Biological Diversity Laws	14-15 Mar 2019
47.	NCU	Project Day 2019 - TECHNOVATION	15 Mar 2019
48.	APS	Workshop on A statistical approach to research methodology using TIBCO Statistica	16 Mar 2019
49.	ME	Workshops on Hands-on Practical Training on 3D Solid Modelling & Hands-on training on Automaton	16 Mar 2019
50.	SOM	Workshop on Know Your Rights	18 Mar 2019
51.	SPIC MACAY NCU	NCU Got Talent	18 Mar 2019
52.	CE	Workshop on Outcome Based Education in Civil Engineering	26 Mar 2019
53.	EECE	Workshop on Embedded System Design using MATLAB	29 Mar 2019
54.	SOL	National Moot Court Competition (NMCC)	6-7 Apr 2019
55.	ME	Workshop on Assembly & Disassembly of Engines	5-9 Apr 2019
56.	OSA Student Chapter, NCU	Club Fiesta	10 Apr 2019
57.	Exuberance, SOM	Event on Panorama	10 Apr 2019
58.	Synergy Club, SOM	Business Quiz competition	10 Apr 2019
59.	CE	Workshop on Awareness on Health and Hygiene of women	11 Apr 2019
60.	NSS, NCU	Education Drive	11 Apr 2019
61.	Social Club, SOM	Donation drive with the motto #Bringonegiveone.	10-12 Apr 2019
62.	Synergy Club, SOM	Ad-Mad, Situation Based Events & Case Study Analysis competition	16 Apr 2019

Conferences, Workshops and Training Programmes

S.No.	Department	Conference	Dates
63.	CSE	Exhibition of IoT based projects	18 Apr 2019
64.	ME	Workshop on Intellectual Property Rights	18 Apr 2019
65.	Visualive Club, NCU	Doodle Workshop	27 Apr 2019
66.	CIPRAAT, SOL	Workshop on Intellectual Property Rights: Boon or Bane	2 May 2019
67.	ECE	Skill development summer programme on Internet of Things & Artificial Intelligence	18 May 2019
68.	CSE	Workshop on Cyber Security	9-19 July 2019
69.	SOM	Workshop on RIIA, NAAC and NIRF parameters	16 Jul 2019
70.	ECE	Workshop on Hands on session on IoT- Module 1	17 Jul 2019
71.	NCU	Model United Nation Conference	26, 27 Jul 2019
72.	ECE	Workshop on Introduction to PLC	7 Aug 2019
73.	SOM	Workshop on Facing the future of finance	13 Aug 2019
74.	IEEE	Workshop on Advanced IoT workshop phase I	20 Aug 2019
75.	ME	Workshop on a session to PLC	14 Aug 2019
76.	Mathemactive Society-NCU	MATHOGENICS competition	21-27 Aug 2019
77.	ECE	Workshop on Line Following Robot (LFR)	3 Sep 2019
78.	CSE	International Conference on Computational Intelligence & Data Science, ICCIDS 2019	6-7 Sept 2019
79.	CSE	Agile BootCamp@Gurugram	21 Sep 2019
80.	ECE	Workshop on Matlab and Its Applications	23 Sep 2019
81.	APS	Workshop on IPR-Basic Information and Patents-Initial steps for filing a patent application	24 Sep 2019
82.	ECE	Workshop on Advanced IoT workshop phase II	27 Sep 2019
83.	ECE	Workshop on Advanced IoT workshop phase II	27 Sep 2019
84.	ECE	Eco System awareness for Faculty Members	5 Oct 2019
85.	CSE	Workshop of Social Network Analysis	4 Oct 2019
86.	CSE	Webinar on Big Data Architecture	10 Oct 2019
87.	ECE	Eco system awareness for Students	22 Oct 2019
88.	CSE	Faculty Development Programme on Cyber Security	1 Nov 2019
89.	CSE	Student Technical Ambassador Programme	Nov 2019
90.	SOM	Workshop on Effective Leadership 'Managing the Millennial'	19 Nov 2019

Conferences, Workshops attended by faculty

S. No.	Faculty	Dept.	Conference/ Workshop/ Seminar	Venue	Dates
1.	Dr Vaishali Sahu	CE	Conference on "Renewable Energy-Challenges and Way Forward" organized by PHDCCI	PHD House, New Delhi	4 Oct 2018
2.	Ms Neha Kapur	SOL	Workshop on 'The sexual harassment of women at workplace (Prevention, Prohibition & Redressal) Act, 2013',	NLU, Delhi	6–7 Oct 2018
3.	Mr Navin Pal Singh	SOL	Seminar on Medico-Legal Literacy organized	IMA, Gurugram	7 Oct 2018
4.	Ms Unanza Gulzar	SOL	National Seminar on Emerging Trends of Alternative Dispute Resolution in India	Jamia Millia Islamia, New Delhi	9 Oct 2018
5.	Dr Esha Jain	SOM	34th National Conference on Make in India: To Go Global	Tecnia Institute of Advanced Studies, Delhi	26 Oct2018
6.	Prof. Prem Vrat	PC, NCU	14th FICCI Higher Education Summit 2018	Vigyan Bhavan, New Delhi	30 Oct -1 Nov 2018
7.	Dr Satnam Singh & Mr Praveen Singh	ME	International workshop on NANO/MICRO 2D-3D fabrication, manufacturing of electronic – biomedical devices & applications (IWNEBD-2018)	IIT, Mandi (HP)	31 Oct–2 Nov 2018
8.	Ms Unanza Gulzar	SOL	3rd Intra-Faculty Moot Court Competition 2018	Jamia Millia Islamia, ND	17 Nov 2018
9.	Mr Diptendu Roy & Mr Lokesh Choudhary	CE	Workshop on use of 'Total Station in Surveying',	NITTTR at Chandigarh	26-28 Nov 2018
10.	Dr Aditya Sharma	APS	Workshop for Women in Science Administration and Management	NCBS, Bengaluru	26-29 Nov 2018
11.	Prof. Prem Vrat	PC, NCU	3rd National Conference on Industrial Engineering and Technology Management (NCIETM-18)	NITIE, Mumbai	30 Nov 2018
12.	Dr Esha Jain	SOM	International Conference on Envisioning India 2.0: Economic Policies Prospects and Challenges	Jaipuria Institute of Management, Ghaziabad	1 Dec 2018
13.	Dr Anjali Garg	EECE	Externship	Conquerent Madhu Electrical, Manesar	6 Dec 2018
14.	Prof. Prem Vrat	PC, NCU	Academic Conference on the theme 'Managing in the age of Disruption: Future of Organisation'	Hotel Shangri-La, New Delhi	7 Dec 2018
15.	Prof A P Dash	SOM	South Asia Team Excellence Award (SATEA) 2018	Suryaa Hotel, New Delhi	7-9 Dec 2018
16.	Dr Kavita Khanna, Jyotika Pruthi & Dr Vijender Singh	CSE	Google Faculty Institute India '18 event	Google, Gurugram	11Dec 2018
17.	Dr Divyabha	CLL	Session on 'Interpersonal Skills'	POSCO-IDPC, India Gurugram	12-13 Dec 2018
18.	Prof. H B Raghavendra	VC, NCU	National Conference on 'Positioning India on the Global Education Map: Strategies and Road Map'	India Habitat Centre, New Delhi	14 Dec 2018

Conferences, Workshops attended by faculty

19.	Prof. Prem Vrat	PC, NCU	15th Annual Conference of Indian Society of Quality (ISQ)	Hotel Holiday Inn, New Delhi	15-Dec 2018
20.	Dr Saumya Dixit	SOM	Training Programme on 'Case Study Methods: Learning, Teaching and Writing'	MNNIT Allahabad	17-21 Dec 2018
21.	Dr Akshat Aditya Rao	SOM	International Marketing Conference	Great Lakes Institute of Management, Chennai	20-21 Dec 2018
22.	Dr Vijender Singh	CSE	IEEE International Conference on Parallel, Distributed and Grid Computing	Jaypee Univ. of IT, Solan, HP	20-22 Dec 2018
23.	Prof. H B Raghavendra	VC, NCU	106th Indian Science Congress	Lovely Professional University, Punjab.	4-5 Jan 2019
24.	Ms Pallavi Bajpai	SOL	International Seminar on Protection of Women and Children Rights: Issues and Challenges	The Indian Law Institute, New Delhi	12 Jan 2019
25.	Dr Vijender Singh	CSE	Externship	Info Edge India Limited, Noida	16 Jan 2019
26.	Prof. H B Raghavendra	VC, NCU	International Conference on STEM	Ahmedabad Science City	17 Jan 2019
27	Ms Unanza Gulzar	SOL	National Conference on International Humanitarian Law	Vivekananda Institute of Law and Legal Studies, New Delhi	19 Jan 2019
28.	Mr. Diptendu Roy & Mr Jag Parvesh Dahiya	CE & ME	Technical Talk on Green Building	Hotel Silver Ark, Gurugram	24 Jan 2019
29	Mr. Shubham Bansal	CE	Training on Laboratory Quality Management System & Internal Audit	CIPET: CSTS- Bhopal	28-31 Jan 2019
30.	Dr Sunita Sharma	APS	International Conference on Advanced and Basic Sciences (ICABS 2019)	GDC Memorial College, Bahal	7-9 Feb 2019
31.	Prof. H B Raghavendra	VC, NCU	International Conference on Leadership	St. Joseph Institute of Management, Bangalore	8-10 Feb 2019
32.	Dr Jagdeep Kaur	CSE	IEEE international conference on "Machine Learning, Big Data, Cloud & Parallel Computing	Manav Rachna, Faridabad	14-16 Feb 2019
33.	Dr Kavita Khanna & Ms Jyotika Pruthi	CSE	12th ASSOCHAM National Education Summit	Lé-Meridien, New Delhi	21 Feb2019
34.	Ms Unanza Gulzar	SOL	National Conference on Alternative Dispute Resolution	Sharda University, Greater Noida	22 Feb-2019
35.	Dr Anjali Garg and Mr Ajay, EECE & Mr Anmol Bhatia ME	EECE & ME	Workshop on SCADA	Mitsubishi Electric India (MEI) Pvt. Ltd	26-27 Feb 2019
36.	Dr Esha Jain	SOM	Workshop on 'Case Study'	(UPES), Dehradun	7 - 9 Mar 2019
37.	Ms Garima Lakhmani & Dr Praveen Kumar	SOL	4th Amity National Moot Court Competition	Amity Law School, Gurugram	9 Mar 2019
38	Ms Unanza Gulzar	SOL	National Seminar on Cyber Crime-Issues and Challenges	Jamia Milia Islamia, New Delhi	9 Mar2019

39.	Dr Kavita Khanna and Ms Prerna Singal	CSE	Bett Asia 2019	Kuala Lumpur, Malaysia	12-13 Mar 2019
40.	Dr Vaishali Sahu	CE	Seminar titled "Industrial Waste and Waste Water Management"	Hotel Lemon Tree, Sector 29, Gurgaon	13-Mar 2019
41.	Dr Esha Jain	SOM	3rd International conference on 'Rethinking Innovation: Role of Management & Technology in Modern Business Practices'	Amity University, Noida	14-15 Mar 2019
42.	Dr Kavita Khanna	CSE	International Conference on "ICT for Digital, Smart, and Sustainable Development"	Jamia Hamdard, New Delhi	15 Mar 2019
43.	Dr Esha Jain	SOM	International Conference on 'ICT for Digital, Smart, and Sustainable Development: Challenges, Opportunities, Indian Perspective'	Jamia Hamdard University, New Delhi	16 Mar 2019
44.	Dr Shabana Shabnam	SOL	Workshop on Empirical Legal Research :SPSS Application and Data Analysis	Jamia Millia Islamia, New Delhi	16-17 Mar 2019
45.	Dr Rohit Singh Lather	ME	One-Week TEQIP-III sponsored Short Term Course on 'IC Engine Fuels & Combustion Technologies (ICEFCT-19)'	NIT, Jalandhar	19-24 Mar 2019
46.	Dr Archanaa Dongre	CE	Symposium on "Current Challenges for Safe and Sustainable Structural Development"	PDPU, Ahmedabad	27-29 Mar 2019
47.	Prof. H B Raghavendra	VC, NCU	International Conference on 'Building Partnerships towards Collaborative International Learning'	Symbiosis International, Pune	4-6 Apr 2019
48.	Dr Rita Chhikara	CSE	20th International Conference on Contemporary Issues in Science, Engineering & Management	Singapore	6-7 Apr 2019
49.	Dr Archanaa Dongre	CE	A Gathering for Women Empowerment: Redefining Morals	Dhankot Village, Gurugram	7 Apr 2019
50.	Prof. H B Raghavendra	VC, NCU	Deloitte Dean's Summit 2019	Deloitte, Hyderabad	8-9 Apr 2019
51.	Dr Shabana Shabnam	SOM	International Conference on Domestic Reception of Public International Law	Faculty of Law, Univ. of Delhi	12-13 April 2019
52.	Dr Shaveta Arora	EECE	International Conference on Intelligent Computing & Smart Communication (ICSC 2019)	(IHET), Tehri, Uttarakhand	19-21 Apr 2019
53.	Dr Preeti Chawla	SOM	Summit on promoting Green, Sustainable & Innovative MSMEs in India	IHC, New Delhi	24 Apr 2019
54.	Ms Jyotika Pruthi	CSE	TEDx India Organizers Workshop 2019	Pearl Academy of Fashion, Jaipur	27-28 Apr 2019
55.	Ms Jyotika Pruthi	CSE	Indian Education Awards-Top 10 Young Teachers of the Year	Radisson, Dwarka	4 May 2019
56.	Mr Diptendu Roy	CE	Himalayan Innovation challenge under theme Start-ups for Himalayas	IIT Mandi	25-26 May 2019
57.	Ms Mahima Anand	SOM	MDP on Data Analytics for Advanced Research	IIM, Sirmaur	1-2 Jun 2019
58.	Dr Jagdeep Kaur	CSE	3rd International Conference on Advanced Informatics for Computing Research (ICAICR-2019)	Deventure Shimla Hills, Shimla	15-16 Jun 2019

59.	Ms Jyotika Pruthi & Ms Garima	CSE	Seminar on Emotional Intelligence	DAV, Faridabad	27-28 Jun 2019
60.	Ms Shakshi Sharma	CSE	Workshop on AI Assisted Data Analytics	IIIT D	11–14 Jul 2019
61.	Dr Akshat Aditya Rao	SOM	2019 IIM Indore-NASMEI Marketing-IS Conference	IIM, Indore	26-28 July 2019
62.	Prof. Hemant Trivedi, Dr Shilpa Sindhu, Dr Esha Jain, Dr Poonam Arora & Dr Akshat A Rao	SOM	10th Indian Management Conclave	IIC, New Delhi	2-3 Aug 2019
63.	Prof. Prem Vrat	PC, NCU	10th Indian Management Conclave	IIC, New Delhi	2-3 Aug 2019
64.	Prof. Prem Vrat	PC, NCU	14th World Education Summit	Leela Ambience, New Delhi	10 Aug 2019
65.	Dr Sunita Sharma	APS	National Workshop in Tech4Seva	IIT Delhi	12 Aug2019
66.	Ms Amanpreet Kaur, Dr Shaveta Arora, Dr Satnam Singh	ECE & ME	AWIM – A World in Motion	ICAT Manesar	16 Aug 2019
67.	Ms Prerna Singal, Dr Sumanlata Gautam & Ms Monika Yadav	CSE	Conference on Internet of Things dated	Nagarro, Gurugram	4 Sep 2019
68.	Dr Esha Jain	SOM	Workshop on 'Practices of comprehensive sanitation management under Swachhta Action Plan-Engaging Higher Education Institutions'	Centre for Professional Development in Higher Education, UGC-HRD Centre Delhi	4 Sep 2019
69.	Ms Shiksha Dahiya	SOL	International summer Academy on 'Women's Empowerment for Sustainable Development'.	Koc University, Turkey	6 Sep 2019
70.	Dr Archanaa Dongre	CE	17th International Symposium on 'New Technologies for Urban Safety of Mega Cities in Asia' (USMCA 2018)	IIIT Hyderabad	12-14 Dec 2018
71.	Dr Divyabha	CLL	Basics of Business and Technical Communication	Hitachi Chemicals, India	16 Nov 2019
72.	Dr Divyabha	CLL	"Building Harmony and Interpersonal Relationship at work	POSCO- IDPC, Gurugram	12-13 Dec 2019

Guest Lectures

1. An expert talk on the topic 'Communication Networks Evolution and the Road to 5G' by Mr Rahul Sathe, Ericsson Global India Pvt. Ltd, Gurugram was organized by the department of EECE on 3rd October 2018.

2. ASQ NCU Chapter organized an interactive session with ASQ Business Development Head, Mr Anandiya Sarangi, on 3 Oct 2018.

3. An Orientation and Ice breaking session was organized by Google Students' Club, which aims at creating awareness regarding the internet as well as new and improved Google technologies on 4 Oct 2018.

4. A lecture on CMOS Technology by Alumnus Mr Shankar Arora (MTech, Class of 2012), R&D Engineer, Logic Fruit Technologies, Gurugram was organized by the department of EECE on 4th October 2018.

5. A lecture on 'Data Analysis' by Ms Nishtha Madaan, Senior Research Software Engineer, IBM India Research Lab was organized by the department of Applied Sciences on 4 Oct 2018.

6. An interactive session on 'Cyber Security' for NCU girls by Cyber Peace Foundation was organized by the department of CSE on 5 Oct 2018.

7. A lecture on 'Access Control List and SDWAN' by Mr Gaurav Sidana, SVT/ PV Engineer, R&D, Ciena was organized by the department of CSE on 9 Oct 2018.

8. A talk on 'What to do After B.Tech.?' by Mr Amit Poddar, Chief Knowledge Expert, Triumphant Institute of Management Education (T.I.M.E) was organized by the department of EECE on 11 October 2018.

9. A lecture on 'Civil Engineering - A challenging career' by Er. P Surya Prakash, Founder and Mentor of Smart Infr-EST, an eminent engineer and consultant who has made significant contribution to Civil Engineering in India was organized by the department of CE on 12 Oct 2018.

10. A lecture on 'Software Quality Assurance' by Mr Anil Bahl, Practice Head, IT Service Management Group, Tech Mahindra Ltd, was organized by the department of CSE on 17 Oct 2018.

11. A lecture on 'Text and Web Intelligence Analytics- Sentiment Analysis' by Mr Sahil Arora, Manager and Business Analyst, IBM, Bengaluru, was organized by the department of CSE on 23 Oct 2018.

12. ACM student Chapter organized a lecture on 23 Oct 2018 on 'Career Counselling for Higher Studies in USA'. The speaker Mr Raj Singh, Founder of Connexio Inc, USA.

13. A special talk on 'Ethical Issues in Conduct of Research and Development' by by Padma Shri Prof K L Chopra, Honorary Distinguished Research Professor, NCU, Former Director, IIT Kharagpur, Former Professor & Dean, IITD and President, Society for Scientific Values was organized by RDIL on 24 Oct 2018.

14. Dr Vandana Khanna, Asst. Prof. at NCU delivered a guest lecture on 'Solar Energy: The Ultimate Renewable Resource' to 2nd and 3rd year students at DPGITM, Gurugram, on 29 Oct 2018.

15. A technical lecture to impart contextual based education and to promote industry-institute interaction by Mr. Sanjay Hans, Emerson Climate Technologies (India) Pvt. Ltd., Gurugram was organized by ISHRAE Student Sub-chapter on 5 Nov 2018.

16. A guest lecture on 'Routing Algorithms and Firewalls' by Mr Gaurav Sidana, SVT/ PV Engineer, R&D, Ciena was organized by the department of CSE on 13 Nov 2018.

17. A lecture on 'Design Thinking: The Path to Innovation' for students of Creativity, Innovation, Leadership and Entrepreneurship by Ms Shalu Manan, Global Capability Development Leader for Transformation Services, Genpact, was organized by School of Management on 13 Nov 2018.

18. A lecture on 'Cyber Laws, Cyber Crime and Cyber Security' by Dr Sarah Jane Fox, Senior Lecturer in Criminology, Middlesex University London, specializing in law and policing, was organized by School of Law on 13 Nov 2018.

19. A guest lecture to learn about opportunities in industry related to Data Analysis students by Mr Rahul Jain, Transition Manager (IT Transition & Transformation Pools), IBM, was organized by the department of Applied Sciences on 15 Nov 2018.

20. A session on 'Getting high quality research published' with Prof. Subhadip Roy, Faculty Marketing at IIM Ahmedabad was organized by School of Management on 09 Jan 2019.

21. Alumnus Mr Kabir Sethi, First Grade Pilot with Indigo, interacted with students on the topic 'Follow your passion'. It was organized by the department of CE on 4 Feb 2019.

22. A talk on 'Higher Education Opportunities for students at Providence University, Taiwan by Dr Rushikesh Khire, International College, Providence University, Taiwan was delivered on 30 Jan 2019. It was organized under partnership programme between both universities.

23. A guest lecture on 'Human Trafficking and Migration' was delivered by Prof.(Dr) K Elumalai, Director, School of Law, IGNOU was organised by School of Law on 31 Jan 2019.

24. Lectures on 'Lasers: From Einstein's Vision to Today's Reality' and 'Nonlinear Optical Phenomena: From Fundamentals to Applications' delivered by Dr Sib Krishna Ghoshal, Associate Professor of Physics at the Faculty of Science, University Technology Malaysia were organized by the department of Applied Sciences on 4 Feb 2019.

25. A lecture on 'Career Opportunities in the Financial Markets' was delivered by Mr Sushil Alewa, a certified trainer of financial education, SEBI, was oragnised by School of Management on 8 Feb 2019.

26. A guest lecture on 'Sustainable Manufacturing: The Future' by Prof. Mark Jolly, Professor of Sustainable Manufacturing, Sustainable Manufacturing Systems Centre, Cranfield University, UK was organized by the department of ME on 12 Feb 2019.

27. Alumnus Mr Chirag Nagpal, Senior Engineer, in Dhruv Interiors interacted with the students to enlighten them about the 'Job opportunities for the Civil Engineers on 10 January 2019.

28. A guest lecture and research meeting by Mr Vidya Sagar, PE, PMP, AECOM, Project Manager, Maryland Aviation Administration, USA was organized by the department of Civil & Environmental Engineering on 1 March 2019.

29. A Career Counselling session by Mr Abhishek Gupta, a career expert at Byjus was organised by the department of EECE on 4 March 2019.

30. A talk on 'Data Science: Challenges and Solutions in Production Environment' by Dr Mohit Kumar, Principal Data Scientist, Naukri.com (Info Edge India Pvt ltd) was organized by the department of CSE on 4 March 2019.

31. A session on 'Quantitative Aptitude and Ability' by Mr Sumit Mishra was organized 5 & 6 March 2019 and a session on " Technical Profile Building' by Mr Abhishek Gupta, Career Expert, BYJUS, was organized on 5 & 14 March 2019 by the department of CSE.

32. A guest lecture on topic 'Industry 4.0' by Mr Abhinov Chakraborty, Regional Manager at Sofcon India Ltd was organised by the department of on 7 March 2019.

33. An Arduino workshop was conducted by the Department of EECE & IEEE-NCU Student Branch on 8 March 2019.

34. IEI (Institution of Engineers, India) CSE NCU chapter organized a lecture, delivered by Mr Manuj Chandra on the topic 'Environmental Awareness' on 13 March 2019.

35. A lecture on Mergers & Acquisitions by Mr Amit Kumar, Vice President of Fab Hotels, was oraganised by the School of Management on 14 Mar 2019.

36. The Department of EECE and IEEE NCU organized an interactive session in collaboration with Intel Software titled 'Innovations in Internet of Things' on 18 March 2019.

37. A guest lecture of Mr Vivek Dixit, GM Network solutions, Huawei Telecommunications, Gurugram on 'New Technology Trends in Telecom Industry' was organized by the Department of EECE on 27 March 2019.

38. An awareness session on 'Innovation and Entrepreneurship' was organized by Master Jagannath Centre of Excellence and Incubation on 28 March 2019.

39. Alumnus Mr Abhishek Choudhary, Quantity Estimator in Virtual Employees interacted with students on the topic 'Skill Requirement and Development for Civil Engineers'. It was organized by the department of CE on 14 March 2019.

40. A guest lecture on 'Skills required by Mechanical Engineers to get Placed' by Alumnus Mr Nishant Yadav, Manager, Shiv Pneumatics and and Mr Tushar Talwar, HR Manager, Shiv Pneumatics was oragnised by the department of ME on 29 March 2019.

41. A guest lecture on 'Indian Maritime Boundaries delimitation, management and Security Issues' by Captain (Dr) Gurpreet S Khurana, Indian Navy, Executive Director, National Maritime Foundation (NMF), New Delhi was organized by School of Law on 29 March 2019.

42. A guest lecture on Types of Air conditioning Systems by Mr Gagan Malhotra, Head of Centralized Air conditioning/ Chillers for North India, Daikin Air Conditioners and Alumnus Mr Anmol Tikoo, Engineer, Daikin Air conditioners was organized by the department of ME on 2 April 2019.

43. An expert lecture on 'Emerging trends of 3-D Printing' by Mr Vivek Yadav, CEO, Designifying Gurugram was organized by the department of ME on 10 April 2019.

44. A lecture on 'Use of MATLAB in Industry' by Alumnus Mr Aman Singla, Engineer in AVL India was organised by the Department of EECE on 11 April 2019.

45. The Department of EECE and WIE-IEEE organized a guest lecture titled 'How to Ace an Interview' delivered by Lieut. Rita Gangwani, a renowned motivational speaker and a celebrity pageant coach on 12 April 2019.

46. A lecture on 'Role of Digital Electronics Engineers' by Alumnus Ms Agrata Kumar, Business Analyst in Deloitte Boston was organised by the Department of EECE on 12 April 2019.

47. A guest lecture titled 'Applications of DSP in real-world underwater scenarios' by Prof. Rajender Bahl, CARE, IIT Delhi was organised by the Department of EECE on 16 April 2019

48. A guest lecture on Live trading of currency options on NSE portal by CA Manish Gupta was organized by School of Management on 16 April 2019.

49. Centre for Intellectual Property Rights Advocacy, Research and Training (CIPRAAT), School of Law organized an expert lecture titled 'Pros and Cons of Protecting Intellectual Property Rights' on 16 April 2019.

50. Centre for Intellectual Property Rights Advocacy, Research and Training (CIPRAAT), School of Law organized a workshop titled 'Start-ups and the Practical approach to Patents' for the students of Mechanical Engineering on 18 April 2019.

51. An expert lecture titled 'Recent Trends in Cryptography' by Dr AK Mohapatra, Chief Technical Officer (CTO), Delhi Police was organised by the Department of CSE on 18 April 2019.

52. A special lecture on 'Agile Methodology using SCRUM' by Mr Varun Rao, Product Manager, SOTI, Gurugram was organised by the Department of CSE on 18 April 2019.

53. A guest lecture by Mr Ganesh Chandra Barman, Senior Manager, Xplorer Consultancy Services Pvt. Ltd, Mr Prashant Kumar, Delhi Jal Board, Zonal Engineer-Delhi Jal Board and Ms A Nisha Rani, Assistant Engineer, Water Resources, Organization, Public Works Department, Government of Tamil Nadu was organized by the department of CE on 22 Apr 2019.

54. An expert lecture on 'Solar photovoltaic Power Generation and Thermal Energy Storage for Solar Energy' by Dr Som Mondal from Department of Energy and Environment, TERI School of Advanced Studies, was organized by the department of ME on 22 April 2019.

55. A guest lecture on 'Skills required by Mechanical Engineers to get Placed' by Alumnus Mr Nishant Yadav, Manager, Shiv Pneumatics, and Mr Tushar Talwar, HR Manager, Shiv Pneumatics was organized by the department of ME on 29 March 2019.

56. A guest lecture on 'Future Prospects for Management Studentsby Mr Vikas Vats, President- HR Association was organized by School of Management on 23 April 2019.

57. A guest lecture on 'International Business, Human Rights

and Social Responsibility' by Andy Unger - Head of the Law Division, London South Bank University was organized by School of Law on 23 April 2019.

58. An Expert lecture on Making the transition from campus to corporate by Mr Deepak Jain (CS), Ex-Vice President, Unitech Limited and founder of Vijayash Foundation was organised by School of Management on 25 April 2019.

59. An expert lecture on 'Arithmetic's by Vedic Mathematics' by Dr Sanjeev Kumar from Thapar institute of Engineering and Technology was organized by the department of ME on 26 April 2019.

60. A guest lecture on 'Social Media and Cyber Security' by Mr Mohit Rampal, Cyber Security Evangelist & Consultant, RamoGnee Technologies Pvt Ltd was organised by School of Management on 26 April 2019.

61. A special lecture on The Displacement in 21st Century and Practice of Refugee Protection- UNHCR Perspective by Mr Kiri Atri, Protection Associate, United Nations High Commissioner for Refugees (UNHCR) was organized by School of Law on 26 April 2019.

62. An expert Session on 'Technology Development for Oil & Gas, Transportation, Aviation and Renewables with special focus on Component Testing & Method Automation' by Dr Murli Krishna Rangharajhan, Global Product Configuration Leader at GE Power Portfolio was organized by the department of CE on 7 Aug 2019.

63. An expert session on 'Getting Smart with Investments' by Mr Rahul Saini, an alumnus of the University of Wolverhampton, England and the founder and President of 'Mission Financial Literacy' was organized School of Management, on 7 August 2019.

64. An expert lecture on 'Ace your Interview and profile building' Ms Shikha Malhotra, a Certified Image Consultant (Conselle Institute of Image Management, USA) and Soft Skills Facilitator and Trainer (Scottish Qualifications Authority) was organized by the department of ECE on 7 August 2019.

65. An awareness session on 'How to launch your idea on no Money?' by Mr Sameer Talwar, an Entrepreneur with four start-ups in Hospitality education and consulting was organized by the Entrepreneurship Development Cell, NCU on 8 August 2019.

66. An expert lecture on Engine Technologies by Mr Gagan Kapoor, City Car Care, Gurugram was organized by the department of ME on 13 August 2019.

67. A guest lecture on 'Knowing our golden history' by the speaker Mr Prem Kumar, Vice President & Head of Artificial Intelligence, OakNorth Bank was organized by the School of Law on 13 August 2019.

68. A guest lecture on Visualizing IoT Solutions for Smart Automation by Mr Vivek, an Official from Mitsubishi Electric India (MEI) Pvt. Ltd was organized by the departments of ECE on 19 Aug 2019.

69. An expert session on the dire need to inculcate the habit of referring Indian Standards while testing materials by Mr Sharad Naik, Senior Technical Advisor, Acropolis Engineering Wisdom and Observer, NABL was organized by the Department of CE on 26 August 2019.

70. A Guest Lecture on 'Patents and related Industry Issues' by Mr Sukhdeep Singh, an Assistant Controller of Patents & Designs at the Ministry of Commerce and Industry, Government of India was organized by School of Law on 11 September 2019.

71. A Guest Lecture on 'Emerging challenges of techno-legal aspects to fix criminal liability in developed countries' by Prof. Steven Levett, a Senior Lecturer in Professional Practice at University of York, UK was organized by School of Law on 13 September 2019.

72. A guest lecture on 'Environmental & Sustainability-Environment Management for Business Managers' BY Mr Paritosh Tyagi, Chairman, Retired Central Pollution Control Board, Ministry of Environment and Forest, New Delhi was organized by the department of APS on 23 September 2019.

73. An expert lecture on 'Liability of Online Market Places in Intellectual Property Right' by Ms Abha Kashyap, International Patent Agent and Managing Partner, Kashyap Partners and Associates was organized by School of Law on 23 September 2019.

74. A session on Recent Amendments in The Central Motor Vehicle Rules (CMVR) by The Regional Transport Office (RTO), Government of Haryana, Gurugram and Mr Anurag Kulshrestha, Founder & President, TRAX, a road safety NGO was organized by the department of ME on 27 September 2019.

75. An expert lecture on fundamental amendments to be Arbitration and Conciliation Act by School of Law on 30 Sep 2019. The session was conducted by Mr Ashish Verma, Founder and Managing Partner Vidhisastras-Advocates and Solicitors.

76. A guest lecture on Emerging areas of Public health by School of Law was organized by 24 Oct 2019. Lecture was delivered by Ms Anjali Singh of Indian Institute of Public Health, New Delhi.

77. A lecture on contextual learning was organized by Dept. of Mechanical Engineering on 3 Oct 2019 for the final year Mechanical Students studying Quality Engineering and Reliability assurance course. The session was conducted by Mr Chirag Garg from Synergy School of Business skills.

78. An expert session on Entrepreneurial opportunities in financial sector was conducted by School of Law on 15 Nov 2019. The lecture was delivered by Mr Avtar Singh, CEO and Co-Founder of Intelliout Technologies Pvt. Ltd.

Industrial Visits

S. No.	Department	Industry	Dates
1.	APS	National Physical Laboratory, Delhi	28 Sept 2018
2.	ME	Maruti Suzuki, NEXA Workshop, Gurugram	4 Oct 2018
3.	SOM	Coca Cola (Baddi, HP) and Hindustan Unilever Ltd (Baroti Wala, HP)	12 Oct 2018
4.	SOM	National Small Industries Corporation, New Delhi	12 Oct 2018
5.	ME	Maruti Centre for Excellence (MACE), Manesar	15 Nov 2018
6.	SOL	Myntra and Jabong Gurugram	20 Oct 2018
7.	EECE	Huawei India, Unitech Park, Sohna Road	18 Feb 2019
8.	SOM	Barclays Bank, Noida	19 Mar 2019
9.	SOM	Yakult, Sonepat, Haryana	29 Mar 2019
10.	SOM	Parle G, Bahadurgarh, Haryana	4 Mar 2019
11.	EECE	Logic Fruit Technology (LFT), Gurugram	12 Apr 2019
12.	APS	Parle G, Bahadurgarh, Haryana	12 Apr 2019
13.	ME	Motif Electric Ltd, Badli Industrial Area, Delhi	15 Apr 2019
14.	SOM	Khodri Power House Dakpathar, Uttarakhand	5-6 Apr 2019
15.	ISHARE Student Chapter	Emerson Climate Technologies (India) Pvt Ltd, Gurugram	27 Mar 2019
16.	ME	Prem Motors, Gurugram	25 Jul 2019
17.	CSE	WizAR studio based in Gurugram	30 Aug 2019
18.	CEE	Hindustan Prefab Limited, Govt. of India Enterprise	3 Sept 2019
19.	APS	National Physical Laboratory, New Delhi	30 Sep 2019
20.	SOM	Panipat Thermal Power Station	11 Oct 2019
21.	SOM	Patanjali Ayurvedic Ltd. (Food and Herbal Park)	12 Oct 2019
22.	SOM	Hella India Lighting Ltd.	1 Nov 2019
23.	SOL	Gurugram Mediation Centre	8 Nov 2019

Research Publications

November 2018 - December 2019

November 2018

Book Chapter

International

- **Subhradipta Sarkar** (2018) 'Legal Recognition of the Rights of Disaster-induced Displaced Persons: An Inconspicuous Episode in International Refugee Law' in Global Refugee Crisis: A Contemporary Reflection, Chapter 9, pp. 139 – 162, Thomson Reuters, ISBN - 978-93-86374-64-6, **SOL2018BC001.**

Journals

International

- Anju Arya, Khushbu Gupta, **Tejpal Singh Chundawat*** and Dipti Vaya (2018) 'Biogenic Synthesis of Copper and Silver Nanoparticles Using Green Alga Botryococcus braunii and Its Antimicrobial Activity', Bioinorganic Chemistry and Applications, Vol. 2018, pp. 001-009, **APS2018J028.**

- **Hukum Singh*** (2018) 'Watermarking image encryption using deterministic phase mask and singular value decomposition in fractional Mellin transform domain', IET Image Processing, Vol. 12, No. 11, pp. 1994-2001, **APS2018J029.**

- Priyanka Maan* and **Hukum Singh** (2018) 'Non-linear cryptosystem for image encryption using radial hilbert mask in fractional Fourier trnasform domain', 3D Research, Vol. 9, No. 53, pp. 1-12, **APS2018J030.**

- Deepika* and **Hukum Singh** (2018) 'Study of Electrical Properties of Nanostructured Se7Te20M6 (M= Bi, Sb) thin films', Advanced Science, Engineering and Medicine, Vol. 10, No. 7-8, pp. 810-813, **APS2018J031.**

Conference Presentations

National

- **Unanza Gulzar** (2018) 'Human Rights in Islam With Reference to Right to Education and Rights of Women', National Seminar on Islam and Contemporary Legal Issues, Faculty of Law, Jamia Milia Islamia University in association with Centre for Study and Research, Hyderabad and Council of Legal Studies, New Delhi, Indian Society of Victimology, **SOL2018C004.**

- **Unanza Gulzar** (2018) 'Settlement of disputes outside the courts under CPC - A Critical Apprisal', National Seminar on Emerging Trends of Alternative Dispute Resolution in India, Faculty of Law, Jamia Milia Islamia University, **SOL2018C005.**

- **Unanza Gulzar** (2018) 'A Critical Evaluation of Surrogate Advertisement under Trade Mark laws', National Seminar on Intellectual Property Rights: Emerging Issues and Challenges, Chanakya National Law University, Patna, **SOL2018C006.**

- **Pallavi Bajpai** (2018) 'Building Blocks for Effective International Commercial Arbitration in India', National Seminar on Emerging Trends of Alternative Dispute Resolution in India, Faculty of Law, Jamia Milia Islamia University, **SOL2018C007.**

December 2018

Book Chapter

International

- Yugal Kumar*, Neeraj Dahiya, Sanjay Malik, Geeta Yadav and **Vijendra Singh** (2018) 'Chemical Reaction-Based Optimization Algorithm for Solving Clustering Problems' in Natural Computing for Unsupervised Learning, Chapter 7, pp. 147-167, Springer, ISBN - 978-3-319-98566-4, **CSE2018BC008.**

Journals

International

- Barkha Bansal and **Sangeet Srivastava*** (2018) 'Hybrid Attribute Based Sentiment Classification Of Online Reviews For Consumer Intelligence', Applied Intelligence, pp. 1-13, **APS2018J032.**

- Deepika*, **Hukum Singh** and Narendra Sahay Saxena (2018) 'Optical Characterization of Nanostructured Ge1− xSnxSe2.5 (x = 0, 0.3, 0.5) Films', Optical and Quantum Electronics, Vol. 51, No. 1, pp. 1-11, **APS2018J033.**

Jan 2019

Journals

International

- **Diptendu Roy*, Lokesh Choudhary,** Nikhil Sharma and Nikhil Sharma (2018) 'Study on physical properties of quaternary cement concrete with novocon XR steel fibers', International Journal of Sustainable Building Technology and Urban Development, Vol. 9, No. 4, pp. 197-208, **CEE2019J001.**

- Purnima Yadav, **Diptendu Roy*** and Megha Kalra (2018) 'Model-based analysis of base isolation systems for multi story buildings subject to various Seismic Events', International Journal of Sustainable Building Technology and Urban Development, Vol. 9, No. 4, pp. 209-221, **CEE2019J002.**

- Purnima Bajpai*, K. Chandrashekhar and **Shubham Bansal** (2018) 'Identification of Key Challenges associated with the implementation of renovation of modernization (r&m) projects in India using factor analysis.', International Journal of Engineering and Technology, Vol. 7, No. 4.5, pp. 767-771, **CEE2019J003.**

- **Jyotika Pruthi*, Shaveta Arora and Kavita Khanna** (2018) 'Modified Bird Swarm algorithm for edge detection in noisy images using fuzzy reasoning', Computer Methods In Biomechanics And Biomedical Engineering-Imaging And Visualisation, DOI: 10.1080/21681163.2018.1523751, **CSE2019J001.**

- **Jyotika Pruthi, Shaveta Arora* and Kavita Khanna** (2018) 'Meta heuristic Techniques for Detection of Optic Disc in Retinal Fundus Images', 3D Research, Vol. 9, No. 4, pp. 22, **CSE2019J002.**

- **Jyotika Pruthi*, Shaveta Arora, and Kavita Khanna** (2018) 'An Automated Technique for Optic Disc Detection in Retinal Fundus Images Using Elephant Herding Optimisation Algorithm', Recent Patents on Computer Science, Vol. 12, No. 1, **CSE2019J003.**

- Ravindra Ojha* and **Prem Vrat** (2018) 'Implications of Goods and Services Tax reform on the Make in India initiative: A system dynamics perspective', systems research and behavioural science, pp. 1-13, **MED2019J001.**

- Sarbjeet Kaushal* and **Satnam Singh** (2018) 'Slurry erosion behaviour of plasma sprayed coating on turbine steel', Industrial Lubrication and Tribology, Vol. 71, No. 1, pp. 1-9, **MED2019J002.**

- **Satnam Singh*, Praveen Singh,** Dheeraj Gupta, Vivek Jain, Rohit Kumar and Sarbjeet Kaushal (2018) 'Development and characterisation of microwave processed cast iron joint', Engineering Science and Technology, an International Journal, pp. 1-9, **MED2019J003.**

- **Deergha Sharma** and Shelly Singhal (2018) 'Panel Data Approach: An investigation of profitability of Indian Nationalised banks', Apeejay Journal of Management Sciences and Technology, Vol. 6, No. 1, pp. 45-57, **SOM2019J001.**

National

- Jainendra Kumar*, Saqib Zaidi, Anuj Kumar Jain and **Jag Parvesh Dahiya** (2018) 'A Review on Shell and Tube Heat Exchanger Design Optimisation', Trends in Machine Design, Vol. 5, No. 2, pp. 42-53, **MED2019J004.**

Book Chapter

International

- **Indira Priyadarshini Debnath** and Shiv Kumar Gupta (2018) 'Necessary and Sufficient Optimality Conditions for fractional

interval-valued optimisation problems' in Decision Science in Action, Chapter 12, pp. 155-173, Springer, ISBN: 978-981-13-0860-4, **APS2019BC001**

Conference Proceeding

International

- Pulkit Choudhary and **Vaishali Sahu** (2018) 'Analysis of Delays in Real Estate Projects in Delhi/NCR', 4th International Conference on Science, Technology & Management (ICSTM-2018), pp. 1430-1433, **CEE2019P001.**

Conference Presentation

International

- **Anshu** (2018) 'An Algorithm to detect S-Consistency in Common-Edge Sigraph', International Conference on Mathematical Modelling and Computations (ICMMC-2018), South Asian university New Delhi, **APS2018C014.**

- Renu Yadav, Dipti Vaya and **Tejpal Singh Chundawat** (2018) 'Photocatalytic Activity of Hybrid Nano composite of Iron Oxide', International Conference on Sustainable Solutions in Industrial Pollution, water and waste water treatment, Department of Civil Engineering, AMU, Aligarh, **APS2018C015.**

- Anju Arya, Khushbu Gupta and **Tejpal Singh Chundawat** (2018) 'Copper and Silver Nanoparticles: Green Synthesis, Characterisation and Antimicrobial Activity', International Conference on Microbes for Biotechnological Innovations, Department of Microbiology and AMI Rohtak Unit, Haryana, **APS2018C016.**

- Khushbu Gupta and **Tejpal Singh Chundawat** (2018) 'Biogenic Synthesis of Copper Nanoparticles using Fungus Fusarium Oxysporum and its antimicrobial activity', International Conference on Microbes for Biotechnological Innovations, Department of Microbiology and AMI Rohtak Unit, Haryana, **APS2018C017.**

- **Vijendra Singh** (2018) 'Deep Learning for software defect Prediction in time', IEEE Fifth International Conference on Parallel, Distributed and Grid Computing, Jaypee University of Information Technology, **CSE2019C001.**

- **Vijendra Singh** (2018) 'Deep Learning and Big Data Technologies in Medical Image Analysis', IEEE Fifth International Conference on Parallel, Distributed and Grid Computing, Jaypee University of Information Technology, **CSE2019C002.**

- **Vijendra Singh** (2018) 'Diagnosis of Breast Cancer and Diabetes using Hybrid Feature Selection Method', IEEE Fifth International Conference on Parallel, Distributed and Grid Computing (PDGC),, Jaypee University of Information Technology, **CSE2019C003.**

- **Vijendra Singh** (2018) 'Sentiment Analysis Using Lexicon Based Approach', IEEE Fifth International Conference on Parallel, Distributed and Grid Computing, Jaypee University of Information Technology, **CSE2019C004.**

- **Satnam Singh** and Dheeraj Gupta (2018) 'Processing and charachterization of metallic powder based castings using microwave energy', International Workshop on Nano/Micro 2D-3D Fabrication, Manufacturing of Electronic-Biomedical Devices & Applications, IIT Mandi, **MED2019C001.**

- **Praveen Singh** and **Satnam Singh** (2018) 'Correlation of microstructure evolution and functional wear performance of heat treated dual phase steel', International Workshop on Nano/Micro 2D-3D Fabrication, Manufacturing of Electronic-Biomedical Devices & Applications, IIT Mandi, **MED2019C002**

National

- Anju Arya, Khushbu Gupta and **Tejpal Singh Chundawat** (2018) 'In Vitro Antimicrobial and Antioxidant activity of biogenically

synthesised palladium and platinum nanoparticles using botryococcus braunii', National Conference on Chemistry for Human Health and Environment, Green Chemistry Network Centre, University of Delhi, **APS2018C018.**

- Khushbu Gupta and **Tejpal Singh Chundawat** (2018) 'Evaluation of antimivrobial and antioxidant activity of biogenically synthesised silver nanoparticles using fusarium oxysporum', National Conference on Chemistry for Human Health and Environment, Green Chemistry Network Centre, University of Delhi, **APS2018C019.**

- Vaibhav Mishra and **Tejpal Singh Chundawat** (2018) 'Silica Supported Piperazine Sulfosalicyclic acid: A reusable and environmental friendly catalyst for synthesis of 2-aryl benzimidazoles', National Conference on Chemistry for Human Health and Environment, Green Chemistry Network Centre, University of Delhi, **APS2018C020.**

Feb 2019

Journals

International

- **Neeti Kashyap*,** A. Charan Kumari and **Rita Chhikara** (2019) 'Service discovery and selection in Internet of Things- A review', Recent Patents on Engineering, Vol. 13, No. 1, pp. 1-8, **CSE2019J004.**

- **Sumanlata Gautam*** and Latika Singh (2019) 'The development of spectral features in the speech of Indian children', Sadhana - Academy Proceedings in Engineering Sciences, Vol. 44, No. 1, pp. 15, CSE2019J005.

- **Sumanlata Gautam*** and Latika Singh (2018) 'Variations in relationship between fundamental frequency and intensity in speech of children during development', Journal of Cultural Cognitive Science, Vol. 2, No. 1, pp. 59-69, **CSE2019J006.**

- Rakhi Nangia*, **Neeraj Shukla** and **Ambika Sharma** (2018) 'Optical and structural properties of Se80Te15Bi5/PVA nanocomposite', Journal of Molecular Structure, Vol. 1177, pp. 323-330, **ECE2019J001.**

- **Naresh Kumari*, Nitin Malik** and A.N. Jha (2017) 'Modified Firefly Algorithm and Fuzzy based FOPID controller for Load Frequency Control of a power system', International Journal of Manufacturing Technology and Management, pp. 1-25, **ECE2019J002.**

- **Anjali Garg*** (2019) 'Ancillary Services, Scope and Prospects in Power Sector', International Journal of Information, Communication and Computing Technology, Vol. 6, No. 2, **ECE2019J003.**

- **Naresh Kumari*, Nitin Malik** and A.N. Jha (2018) 'Multi-area interconnected power system load frequency control usingELQR based state feedback gain controller', Evolving Systems, pp. 1-13, **ECE2019J004.**

- **Pankaj Rakheja*, Rekha Vig** and Phool Singh (2019) 'Optical asymmetric watermarking using 4D hyperchaotic system and modified equal modulus decomposition in hybrid multi resolution wavelet domain', Optik, Vol. 176, pp. 425-437, **ECE2019J005.**

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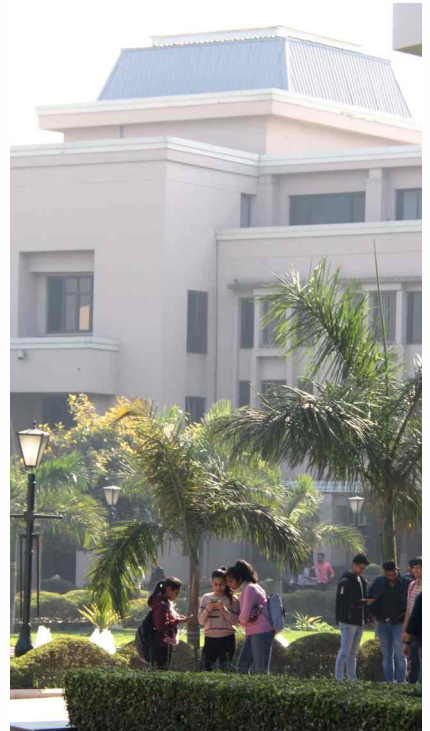
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