

upes.ac.in

ADMISSIONS OPEN 2022



B.Tech. PROGRAMMES

NEW

ENGINEERING | COMPUTER SCIENCE | DESIGN | BUSINESS | LAW | HEALTH SCIENCES AND TECHNOLOGY | MODERN MEDIA | LIBERAL STUDIES

About UPES

Established in 2003 through the UPES Act, 2003, of the State Legislature of Uttarakhand, UPES is a UGC-recognized university and has been accredited grade 'A' by NAAC. National Institutional Ranking Framework (NIRF), Ministry of Education, has ranked UPES amongst the top 100 universities to study in India. School of Engineering at UPES has been ranked 91 amongst 300 institutions, School of Business is ranked 46 amongst 100 institutions and School of Law is amongst top 25 institutions in India. The university has received 5-Stars for Employability (placements), Academic Development, Programme Strength, Campus Facilities and 4-Stars for overall teaching by globally acclaimed QS Rating.

UPES offers industry-aligned and specialized graduate and postgraduate programmes through its seven schools:

School of Engineering, School of Computer Science, School of Design, School of Law, School of Business, School of Health Sciences & Technology, School of Modern Media and School of Liberal Studies. Given its industry-oriented programmes and emphasis on holistic development, UPES graduates are a preferred choice for recruiters, ensuring a track record of 90% + placements over the last few years. UPES is driven by its core philosophy and purpose of delivering outstanding student outcomes. In 2021, it has been awarded as the University of the Year-North by ASSOCHAM.



Ranked amongst
TOP 100 Universities
in India



Accredited
Grade 'A' by NAAC



QS 5 Star Rating for
Academic Development,
Employability, Facilities
and Programme Strength



Certification for quality
E-Learning Excellence for
Academic Digitisation with
perfect score of 150/150

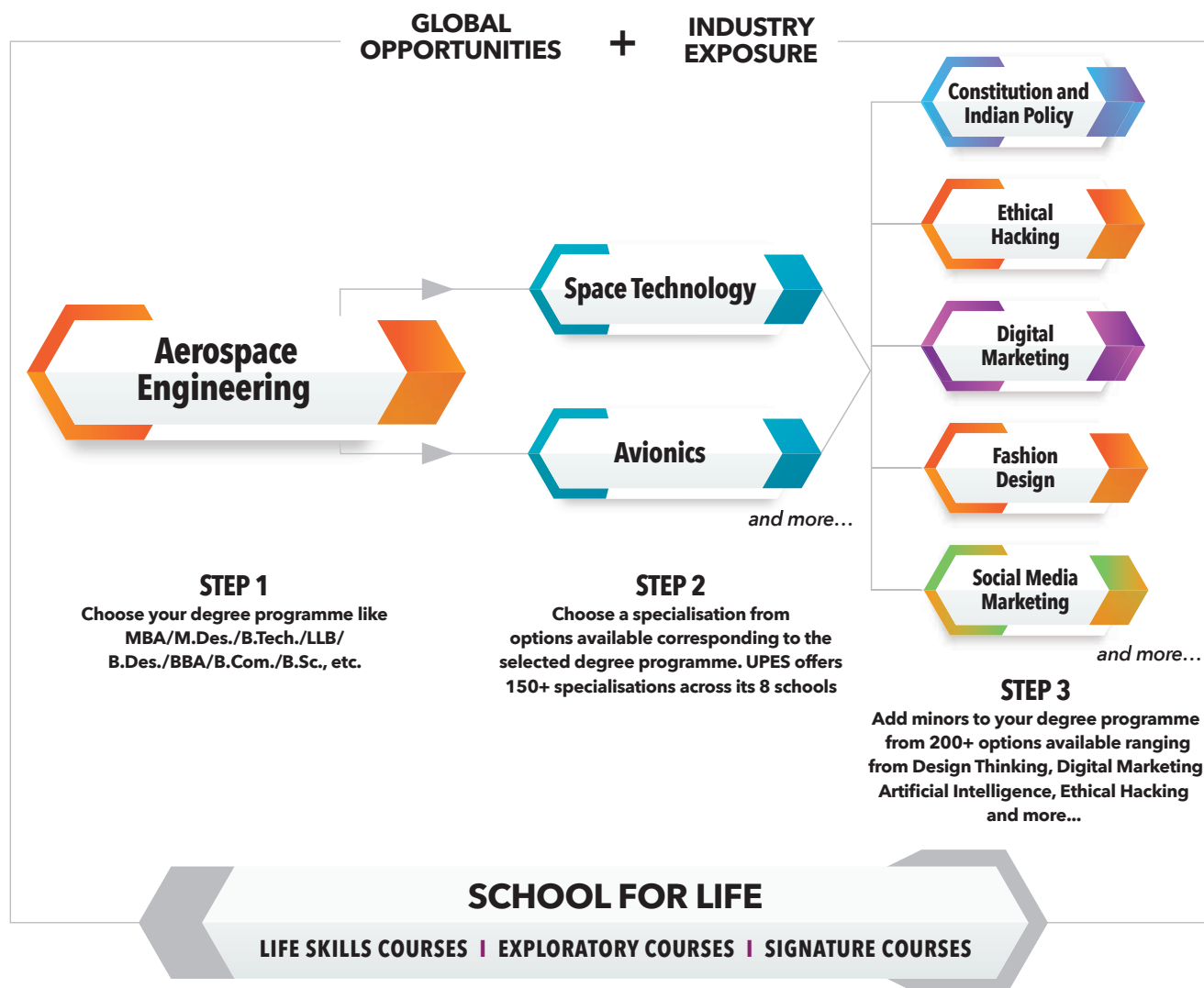


Design Your Own Degree

UPES curriculum framework is holistic in its overall structure and yet focuses on the individual need of the students to discover, experience, explore and challenge. Along with the core subject, students can choose from subject-focused specialisations. They are also allowed to choose minor/exploratory subject from other schools at UPES that are: School of Engineering, School of Computer Science, School of Law, School of Business, School of Health Sciences & Technology, School of Design, School of Modern Media and School of Liberal Studies.

The curriculum also offers Signature and Life-Skills courses through School for Life. To round off this learning experience, students are required to do mandatory internships in the social sector, government/public sector and industry.

The combinations available for students to pick and choose from are endless, ensuring both depth and width of knowledge.



Holistic Development at UPES



School for Life

What is the purpose of education? Is it merely to make students employable, remove ignorance and impart knowledge? Or is it to create a better world? The seismic shifts taking place globally, necessitate action to ensure a secure and equitable future for all. Learners today are, therefore, required to be creative, collaborative and communicative. They must develop skills to solve complex problems that plague humanity, work towards equity, uplift the underserved, live healthy, happy, and productive lives. UPES School for Life (SFL)

was established with the intention to create true changemakers. Students learn to apply an in-depth understanding of attained life skills and broad-based subject competencies along with core subject qualifications to take advantage of educational and employment opportunities. This broad-based learning experience helps them evolve throughout their professional and personal lives.

The undergraduate programme at UPES offers four clearly demarcated, yet academically integrated areas, covering Core Specialisation courses, Exploratory (Interdisciplinary Electives), Signature and Life Skill courses, all of which are credited and are the basis of the degree awarded. School for Life offers the latter three selections of courses, which are structured to be read alongside the students' core academic curriculum.



EXPLORATORY

(Interdisciplinary Electives)

give students the freedom to read a variety of courses from different schools for an all-round learning experience.



SIGNATURE COURSES

include areas that are not specifically linked to a vocation and focus on 21st-century learner skills, empowering students to become global citizens of the future. It includes courses such as History and Constitution of India, Theory of Everything and Digital Transformation.



'SRIJAN' SOCIAL INTERNSHIPS

offered as part of SFL, are full-time, 8-week-long internships with social sector organisations. These internships are mandatory for all first-year students. Through these internships, the students get exposed to social sector challenges and find ways to overcome them. In the process, they build empathy and learn valuable leadership skills.



LIFE SKILL

courses allow students to pick additional skills with a focus on enhanced employability and communication, along with management and professional skills, including critical thinking, problem-solving and creativity.

Unmatched **Global Opportunities** at UPES

Credit Transfer Programme
Facilitating Progression Opportunity to **the University of Queensland, Australia**



Student exchange opportunities at the World's Top Universities such as **University of Adelaide - Australia, University of Calgary - Canada, University of Essex - UK, IED - Italy, Taipei Medical University - Taiwan, Taylor's University - Malaysia, Universiti Sains - Malaysia, Universiti Teknologi Petronas - Malaysia, Polytech Nantes - France, Southern Federal University - Russia, National University of Kaohsiung - Taiwan** and many more



Semester abroad opportunity at **the University of California, Berkeley**



Assistance for International Internships/ Projects



Guidance and counselling for application to various **International Scholarship Opportunities**

Industry in the Classroom

Industry-alliances

- Courses co-developed and co-delivered by industry partners
- UPES has tie-ups with Microsoft, Phillips Carbon Black Ltd., HPCL, Infosys, Tata Power, Xebia and many more



Phillips Carbon Black Limited



Infosys



and more

Experts on Advisory Board

- Mr. Somraj Samin Roy, CHRO, KEC International Ltd., RPG Group
- Mr. Amaresh Singh, Head HR, GE T&D India Ltd.
- Mr. Alok Sinha, Senior Vice President, Projects (Strategy & Planning), Reliance Industries Ltd.
- Mr. Amrit Raj, India Country Manager, Landmark Halliburton
- Mr. Jayant Kumar, Managing Director, Hilti India
- Mr. Sanjay Kumar, Director, Global Solution Engineering, Dell EMC
- Mr. Sam Varughese, Head, Infosec Strategy and Privacy, Reliance Jio and more

Masterclasses

- UPES hosts industry interactions where experts talk about the latest developments in their respective field. Students get an up-close and in-depth exposure of the industry, enabling the development of skillsets required for a successful career.

These classes are moderated by stalwarts like:

- Dr. Deepak Vohra, Ambassador, Made in India
- Dr. K Sivan, Chairman, Indian Space Research Organization (ISRO), Govt. of India.
- Anand Kumar, Mathematician-Academician Super 30, and more.



Engineering Solutions for Tomorrow

School of Engineering

School of Engineering (SoE) aims to enhance its activities to embrace real-world engineering approaches. The focus is on equipping students with competencies for meeting the modern-day industry challenges, particularly those in the manufacturing sector.

The global manufacturing landscape is continually being reshaped by rapidly-evolving technologies. Manufacturers are adopting the latest advances in technologies to stay competitive in Indian and international markets. Future engineers, therefore, need to have the core theoretical knowledge as well as the acumen to apply it to solve practical problems. They also need to have the mindset to ensure they stay up-to-date in their core domain and remain industry relevant. Above all, they must have the intellectual acuity to hone their skills and innovate to create smart solutions for tomorrow.

School of Engineering seeks to encourage learning that reacts to the evolving needs and demands of the world; learning that uses a combination of technology; and human power to take engineering a notch higher every day.

Dr. Gurvinder Singh Virk

Dean, School of Engineering

Building a Smarter World

School of Computer Science

Smart technology holds immeasurable benefits for the world we live in. Today, computational power has pervaded almost all aspects of human existence.

A wide range of sectors, including power, healthcare, infrastructure, consumer electronics, mobile communication, smart home devices and automobiles, among others, are using intelligent systems and technologically-advanced machines. Artificial Intelligence, Machine Learning and Big Data are increasingly being used to provide cognitive awareness to objects that were hitherto considered inanimate.

Currently, there is a huge industry demand for people who understand intelligent systems technology and know how to apply it to real-world problems.

UPES School of Computer Science (SoCS) prepares students to understand and integrate knowledge from various subject areas, including programming, data structures, algorithms, pattern recognition, blockchain technology, machine learning 2.0 and artificial intelligence 2.0, and apply them to address some of the most critical societal challenges of the 21st century. SoCS has a progressive curriculum that emphasises diversity, interdisciplinary teamwork, entrepreneurial thinking and inventiveness. Through long-standing partnerships with some of the leading technology companies, SoCS graduates from UPES are equipped to pursue advanced positions in global organisations that thrive on constant innovation and shape the future of the world.

Dr. Sunil Rai

Officiating Dean, School of Computer Science

Ranking

- Ranked amongst top 100 Engineering Institutions in India by NIRF Ranking, 2021
- Ranked No. 1 Private Engineering College in Uttarakhand by India Today Best Colleges Survey 2021

Credit Transfer Programme Facilitating
Progression Opportunity to the University
of Queensland, Australia

NBA - Accredited* B.Tech. programmes

*Applicable on selected programmes

Programmes Offered

B.Tech. - School of Engineering

CORE	SPECIALISATIONS** (Choice based in 3 rd year)	MINORS** (Indicative list) (Choice based in 2 nd year)
Electronics and Computer Science Engineering	Wireless Communication	Artificial Intelligence & Machine Learning Internet of Things Blockchain Data Science Bio-Mimetics Sustainability Engineering Climate Change Disaster Management Reclaim Engineering Astronomy & Astrophysics Space Engineering Statistics & Probability Economics
	Signal Processing	
	Cloud Computing and Artificial Technology	
	Anti Hacking System and Blockchain Technology	
Applied Petroleum Engineering (Upstream)	Exploration & Production (E & P) Data Management	
	Digital Oilfield	
Applied Petroleum Engineering (Gas Stream)	City Gas Distribution	
	Gas Processing	
Aerospace Engineering	Propulsion System and Structures	
	Rocket and Space Technology	
Aerospace Engineering (Avionics)	Unmanned Aerial Vehicle (UAV)	
Chemical Engineering	Refining and Petrochemicals	
	Process Design and Intensification	
Electronics and Communication Engineering	5G Communication and Smart Grids	
	VLSI Design and Embedded Systems	
Fire and Safety Engineering	Safety and Risk Management	
	Disaster Management	
Automotive Design Engineering	Electric Vehicle Technology	
	Aerial Technology	
Mechanical Engineering	Additive Manufacturing	
	Smart Manufacturing	
Mechatronics Engineering	Mechanics and Signal Processing	
	Machine Design and Programming	
Renewable & Sustainable Energy Engineering	Energy Storage Systems	
	Waste to Energy	
Advance Materials & Nano Technology	Smart Material	
	Computational Material Science	

B.Tech. (Hons.) - School of Computer Science

CORE	SPECIALISATIONS** (Choice based in 2 nd year)	MINORS** (Indicative list) (Choice based in 3 rd year)
B.Tech. (Hons.) Computer Science and Engineering	Artificial Intelligence and Machine Learning	Data Science Game Design Cognitive Technologies Image and Signal Processing Computing for Sustainability Internet of Everything Privacy and Security Human Computer Interface Cloud Computing
	Full Stack AI	
	Banking, Financial Services and Insurance	
	Big Data	
	Blockchain Technology	
	Data Science	
	Cloud Computing and Virtualization Technology	
	Computational Sustainability	
	Cyber Security and Forensics	
	Dev Sec Ops	
	E-Commerce	
	Graphics and Gaming	
	Internet of Things and Smart Cities	
	IT Infrastructure	
	Mainframe Technology	
	Enterprise Mobility	
	Oil and Gas Informatics	
	Open Source and Open Standards	
B.Tech. (Computer Science) Global Programme - 2 Years in Dehradun Campus 2 Years in Overseas Campus		

B.Tech. - School of Health Sciences

CORE	SPECIALISATIONS** (Choice based in 3 rd year)
B.Tech. (Food Technology)	Food Biotechnology
	Food Plant Engineering
B.Tech. (Biomedical Engineering)	Medical Devices
	BioMaterials
	Prosthetics
	Medical Diagnostics
B.Tech. (Biotechnology)	Pharmaceutical Biotechnology
	Genomics and Biosimilars
	Plant Biotechnology
	Bioinformatics

**Specialisation & minors to be opted after 1st year depending on the selected programme

Credits would depend on the Minors/Exploratory courses chosen during the Programme duration

SCHOLARSHIPS

Up to 100% Scholarship*
Based on Entrance Exam;
50% Seats Reserved
for Girls

Sports
Scholarships*

Freeships* to
Underprivileged
Students

33% Fee Concession
for Bonafide
Uttarakhand
Students

*T&c apply. For more details, visit upes.ac.in

DECATHLON SPORTS INDIA	CROMA
ACCENTURE	BECHTEL INDIA
ADANI POWER	BERGER PAINTS
BIAL	ADANI AIRPORTS
DELHIVERY	GENPACT ANALYTICS
EVALUESERVE	BLUEDART
THINK GAS	HDFC LTD.
PHONEPE	INATECH
PROTIVITI KNOWLEDGE AND INNOVATION CENTER (PKIC)	WIPRO
BANGALORE INTERNATIONAL AIRPORT LIMITED	TRANSWORLD GROUP
HILTI INDIA PVT. LTD.	INDIA INFRASTRUCTURE
GLOBAL DATA	AMAZON
IFOS AVIATION	LTI - L&T INFOTECH
IHS MARKIT	IEX
INFOSYS LIMITED	KPMG
DELOITTE	MARKETS AND MARKETS
NESTLE	JSW STEEL LTD.
PXIL	ITC LTD.
RELIANCE INDUSTRIES LIMITED	SPICEJET
TORRENT GAS /TORRENT POWER	TCIL
TCS	INDIAN OIL ADANI GAS PVT. LTD.

**Highest
CTC
40 LPA**

**100%
Placement[#]**

**Placement
assistance
up to
5 years**

[#]Placement statistics refer to the number of students who have opted for and eligible for placements



Success Stories



Featured for Excellence

Shubham Srivastava, alumnus, got featured by Freshworks Inc. Headquarters, California at NASDAQ, Times Square, New York. Shubham is one of the global employees to get featured for his contribution to the company's growth because of his excellent performance at the domain and organization level.



Developed Sanitizing Machine Prototype

B.Tech. student Udayveer Mittal developed compact, contactless, battery-operated, sanitizing machine prototype under the guidance of the UPES faculty.



Runner-up @ GitHub

Nishkarsh Raj, B.Tech. (CSE DevOps) student, was ranked No.2 in India at GitHub. His dedication and perseverance made him one of the most active GitHubbers in India in terms of overall contribution, as stated by Commits.top.



Developed an e-learning web-app

Abheesht Singh, B.Tech. CSE (IT Infrastructure), developed an e-learning SaaS platform 'CavenX' for students and institutions. Designed to facilitate online learning, it is equipped with a centralized dashboard and a fully responsive interface that can accommodate 1,000 students at a time.

Faculty Feats



UPES Faculty Develops and Patents Innovative Neelam Multifuel Burning Stove

An UPES faculty Dr. Pankaj Kumar Sharma, developed and patented the Neelam Multifuel Burning stove, an innovative new stove that promotes green energy while providing more efficiency and less CO emissions than an average stove. It operates in 4 modes - pure biomass, pure biogas, pure LPG and a combination mode. Special thought has been given to make the device economical and accessible to the masses.



Honoured with Himalayan Nari Shakti Samman

Dr. Neelu J. Ahuja has been conferred with the Nari Shakti Award (March-2020) by Govt. of Uttarakhand and the IGEN-Women Achievers award (March- 2021) by the Institute of Green Engineers for research contributions. Specific mention is successfully executed R&D project focused AI-based tutoring tools for children suffering from learning disabilities, funded by DST, Gol.



Automated Monitored Hand Hygiene System

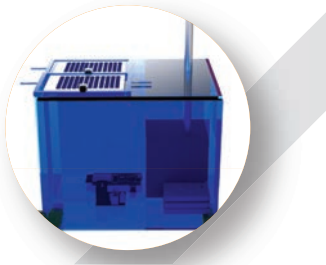
Dr. Ashish Karn engineered an Automated Monitored Hand Hygiene System. The four-pronged structure is built to provide hand sanitization to four persons at a time while ensuring adequate distancing.



Sanirobo - Designed by UPES Faculty for Contactless Sanitization

Ms. Shubhi Sharma, faculty at the UPES School of Computer Science and Neel Advani, student, B.Tech. CS, together developed a self-powered 'Sanirobo', which uses a high-end microcontroller, accompanied by a camera. which can be controlled from any part of the world.

Student Projects



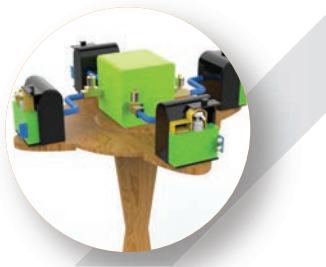
Sanirobo - Designed for the Greater Good

The self-powered, camera-featured model titled 'Sanitizing Apparatus and Method for Dispensing Sanitizer Solution', automatically sanitizes small pockets and densely-populated areas, protecting frontline workers.



Sorting Machine

This invention, which has applications in food processing, won its maker the Best Rural Innovator Award bestowed by the National Institute of Rural Development (NIRD), India.



Automated Monitored Hand Hygiene System

The four-pronged hand hygiene system is built to provide hand sanitization to four persons at a time while ensuring adequate distancing amongst them.



Quad Bike - All-Terrain Vehicle

Students developed this light utility vehicle with a 250 cc engine and a 12-inch ground clearance. It travels on low-pressure tyres and has handlebars for steering control.



Solar Tree and Electric Bicycle

With a commitment to creating green energy sources, a team of researchers at UPES developed a self-powering Solar Tree and a model bicycle with an electric motor.



The COVID-19 Visualizer

UPES students of Graphics and Gaming built a great tool that can visualise COVID-19 data using Augmented Reality. The tool creates a live feed using real-time data from around the world and visualizes them in an interactive way.

Life @UPES

- Life at UPES is about creating unforgettable memories. It is about young learners **discovering themselves through activities** that enrich their understanding of the world.
- There are twenty student chapters – such as the **Cloud Security Alliance, the Society of Law and Literature, IEEE Branch and Moot Court Association** – and several clubs including National Service Scheme, Vultus and Sanskriti.
- Events such as **Uurja**, the annual youth festival, and **'Wow Wednesday'**, a mid-week activity for showcasing talent, bring together students from across all the schools on one stage.
- **Sports activities at UPES** give students the opportunity to compete in a fun, relaxed environment. **Students develop skills such as team spirit, patience and resilience.**
- From learning to **leisure, path-breaking innovations to life-long friendships, life at UPES** is a vibrant blend of everything a learner would aspire for. It is a place that brims with artists, explorers, athletes and innovators.



Enhance your well-being through sports



Become your most creative self



Accomplish fitness goals together



Create rhythms from the soul



Explore learning without limits

The Allure of Dehradun



Just a few kilometres away from the bustling yet charming city life of Dehradun, UPES campus is close to trekking trails, rock climbing and picnic spots, monasteries, water bodies, rafting and the popular hill station of Mussoorie. The mighty Himalayas and thick pine forests surround this pristine campus.

Life at UPES is nothing short of a getaway that helps liberate our students from the mundane monotones and pollution hazards of a city life.

A home away from home. A bright and fresh start. A rewarding second life.



The foodie culture



Travellers' haven



Camp your nights away



Leisure times

Download UPES App  

1800 102 8737 (8 am to 8 pm) | enrollments@upes.ac.in

International students write to us at
international.admissions@upes.ac.in

Energy Acres: Bidholi via-Prem Nagar, Dehradun (Uttarakhand), India