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17.2.4 Does your university as a body, through international collaboration and research, review comparative approaches and develop international best practice on tackling the SDGs?

RESEARCH AND DEVELOPMENT

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A University's worth, it's 'greatness', should be judged by its value to the society. Since its establishment, UPES has been among India's pioneering innovation driven University with fine tradition of developing research culture in the organization by creating dedicated research centers and winning several research projects from National and International Funding Organizations; both in the public and private sectors.

UPES has a strong ecosystem to support innovations and interdisciplinary research. To foster a research culture that provides solutions through innovative applied research to society and intellectually stimulating environment for researchers; UPES has developed commensurate research policies to provide the enabling ecosystem for state-of-the-art research:

• Expansion of research databases through subscription of SCOPUS, Science Direct, Web of Science, Emerald Insight, EBSCO, IEEE, etc.

• Provision of SEED grant for undertaking interdisciplinary and innovative research projects.

• Provision of SEED Infrastructure grant for procurement of state-of-the-art sophisticated equipment.

• Student support – financial and through mentorship – for research through a scheme SHODH.

• Talks, lectures from eminent researchers, conference, seminars, etc. for capacity building.

• Establishment of Centre for Interdisciplinary Research and Innovation (CIDRI), Machine Intelligence Research Centre (MIRC), Centre for Alternative Energy Research (CAER) & Speech and Language Research Centre (SLRC).

• Financial Support for attending National and International Conferences, etc.

• Rewards & Recognition Policy & Research Advisory Committee.

• Institutional Ethics Committee to implement adherence to highest standards of ethics.

RESEARCH CENTERS

• Centre for Interdisciplinary Research and Innovation (CIDRI)

Centre of Inter-disciplinary Research & Innovation (CIDRI) at UPES provides a platform for interaction across the boundaries of various disciplines – such as Science, Engineering, Health Environment, Computer Science, Design, Management, Humanities, Law, etc. and address the key technical, organizational and logistical challenges that currently hinder truly transdisciplinary research. CIDRI promotes and facilitates the interfacing and collaborations with industries, clinicians and doctors in hospitals for translational research, research groups of prominent national and international universities/institutes. CIDRI aims at bringing together the researchers in the field of basic Sciences, all streams of Engineering, Artificial Intelligence, Machine Learning, along with experts of Design as well as Business and Law so as to finally emerge with a product with intellectual property rights and business plan.

• Central Instrumentation Centre (CIC)

Central Instrumentation Centre (CIC) was inaugurated by ‘Padma Bhushan Dr. R. Chidambaram’ on 27th February 2014. This facility is aimed to provide data collection from sophisticated, analytical equipment's to scientific community for their advanced research and also to facilitate cutting edge technologies for societal needs. The facility is open to researchers from across the country.

• **Machine Intelligence Research Centre (MIRC)**

The facility is aimed at conducting high-end computing specific to investing Machine Learning challenges of Artificial Intelligence. It is funded by Research & Development Department of UPES, in collaboration with School of Computer Science (SOCS) having a vision to develop as Centre of Excellence (COE) that is profound and self-sustainable. MIRC facility is equipped with HPE Apollo 6000 Gen 10 server system, having 256 GBs of RAM and dual Xeon processors installed over 32 GB of GPU Tesla V100 graphic card. MIRC provides platform for researchers of all faculty and students to conduct fundamental research in the field of Artificial Intelligence and Data Sciences. It also provides assistance and collaborates with other schools of the university and other related organizations for applied AI work. MIRC facilitates the heavy and parallel computing for other fields like fluid dynamics, virtual reality, and simulation for aerodynamics. The centre is utilized by students of doctoral studies, post and under graduate, along with faculty members. Over the coming few years, the centre is expected to be strengthened with increased computational capacities and other infrastructure.

• **Centre of Alternative Energy Research (CAER)**

Providing safe, widespread, and equitable access to sustainable energy is one of the key challenges of our time. Centre for Alternate Energy Research (CAER) UPES, hosts world-leading researchers who see this challenge as an opportunity to help future generations inherit a better world. Our interdisciplinary program brings together innovators from many departments, including the School of Applied Science, School of Engineering, School of Health Sciences and School of Business.

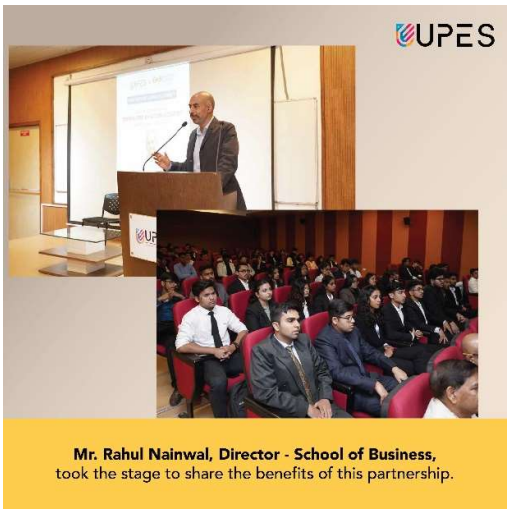
Work is in progress on different alternative energy resources using advanced technology. Current efforts include biofuel production from agricultural waste and forest , biomass by thermal and biological routes, plastic waste to energy and other value-added products and microalgae biofuels. CAER actively seek National and Global collaboration with industry, academia and all levels of government and private bodies.

UPES & GMRAA

https://twitter.com/UPESDehradun/status/1642766854849540096

#UPES students are ready to take off on a new adventure with the partnership between UPES & GMRAA! This DGCA-approved course will help students own their tomorrow. It includes a potential job opportunity for #SchoolOfBusiness students with GMR Airports.

Chief Commercial and Strategy officer of GMR Airports, **Mr. Subir Hazra** receiving a warm welcome.



Mr. Rahul Nainwal, Director - School of Business, took the stage to share the benefits of this partnership.

A moment of celebration as the **MOU** was signed.

How Semester Exchange Programs help students shed their inhibitions

https://blog.upes.ac.in/how-semester-exchange-programs-help-students-shed-their-inhibitions/

Two UPES students recount their experiences of their Semester Exchange Program to France

Mohit Gehlot, a student of M.Tech. in Renewable Energy Engineering, decided to make the most of the opportunities at UPES. As a teaching assistant, he taught B.Tech. students for a semester. He always was inclined towards research writing and had presented papers at several international conferences. But the most challenging thing he did, Mohit admits, was opting for an exchange program to France for Master (II) degree in Electrical Engineering.

Mohit says, “The exchange programme to France at Polytech Nantes was the most daring and exciting step I ever took. Studying in one of the most developed countries in the world was a challenge. I never knew that I had this strong capability of learning things until I went there. People were helpful and caring and I made friends and family-like relations in France. All the hard work during studies was compensated by a sightseeing tour to see the country and its magnificent beauty.”

The exchange programme to France at Polytech Nantes was the most daring and exciting step I ever took

Mallika Shrivardhani, a student of B.Tech. PSE final year, chose to spend her semester exchange in the heart of France. She says, “After finding about Ecole Nationale Supérieure d’Electricité et de Mécanique (ENSEM) and its vast Electrical, Electronic and Mechanical scope, I confirmed my choice for the semester exchange. Studying in France allowed me to live, experience and study in totally new cultures and markets. One of the greatest opportunities a student can be offered is the chance to study overseas before graduating from the university. Studying abroad gave me the chance to continue my education while soaking in the culture, customs, and education practices of a society that is different from the one I grew up in, India.”

But, why France? Mallika adds, “France is one of the most beautiful and refined countries in Europe. Perfect climate, amazing food, and rich culture attracted me towards this country. Besides, I knew

that the technical and social advancements of France will help me become a better human being with a treasure of wide knowledge. Engaging with the locals was the best part."

Mallika decided to pursue research as a career option. She explains, "It gives me great satisfaction in applying the knowledge, which I have earned till now, to develop further understanding and solving practical problems. For me, no other profession promises the creative satisfaction and intellectual independence that research does. 30 years from now, I want to look back at the accomplishments of my life and feel a sense of contentment and gratification because my work made a significant impact in my field. And if I achieve this goal, I will consider my career a success. Six or seven years from now, I see myself as part of a leading research group, contributing my bit to Power System Engineering."

What about the challenges of living away from home? "It is an exciting opportunity," explains Mohit , "that only a few students can access. Besides having a positive impact on my development, this also has an impact on my personal perspective.'' For him, this experience provided him with an advantage in the field of work, as well as the possibility of being able to enjoy several opportunities from different places all over the world. This environment was also a perfect platform to enhance research skills,

Mohit signs off.

UPES student exchange program: Unforgettable and transformational experience

https://blog.upes.ac.in/upes-student-exchange-program-unforgettable-and-transformational-experience/

Student exchange programs are one of the most beautiful and enriching elements of being a student at UPES. University offers exchange programs to foreign universities such as Polytech Nantes France, ECE Paris, University of Berkeley, United States, University of Maribor, Slovenia, etc.

Nitya Agarwal, our student from BBA Foreign Trade (2017-2020), shares her experience and learnings from her student exchange program to the University of Maribor, Slovenia, from September 2019 to January 2020.

What motivated you to take part in the exchange program?

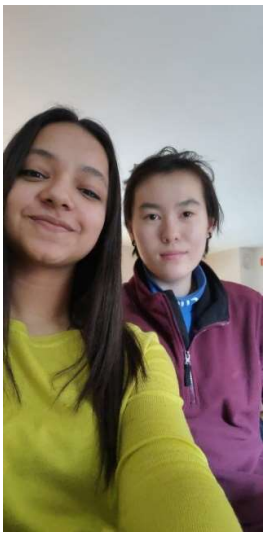
The beauty and the culture of Europe always fascinated me. On getting the opportunity to go to Slovenia, I grabbed it with both hands. Living on my own, away from my family, helped me to become more independent and confident. Of course, it was difficult at first, but it was totally worth it. I was in a student–friendly and safe city in Slovenia, sharing borders with Italy and Austria. The intra-city commute was convenient and even travelling to neighbouring countries was fairly easy.

What is the academic process like in Slovenia?

The system of education in Slovenia is very different from that of India. If here we have 4-5 lectures per day, there we had 4-5 lectures per week, which gave me plenty of time to engage in other activities. Also, in the beginning of the semester, they provided us with all the schedules of the examinations and the classes. It helped me to prepare for my exams right from the beginning. One challenging thing for me was that we had to submit the research papers in every subject which I had never done before. However, it implied more self-education, reading books, surfing the net, gathering knowledge on various topics, improving writing skills, etc. Also, there was a community for the exchange students, i.e. ESN (Erasmus Student Network), which organised various parties and activities and gave us a chance to interact with people from different cultures.

How was your boarding and lodging arranged? Was it tough for you to live on your own?

Our accommodation was provided by the university. We shared a dormitory in the centre of the city, with students from different countries – Spain, Turkey, China, Taiwan, Germany, Greece, etc. I had a roommate who was from China. The dormitory consisted of an integrated kitchen. I preferred to cook for myself which helped me to learn a crucial survival skill for the future. Sometimes my roommate used to cook Chinese food for me and I cooked Indian food for her and her friends. They were all fond of Indian curries. Once in a day I would eat outside so as to try out the varied Slovenian cuisine. Living alone helped me to discover my own self and the other worthy experiences of life.



I am going to miss the whole 'European lifestyle' the most – the weather, the atmosphere, the food, my friends and everything!

How was your everyday life outside the university?

There are lot of exotic places to visit in and around Slovenia as it is situated in the centre of Europe, sharing borders with Italy, Austria, Hungary and Croatia. It is known for its mountains, ski resorts and lakes. Pohorje is the famous ski resort in Maribor. We had the Slovenia trip in the beginning of our semester. We visited Lake Bled, Postojna Caves, Predjama Castle, Piran, Portoroze, etc., and almost covered the most of Slovenia. I travelled alone to LjubLjana (the capital) and it was an amazing experience. We also visited Austria, Croatia, Czech Republic and Vienna. I always wanted to visit Prague (which I did) and the city has its own charm. I fell in love with the city of Maribor. I used to spend my free time walking around Maribor and sitting beside the river, peacefully watching the swans and ducks swim. The city looks magical around Christmas, covered with the lights, the smell of firs, cinnamon and mulled wine everywhere.

What is the thing you are going to miss the most about your host country?

I am going to miss the whole 'European lifestyle' the most – the weather, the atmosphere, the food, my friends and everything! Living in India, I will miss the freedom I had there. Despite all the difficulties there were some fascinating moments we experienced there; it is now a part of my life and these emotions and memories will forever be in my heart and mind.

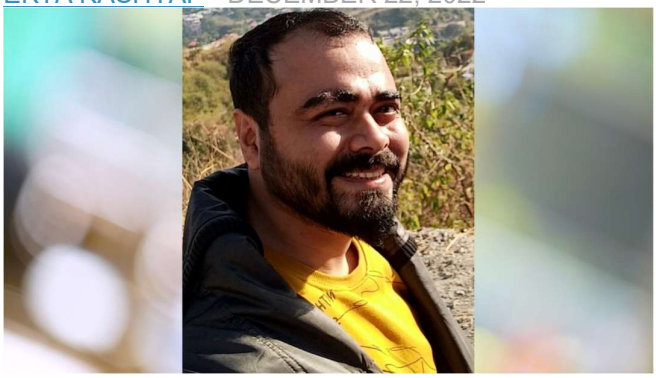
What would you suggest to other aspirants who have fears and doubts about the exchange programs?

Not everyone gets an opportunity to go abroad and study there. So, if you get one, don't lose it. Being an exchange student is an exclusive chance; it gives you an exposure to see a whole world outside of what you know and have seen. It is an unforgettable and transformational experience that will definitely change you for good. You will come to know once you experience it. I am extremely happy and grateful to UPES for this wonderful platform. Because of them I could realise my dream of studying abroad. I wish more power to the team and my juniors – just go for it and unleash your potential.

UPES Prof wins prestigious grant for PhD

https://blog.upes.ac.in/upes-prof-wins-prestigious-grant-for-phd/

EKTA KASHYAP · DECEMBER 22, 2022



Bikram Pratim Bhuyan, Assistant Professor, Informatics, UPES School of Computer Science, has won the Cotutelle Doctoral Grant to complete his PhD work at the University of Paris-Saclay, France. He shares his insights on the preparations that go into the pursuit of a doctoral degree

Starting a doctorate degree comes with several questions and apprehensions. The journey is arduous. However, academicians, desirous of becoming subject matter experts and resolving societal challenges, often have to undertake the tough path for a fulfilling career.

Recently, Bikram Pratim Bhuyan, Assistant Professor, Informatics, UPES School of Computer Science, won the prestigious Cotutelle Doctoral grant to complete his PhD work at the University of Paris-Saclay, France. In a Cotutelle program, a doctoral student is co-supervised by two supervisors from different universities, and the student spends time at each of these institutions.

Bhuyan's topic was approved by the research council at Paris-Saclay. He will receive funds to stay for one year of his PhD program in Paris from 2022 to 2023, and subsequently, he will spend two years at UPES to earn a joint PhD degree.

A public research university, Paris-Saclay is ranked 1st in France and 13th in the world in the Academic Ranking of World Universities (ARWU) ranking, and 46th in the QS subject rank of Computer Science and Information Systems.

Elaborating on the process of getting a grant for PhD, Bhuyan emphasises that choosing a proper guide for research work is an integral step. "Start mailing them by looking at their research interests and papers published in that field," he advised students aspiring to pursue the coveted degree.

Bhuyan adds, "Once there is a proper understanding with the guide and he/she too wants to recruit in the post, start the process with writing a research proposal with the guide. The proposal will be placed in a portal 'ADUM'. All selected proposals will go through the Lab Supervisors and the Director of the research pole. Lab Supervisors will have a meeting concerning the application. The Director will proceed to take an interview for the same. Now if it gets selected, various stages of interview (three in my case) will be taken for the grant of the proposal."

Stressing on the preparation required for performing cutting-edge research as part of PhD, Bhuyan says that striking the right balance between theory and practice is crucial. "A proper balance

between theoretical and implementation work is necessary. The studies provided should be proved in a mathematical sense so that a formal platform is created for the implementation work. Keeping oneself updated about the developments in the respective field of study is also important. Being a faculty helped me in this area," he informs.

Talking about his expectations from the Cotutelle Doctoral Program, Bhuyan says he was looking for a joint PhD collaborative research in the field of Knowledge Representation in Smart Urban Agriculture. "I want to have a proper understanding and work with cutting-edge technologies from the top University in France."

UPES achieves record-breaking milestones in research

https://blog.upes.ac.in/upes-achieves-record-breaking-milestones-in-research/

EKTA KASHYAP · SEPTEMBER 15, 2022

Research Milestones - UPES

From reaching triple the global average in research output to faculty who are among highly cited researchers in the world, here is a glimpse of the university's magnificent accomplishments in research over the years

A lot has happened since 2003, the year in which UPES was founded as a premier learning institution to provide multi-disciplinary, trans-disciplinary, industry-aligned, holistic education. Since its inception, UPES faculty members have made landmark contributions in their respective fields; contributions that have revolutionised research, solved local and global problems, and filled gaps in knowledge.

Today, the university stands tall as a hub of exploration and research. UPES research output – from 0.7 papers to three papers per faculty is possibly the highest jump for any university in one year. It is also triple the global average of one paper per faculty per year.

Scopus (the world's largest abstract and citation database of scientific literature) indexed research output for UPES was 1100+ in 2021. Until mid-September 2022, it was around 1400+ and is likely to cross 2100 by the end of this year. The university has grown twelve times in research output in the last seven years.

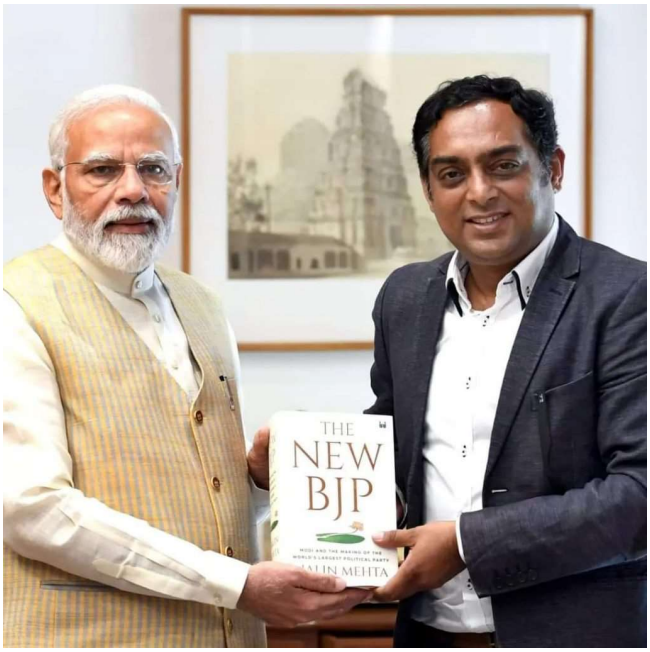
24 UPES faculty members are on the list of top 2% researchers in the world, according to Stanford list and eight of these researchers have found a place in the one of most coveted 'Highly Cited Researchers' list published by Clarivate.

Unmatched academic prowess

UPES students get the opportunity to learn from the best in the world. The university's faculty pedigree comprises two Rhodes scholars, a Fox fellow from Yale University along with Fulbright, Commonwealth, Chevening, DAAD, and Erasmus scholars. Recently, Dr. Khyati Tripathi, Assistant Professor, School of Liberal Studies, received a Harvard fellowship, an honour given to a select few in the world.

Dr. Manish Kumar, Head of Sustainability Cluster, Professor, School of Engineering, was recognised as India's number one and world's fourth-best environment expert for his published articles, as per the analysis by Expertscape.

Dr. Nalin Mehta, Dean, School of Modern Media, recently presented his book 'The New BJP' to Prime Minister Narendra Modi. The book has been making waves on Amazon's list of bestselling non-fiction books for 12 straight weeks. It has been prominently featured in multiple publications and networks including Hindustan Times, The Times of India, The Hindu, The Indian Express, The Washington Post, BBC News, CNN-News18, The New Indian Express, and NDTV. The book is receiving rave reviews nationally and internationally and has been praised as a 'seminal work'. The book has also been listed among the all-time top 10 books in the genre along with the late Pandit Jawaharlal Nehru's autobiography. The UPES School of Modern Media is India's first digital-first media school.



Narendra Modi

Dr. Nalin Mehta (R) presenting his book 'The New BJP' to Prime Minister Narendra Modi

Dr. Snigdha Misra from Cornell University and Dr. Dhruv Kumar, PhD in Cellular, Molecular and Industrial Biology from the University of Bologna, Italy, are among the esteemed faculty members at the School of Health Sciences and Technology. At the School of Design, UPES has onboarded some of the finest academic leaders such as Prof. Debkumar Chakrabarti (Ex-IIT Guwahati), Prof. Pradyumna Vyas (Ex-Director, National Institute of Design), Prof. Nina Sabnani (Ex-IIT Bombay IDC), and Prof. Amit Ray (Ex-IIT Kanpur) as distinguished professors and advisors to craft the best learning experience for students.

Several international faculty are co-teaching modules at different schools. UPES is probably the only private university in India looking to hire full time 1000 PhD scholars – 250 every year for the next four years – beginning 2022. These scholars will be provided with fellowships similar to University Grants Commission (UGC) and Council of Scientific and Industrial Research (CSIR) fellowships through university's internal resources.

How UPES nurtures a culture of research and innovation

In the quest to facilitate a creative and collaborative research ecosystem, the university provides financial support in the form of SEED funding. SEED is an in-house financial support available for consumables, mini equipment, travel grant, fees for characterisation, software purchase, and other operational expenses.

The initiative intends to support the growth of researchers by providing them flexible working capital and to leverage these limited funds to generate substantial external funding, industrial support, or creative scholarship projects.

Infrastructural Support

UPES has a dedicated research laboratory called the Central Instrumentation Centre, which houses machines such as X-ray Diffractometer, Drop Shape Analyzer, Photoluminescence Spectrophotometer, Atomic Force Microscope, Raman Spectroscopy, Mössbauer Spectroscopy, Electrical Resistivity and Transport Properties, Magneto Optic Kerr Effect (MOKE), to name a few.

The university also provides access to several research databases such as Science Direct, SCOPUS, Web of Knowledge, IEEE, RSC, Thomson Reuters, Harvard Business Review, Emerald Insight and Taylor & Francis. Additionally, researchers are provided dedicated research space, assistance through Junior Research Fellowships (JRF), finance, legal cells, and manpower support.

At UPES, the foundation of higher learning is based on critical thinking and innovation; every milestone in research is a testament to the university's thriving research ecosystem.

French Delegates Visit UPES

https://www.instagram.com/p/CH99BefBvZq/

UPES strives to offer its students the best in global education and exposure by promoting student exchange, faculty mobility, joint research, workshops, seminars, and scholarships, making them professional ready to thrive in any culture across the globe. UPES has a great understanding with universities in France and is a part of the Indo-French Alliance for academic cooperation. Continuing with its efforts, the Department of International Affairs, UPES, recently welcomed Mr. Emmanuel Lebrun-Damiens, Counsellor for Education Science & Culture at Embassy of France (India) & Country Director French Institute (India), Ms. Emilia Cartier, Attaché for Scientific & Academic Cooperation at Institut Francais En Inde, Ms. Fatiha Kammoussi, Attaché for Cooperation in Education at Institut Francais En Inde, among other eminent dignitaries, to discuss future opportunities for UPES students in France and vice versa, especially in the new normal.