CHITKARA
UNIVERSITY

DISCOVER
ENGINEERING
IMAGINE | INNOVATE | INSPIRE

Engineering
Viewbook 2025

CHITKARA UNIVERSITY

Explore **Your** Potential

**CHITKARA
ENGINEERING**

Engineering Programs with a world-class reputation

The Engineering Education at Chitkara University is exceptional, combining cutting-edge research, experienced faculty, and state-of-the-art facilities.

We help these bright minds develop into changemakers with global perspective, technical prowess and leadership skills to make a difference in the world.

Our curriculum emphasises innovation, hands-on learning, and real-world problem-solving. Chitkara graduates gain deep technical expertise, critical thinking, and leadership skills. We boast of proactive Industry partnerships and exciting internship opportunities which ensures our graduates are highly skilled, adaptable, and ready for top careers.

Come Explore Your Potential at Chitkara University!!

Dr. ASHOK CHITKARA
CHANCELLOR
CHITKARA UNIVERSITY

Selecting a university program marks the beginning of an exciting journey in your life. It expands your opportunities as well as brings you life changing experiences.

Students from around the world are attracted to Chitkara University for several reasons. This includes our commitment to teaching excellence, research that makes a difference, industry partnerships and our tailored courses.

We are invested in the growth of every student and ensure they evolve into well rounded personalities, subject experts, creative thinkers and future-facing individuals - set to grapple with real world challenges and become changemakers of tomorrow.

We look forward to welcoming you as a part of the Chitkara University fraternity.

STRONG ACADEMIC HERITAGE

Dr. MADHU CHITKARA
PRO CHANCELLOR
CHITKARA UNIVERSITY

Chitkara Education brings with it a reputation for excellence and innovation that has been earned through years of serving the career-needs of the student community.

Chitkara University is known and trusted by the best of employers for preparing graduates who have the knowledge and skills they need to succeed in their workplace.

There are many reasons for choosing Chitkara University. Our students go on to achieve successful careers. We teach in a hands-on and responsive manner. We provide a wonderful learning atmosphere and our research is world-class.

Our industry-relevant curriculum, global exposure, inclusive pedagogy, faculty mentoring and student resilience are all in sync. Our excellent placements bear testimony to all of this.

'' The learning environment at **CHITKARA UNIVERSITY** is a unique combination of illustrious faculty, brilliant & intellectual students and proactive industrial collaborations. ''

CHITKARA UNIVERSITY

CHITKARA UNIVERSITY
HIMACHAL PRADESH

Chitkara University is a UGC recognised University with the right to confer degrees as per the Sections 2(f) and 22(1) of the UGC Act, 1956 and is established by the Himachal Pradesh State Legislature under "The Chitkara University Act".

RECOGNISED FOR
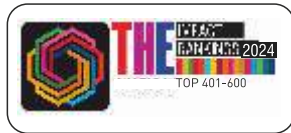# EXCELLENCE

A+ ACCREDITED BY NAAC

Chitkara University has been awarded **A+ rating by National Assessment and Accreditation council (NAAC)** which places us among the Top 5% of Higher Education Institutions in India.

nirf NATIONAL INSTITUTIONAL RANKING FRAMEWORK
Ministry of Human Resource Development
Government of India

Our programs have been ranked among the **Nation's Best in the 2024 NIRF Ranking, 11-50 in Innovation Category and 90 in University Category.**

QS WORLD UNIVERSITY RANKINGS
QS Asia University Ranking | 2025

We are proud to be ranked among the **World's Best** in the **QS World University Rankings.**

THE IMPACT RANKINGS 2024 TOP 401-600

The University has achieved the **13th Rank in India** and **401-600 Globally**, reflecting its comprehensive dedication to **advancing the Sustainable Development Goals.**

THE World University Rankings 2025

Chitkara University **Ranked 1st** in **The Country** in **Research Quality** and **Ranked 601-800 Globally.**

Interdisciplinary Science Rankings
Powered by THE
In association with
SCHMIDT SCIENCE FELLOWS

Chitkara University **Ranked 7th** in **India (Under The Process Pillar), 13th India & 161 in The World**

INTELLECTUAL PROPERTY INDIA

Year after year, Chitkara University has been ranked among the **Top 10 Universities** of the country for filing maximum patents.

Consistently ranked high by:

CAREERS360 | OUTLOOK | INDIA TODAY | DATAQUEST

THE TIMES OF INDIA | UI GreenMetric | THE WEEK | BW BUSINESSWORLD

siliconindia | CHRONICLE | IIRF

EXPLORE YOUR POTENTIAL WITH CHITKARA**U**.

CHITKARA EDUCATION BRINGS WITH IT A REPUTATION FOR EXCELLENCE AND INNOVATION THAT HAS BEEN EARNED THROUGH YEARS OF SERVING THE CAREER-NEEDS OF THE STUDENT COMMUNITY.

STRONG ACADEMIC HERITAGE
Chitkara University has been established and managed by passionate academicians with the sole mission of making each and every student "industry-ready".

BEST LOCATION
With a high quality of living and vibrant student mix, Chandigarh, also known as City Beautiful, has rightfully earned its place as one of the safest and most livable cities in the country.

TOP 20 RANKING
Chitkara University has been consistently ranked among the top 20 Private Universities of the country.

MODERN FACILITIES
Chitkara University has made huge investments in developing student facilities and giving our students access to world-class labs, design studios, libraries, sporting and social facilities.

LEADING INNOVATION
Chitkara Innovation Incubator helps turn students' business ideas into reality. Student ventures with scalable, commercial potential are given access to high tech, a collaborative office space, and are paired with industry mentors to develop scalable business plans and market testable products and services.

Since inception, Chitkara University has had a path breaking recruitment record for graduates from various academic programs. Some of our prominent recruiters on campus are:

accenture · adani · Adobe · amazon · Deloitte.

EY Building a better working world · GE · Google · HDFC BANK · HONDA The Power of Dreams

hp · IBM · Infosys · Kellogg's · KPMG

L&T · Mahindra · MARRIOTT · Microsoft · PEPSICO

Pfizer · Reliance · SAMSUNG · TATA · ZARA

CHITKARA UNIVERSITY

THINGS WE'RE PROUD OF

THERE ARE SO MANY REASONS TO CHOOSE CHITKARA UNIVERSITY. HERE ARE A FEW REASONS WHY WE BELIEVE YOU'LL LOVE US AND BE PROUD TO JOIN US.

WORLD-CLASS RESEARCH EXCELLENCE

With more than 200 patents and project funding from leading organisations such as DST and HP, our researchers, staff and students work across disciplines to extend the boundaries of knowledge.
We are being recognised nationally for pioneering research in Nanotechnology, Mobile Learning, Robotics, Renewable Energy and Mechatronics.

TOP SKILLS

There is an intense focus on developing communication skills, team work and leadership for each and every student.

STRONG ACADEMIC HERITAGE

Chitkara University has been established and managed by passionate academicians with the sole mission of making each and every student "industry ready".

INDUSTRY-LED COURSES

We maintain close links and associations with leading blue-chip companies to deliver our academic programs and ensure that our courses are relevant, practical and deliver the skills in demand, allowing our graduates to hit the ground running.

LEARNING BY DOING

Our curriculum is based on the framework of strategic competitiveness, which teaches the concepts of creativity, entrepreneurship, innovation, sustainability, leadership and incisive decision making.

TOP 20 RANKING

Chitkara University has been consistently ranked among the top 20 Private Universities of the country.

COUNTED AMONG THE BEST

Our programs are consistently ranked among the Top 50 in the country.

5 STARS

All our institutions and academic programs are recognised and approved by UGC and various regulators such as NAAC | AICTE | COA NCHMCT | INC.

CAMPUS PLACEMENTS

Chitkara University has established an unassailable reputation for strong on-campus recruitments. Our students have gained employment in diverse professional roles and areas across the world. From managing hotels to discovering new drugs to helping patients in hospitals to analysing the stock market, a Chitkara University degree can lead to varied and rewarding career paths.

LEARN FROM THE BEST

You will work with some of the brightest and most inspiring academics, lecturers and researchers in the world.

MODERN FACILITIES

Chitkara University has made huge investments in developing student facilities - giving our students access to state-of-the-art labs, design studios, libraries, sporting and social facilities.

BEST LOCATION

With a high quality of living and vibrant student mix, Chandigarh, also known as City Beautiful, has rightfully earned its place in the 'Times 15 Best Asian Spots'.

MORE CEOs

Industry leaders from across sectors visit our campus and interact with our faculty as well as student community to groom them for future leadership roles.

LEADING INNOVATION

Chitkara Innovation Incubator helps turn students' business ideas into reality. Student ventures with scalable, commercial potential are given access to high tech, a collaborative office space, and are paired with industry mentors to develop scalable business plans and market testable products and services.

TRAVEL THE WORLD

At Chitkara University, we offer over 170 exchange destinations to consider.

SAFE & SOUND

We take great pride in looking after our students. We have zero tolerance to ragging.

City Beautiful
Chandigarh

A MILLION PEOPLE; INFINITE POSSIBILITIES

Chandigarh is undergoing rapid urbanisation and the transformation has been holistic and all-inclusive. Over the years, the city has made remarkable progress in terms of physical infrastructure and business environment and has emerged as an economic growth centre with one of the highest per capita incomes in India.

Ample opportunities are available to work and grow in the IT, BPO and pharmaceutical sectors in the region. It has proven to be a magnet for potential employers and employees.

The open hand is the official emblem of Chandigarh; it symbolises the city's philosophy of being "open to give" and "open to receive". Chandigarh has seen the growth of some major start-ups over the last few years. The city has kept pace with the ever evolving education sector to become the one-stop destination for all education needs. This makes Chandigarh ideal for students who wish to enjoy the blend of rich culture of city life and the peaceful environment that this city offers.

Chandigarh is easily accessible from Delhi, Haryana, Punjab, Himachal Pradesh and other metropolitan cities through various modes of transportation, viz. buses, trains and direct flights, both national and international, from Dubai, Singapore, Sharjah, etc.
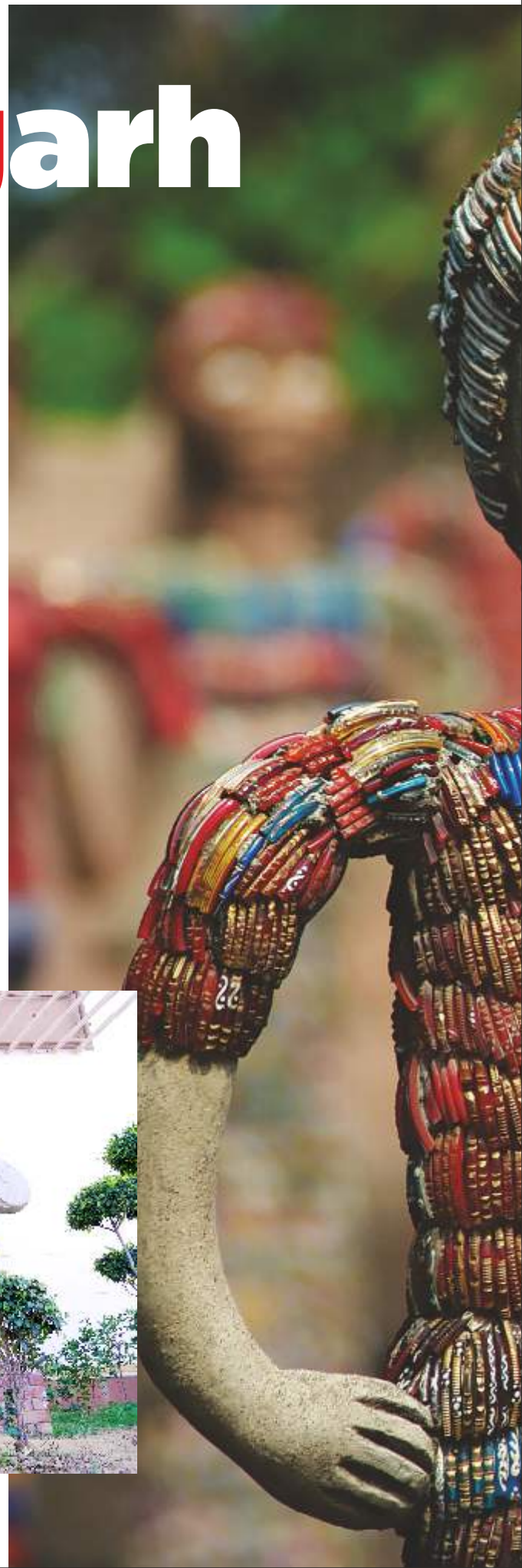
CHITKARA ENGINEERING

At Chitkara University, our Engineering Programs will equip you with all the skills necessary to make you employable, enterprising and entrepreneurial. Engineering graduates are some of the most sought-after across the world and we will do our utmost to prepare you for future success.

MEETING THE DEMANDS OF INDUSTRY
No matter which course you choose, you can be certain that its content will be current and at the forefront of knowledge. Engineering is a rapidly advancing discipline and we want you to be ahead of the game.

KNOWLEDGEABLE & FRIENDLY FACULTY
As a Chitkara Engineering student, you'll learn from leaders in the field. Our faculty includes award-winning scholars, determined researchers, innovative entrepreneurs and celebrated personalities. They're experienced and inspiring with a genuine desire to help you achieve your full potential. Our tutors have considerable industry experience. Many of them are also actively involved in providing consultancy and knowledge transfer for local and national companies. With extensive business links, they bring expertise and innovation into their teaching. So not only will you gain an extensive knowledge of your subject, you will also get plenty of hands-on experience solving real world Engineering challenges.

A REPUTATION FOR INNOVATION
Our academic expertise has given us an international reputation for innovation. Year after year, Chitkara University has been ranked among the Top 10 Universities of the country for filing maximum patents which speaks volumes about our research team, state-of-the-art infrastructure and intensive focus on new ideas and technologies.

HIGHLY RATED PROGRAMS
Our Engineering programs are endorsed by leading external accreditation bodies for their ability to equip you to meet the requirements of the modern engineering environment. These accreditations include: The Institution of Mechanical Engineers (IMechE) and The Institution of Engineering and Technology (IET).

GLOBAL ENGINEERING
Our Engineering graduates have the option to study the first 2 years of Engineering programs at Chitkara University campus and then complete their Degree at over 100+ partner Universities across the world.

100% CAMPUS RECRUITMENT
We have established an unassailable reputation for very strong on-campus recruitments by sheer virtue of our intensive focus on making all our graduates "industry ready". 500+ leading Blue Chip companies visit our campus for hiring our Engineering Graduates.

CHITKARA ENGINEERING

Counted among the best

Our Engineering programs have once again been ranked among the Top 100 in the country in 2024 NIRF Ranking.

ARIIA — ATAL RANKING OF INSTITUTIONS ON INNOVATIONS ACHIEVEMENTS

We have been ranked 2nd across country in the prestigious ARIIA 2022.

QS WORLD UNIVERSITY RANKINGS
QS Asia University Ranking | 2025

We are proud to be ranked among the world's best in the QS World University Rankings: Asia 2025.

SCIMAGO INSTITUTIONS RANKINGS

Chitkara University is ranked 48th in India

Times Higher Education Impact Rankings 2024

Chitkara University has achieved the 13th Rank in India and 401-600 Globally, reflecting its comprehensive dedication to advancing the Sustainable Development Goals.

WURI — WORLD'S UNIVERSITIES WITH REAL IMPACT

Chitkara University Achieves Top Global Rankings in WURI 2024

Clarivate Derwent™

Chitkara University makes it into top 200 in Clarivate Analytics' leading innovators list 2021.

THE AWARDS ASIA 2022

We are the only Indian University shortlisted for 'Technological Innovation of the Year' of 'Times Higher Education Asia Awards 2022'

MHRD — Ministry of Human Resource Development Government of India

We are ranked as one of the Cleanest Universities of India in the 'SWACHHTA' ranking.

THE TIMES OF INDIA

Chitkara Engineering is ranked in the Top 25 Engineering programs.

BW|BUSINESSWORLD

Chitkara University has ranked an impressive 24th nationally in annual Engineering Rankings.

THE WEEK

Chitkara Engineering is ranked among Top 40 in the country.

INDIA TODAY

Chitkara Engineering is ranked among Top 40 in the country.

Josh

Chitkara University ranked as the Top Engg. University in Punjab.

DATAQUEST

Chitkara Engineering is ranked in the Top 25 Engineering programs.

CAREERS 360

Chitkara University Ranked 26th in India's Best Private Engineeing Universities.

Outlook

Chitkara University rated in 'Top 30' in the Engineering Rankings.

CHITKARA ENGINEERING

Key Facts

Here are a few reasons why Engineering programs at Chitkara University in Punjab & Himachal Pradesh are rated as the best by our students, parents, alumni and industry.

HIGH GRADUATE EMPLOYMENT

Our Engineering graduates are highly employable. We have been achieving 100% campus recruitment record for our graduates since inception.

HIGHLY RANKED PROGRAMS

Our Engineering programs have been consistently ranked as one of the best in the country by NIRF, ARIIA, QS World University Rankings among others.

ENTREPRENEURSHIP START ME UP

Do you have the "E gene"? We help students turn an idea into a product, company, or social movement through our unique entrepreneurship programs and competitions.

SUPPORT IN MATHEMATICS

All our Engineering programs have intensive focus on Mathematics and Applied Sciences. Our team helps Engineering students from different Maths backgrounds succeed through special modules and workshops.

RESEARCH EXCELLENCE

Study with us and you will learn from faculty with a stellar reputation for research. We have 35 crore+ research grants & students can embark on research right from Day 1.

ELECTIVES AND SPECIALISATIONS

We offer more than one path to your goal — 70 percent of Engineering Undergraduate students pursue various specialisations and electives or a minor, often in a non-Engineering discipline.

INDUSTRIAL PLACEMENTS

Our courses include placement opportunities to give you valuable real-world experience and boost your employment prospects. We have strong links with organisations such as Google, Amazon, Infosys, L&T, Wipro and Virtusa among other 500+ employers.

LEADING INNOVATION

Year after year, we have been ranked among the Top 10 Universities of the country for filing maximum patents which speaks volumes about our research team, state-of-the-art infrastructure and intensive focus on working with new ideas and technologies.

CUTTING-EDGE FACILITIES

Get hands-on experience building everything from microprocessors to industrial robots with 100+ cutting edge labs using the same generation of technology as leading industries.

GLOBAL PARTNERSHIPS

Our reputation has led to strong partnership with top global Universities across the world providing Engineering students unlimited opportunities for summer schools, semester exchange, international internships and work integrated learning.

WORK-READY WORLD-READY

Study with us and we will equip you to become 'The Chitkara Graduate', a world-ready professional, with the knowledge, attributes and expertise that employers look for.

SHOWCASE YOUR WORK

Each year we have annual design and research festival NOVATE, an opportunity for graduating students to showcase their work to employers and industry specialists.

State of the art
Labs & Facilities

Turn what you learn in class into reality in more than 100+ cutting-edge labs. Get hands-on experience building everything from microprocessors to industrial robots, using the same generation of technology as leading industries across the region. The focus is to generate new ideas, create innovative solutions and apply basic principles with an emphasis on using all this knowledge in developing industry-university Engineering centres.

We have collaborations with world-class companies to include faculty development programs, soft-skills training workshops, industrial visits, technical competitions, live projects and guest lectures. Notably, our Engineering facilities include a number of instructional and research laboratories, including the Microsoft Innovation Centre, nVidia CUDA Teaching Centre, NXP Semiconductors Signal Lab and Dassault Systèmes.

- Advanced Materials & Manufacturing Lab
- ARM Research Lab
- Artificial Intelligence Lab powered by NEC Corporation
- Automation Lab
- Building Energy Efficiency Ergonomics Lab
- CAD/CAM Lab
- Cadence Microelectronics Lab
- Capgemini 5G Wireless Lab
- CISCO Networking Lab
- CoE on Emerging Technology
- Dassault Systèmes
- Digital Communications Lab
- Digital Enterprise Service Lab under Nexus CoE
- Digital Signal Processing Lab

- Electrical Engineering Lab
- Electrodynamics Lab
- Emerging Technologies Lab
- Ergonomics Lab
- Fluid Applications Lab
- Fluid Dynamics Lab
- Fiat Crysler Automobile Lab
- Google Innovation Lab
- Honda Design Lab
- Integrated Circuit Design Lab
- Internet of Things Lab
- iOS Development Centre
- Lean Manufacturing Lab
- Mahindra Rise Innovation Lab
- Microsoft Innovation Lab
- Mitsubishi Electric Lab

- Metrology Lab
- Microwaves & Electromagnetics Lab
- National Centre of Excellence for Cyber Security (NCoE)
- NewGen IEDC Innovation Lab
- nxP Design Lab
- Robotics & Mechatronics Lab
- Plumbing Lab
- Power Systems Lab
- Rapid Prototyping Lab
- Robotics and Intelligent Systems Lab
- SAP Innovation Lab
- Schneider Electric Lab
- Wittur Transportation Lab
- Vibrations Lab
- Full Stack Lab Tech Mahindra

Strong Industry Collaborations

Chitkara University has an intense focus on making each and every Engineering graduate industry-ready. In order to make sure that our students have access to latest tools and technology, we have collaborated with industry majors ranging from software, semi conductor to automation and automotive sectors so that our curriculum and innovation labs are in sync with latest industry trends.

iOS Development Centre Powered By Apple and Infosys			ARM	ASHOK LEYLAND
AUTOMATION ANYWHERE	aws	BOSCH	cadence	Capgemini
CISCO	DASSAULT SYSTEMES	epam	ERICSSON	EY
FCA FIAT CHRYSLER AUTOMOBILES	Fuji Electric	Google	L&T	HONDA
HYUNDAI	Infosys	KONE	Mahindra	Microsoft
MITSUBISHI ELECTRIC	National Centre of Excellence	NEC	newgen	NVIDIA
NXP	paloalto NETWORKS	Quick Heal Academy	redhat	salesforce
SAP	servicenow	Schneider Electric	SIEMENS	TATA TECHNOLOGIES
TECH mahindra	virtusa Accelerating Business Outcomes	vmware	wipro	WITTUR

Be the talent
employers want

98%

OF CHITKARA GRADUATES
ARE EMPLOYED
WITHIN 7th SEMESTER
OF DEGREE

72%

OF CHITKARA
GRADUATES
ARE PAID HIGHER
THAN THE MARKET
AVERAGE

42%

OF CHITKARA
GRADUATES
GET PRE PLACEMENT
OFFERS DURING THEIR
INTERNSHIP TENURE

SOME OF THE MAJOR COMPANIES THAT VISITED OUR CAMPUS
THIS YEAR AND HIRED OUR GRADUATES

accenture	adani	ADITYA BIRLA GROUP	Adobe	AFCONS
amazon	Ambuja Cement	apollo	ARM	ASHOK LEYLAND
BAJAJ FINSERV	Bank of America	BARCLAYS	blinkit	BMW
BOSCH	bp	ca	cadence	Capgemini
Carrefour	CISCO	cleartrip	Coca-Cola	Cognizant

CONVERGYS	ddn	DEEPAK PHENOLICS	DELL	Deloitte.
DLF BUILDING INDIA	eClerx	ESCORTS	EVALUESERVE POWERED BY MIND MACHINE	EXL
EY	Fuji Electric	Finolex	fiserv.	Flipkart
GE	GeekyAnts	GENPACT	GMR Infrastructure	Godrej
GO-JEK An Ojek For Every Need	Google	HCL	Hero	hi. HEXAWARE
highradius	HINDUJA	HONDA	hp	HYUNDAI ENGINEERING & CONSTRUCTION
IBM	Infosys	J.P.Morgan	JSW	KALPA-TARU
Kirloskar	KONE	KPMG	LG	L&T Technology Services
MARUTI SUZUKI	mahindra Rise	make my trip	Microsoft	Mindtree Welcome to possible
Mondelēz International	MRF	ni	NEC	NEROLAC
NETFLIX	NEWGEN One world. One workplace.	NYKAA	ORACLE	orange
OYO	paloalto	Panasonic	PERSISTENT	PHILIPS

PIAGGIO

pwc

Qualcomm

Quick Heal
Security Simplified

RAHEJA
DEVELOPERS

Reliance
Industries Limited

RIPPLING

salesforce.org

SAMSUNG

SAP

Sapient

Schneider Electric

Shapoorji Pallonji

SIEMENS

SML ISUZU

ŠKODA

SUZUKI

TATA

Tech Mahindra

TEXAS INSTRUMENTS

TITAN

TOSHIBA
Leading Innovation

UNISYS

u-shin

verizon

virtusa
Accelerating Business Outcomes

vivo

VOLTAS beko

vodafone

wipro

WNS

YAMAHA

zomato.com

zscaler

ZYCUS

Inter-disciplinary
Engineering Programs

Students who wish to pursue careers in these diverse and inter-disciplinary fields, or go onto graduate school, are best served by an Undergraduate Education somewhat different from that offered by traditional Engineering programs. The Interdisciplinary Engineering track at Chitkara University is one such program that provides the student with the opportunity to define their own unique engineering expertise.

Many of today's most pressing issues demand solutions that defy traditional academic boundaries. Real progress requires incorporating perspectives from business, science, arts and the humanities. To encourage creative problem-solving, Chitkara University has developed some of the most innovative and flexible programs in higher education.

Our unique inter-disciplinary programs blend engineering with fields of study with Chitkara Business School, Chitkara Design School and other schools of the University. Alumni go on to create and follow their own intellectual and professional paths in areas such as law, medicine, business, academia and government.

Multi-disciplinary engineering degree programs allow students to develop unique skill sets and specialise in areas that may not be provided in traditional degree programs. Such specialisations are driven by emerging technical fields or by a student's desire to have an immersive multi-disciplinary experience.

Delivering employability skills is a key focus of ours. The broad-based Engineering Education benefits our students, alumni and industry. Modules are taught cross-departmentally ensuring that our graduates become agile, interdisciplinary engineers that are sought after across a range of industries. You will find our graduates working in renowned companies all over the world. Google, Amazon, IBM, Microsoft and Accenture are just some of the companies hiring our interdisciplinary Engineering graduates.

Your career choices with a degree in Inter-disciplinary Engineering will be tailored as your degree program. Nearly every industry requires engineers with multi-disciplinary skillsets and you will have a unique opportunity to target positions that require multi-disciplinary engineers.

HARNESS THE POWER OF LIBERAL ARTS

Chitkara University takes a holistic approach towards technical education and is looking to provide courses on history, culture, communication, diversity and so on to provide soft skills to our Engineering graduates.

Chitkara University's strong liberal arts core curriculum provides students with invaluable skills needed by all engineers to excel not only in their professional careers, but in all aspects of life.

The core offers instruction in diverse subject areas as writing, history, philosophy, theology, social science and a foreign language. By integrating Engineering and Liberal Arts courses, students are also well prepared to work on complex technical problems that require multi-disciplinary teams to obtain effective solutions.

The development of written and oral communication skills is emphasised throughout the curriculum. The total experience provided in our curriculum is devised to enable Chitkara University Engineering students to develop creative solutions to technical problems and communicate these effectively while engaged in detailed analysis and design as well as Engineering project management.

Get involved in some of the 20-plus student groups exclusively for students of Engineering and Technology. These groups help you develop skills critical to career success—leadership, communication, fundraising and teamwork. You can design, build robots or race vehicles, join a professional organisation or honours society, or make a difference in a service club.

American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE)

American Society of Mechanical Engineers (ASME)

Association for Computer Machinery

Computer Society of India

Institute of Electrical and Electronics Engineers (IEEE)

Institute of Electronics and Telecommunication Engineers

Society of Automotive and Aerospace Engineers (SAE)

Society of Automotive Engineers

Society of Women Engineers (SWE)

The Indian Society for Technical Education

The Institution of Engineering and Technology

The Institution of Engineers

Competition Teams

- **Aero-Design Team**
- **Formula Racing Team**
- **Mini-Baja Team**
- **Supermileage Team**
- **Robotics Club**

![The Global University logo]

The Global University

Live independently. Gain cultural awareness. Expand your social network around the world. Make new friends who may become your future business collaborators in an increasingly interconnected world.

Learn in a classroom on a different continent. Experience working in the real world, around the world. There are so many new experiences awaiting you at Chitkara University.
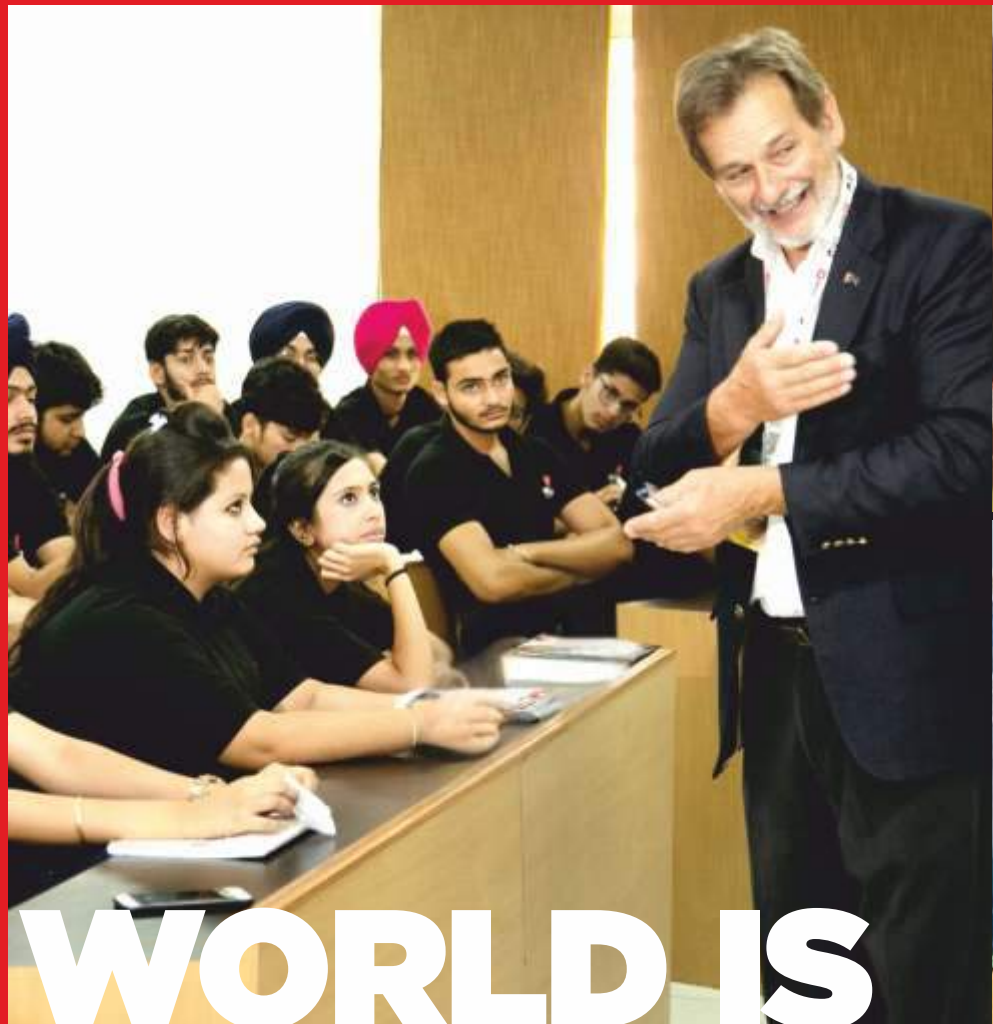
THE WORLD IS

INTERNATIONAL STUDENT EXCHANGE PROGRAMS
Gain a global perspective

Chitkara University's robust international exchange program with more than 200 overseas universities gives you the opportunity to experience living on your own in a different country. The networks you build and experiences you encounter will give you a more global and culturally sensitive perspective.

SUMMER STUDY PROGRAMS
Immerse in overseas experience

Summer Programs are short duration programs of 2-4 weeks on various specialisations. It adds to the international exposure of the students.

SEMESTER EXCHANGE PROGRAMS
Foster stronger bilateral ties

Chitkara students have the option to finish the last half part of their degree programs at our partner Universities. Students visit Partner Universities for six months to one year for completing their semesters abroad.

Chitkara University's approach to Global Engineering Education rests on the belief that every student needs global knowledge and mindset. Our Engineering graduates will get many opportunities to globalise their University experience.

YOUR CAMPUS

OVERSEAS STUDY MISSIONS
Gain insights from industry leaders

Overseas study missions bring you right into the heart of multinational organisations around the world, giving you current insights on how they function through site visits. You will also experience a networking journey with prominent industry leaders, opening doors to a world of opportunities.

OVERSEAS INTERNSHIPS
Step into the global marketplace

Experience for yourself how industries and businesses operate, broaden your perspective and apply your skills and knowledge to real-world business operations.

GLOBAL EXPOSURE
Cultivate empathy

We regularly invite faculty from top Global institutions across the world. This exposure helps our students understand diverse cultural and educational contexts.

Global Engineering

Internationalisation and globalisation are key characteristics of today's work environment. The world has become a "Global Village" where economic, political, social and cultural dimensions are tightly intermingled. Such a platform offers students not only considerable opportunities but also higher complexity.

Chitkara University is prepared to face these new challenges, responding to professional and international commitments, by educating and training future Engineers to be "World-Ready" for tomorrow's world and by helping them develop skill sets desired by future employers.

OUR UNIQUE GLOBAL NETWORK
Chitkara University has established a unique network of more than 300+ partner Universities around the globe. This co-operation network forms the basis for student as well as faculty exchange programs within the framework of our educational programs.

THE INTERNATIONAL EXPERIENCE
We, at Chitkara University, believe that combining a state-of-the-art education and study abroad experience is strongly desired in today's marketplace; it not only enhances candidates' professional, global and inter-cultural competence but also greatly contributes to students' personal development. Studying abroad is also an important opportunity to build a new network of friends and contacts from all over the world, which is a major asset in an increasingly interdependent world. Engineering Students from Chitkara University enjoy unforgettable experiences during their study abroad programs, such as semester exchange and summer school programs, at partner universities across the world.

OUR INTERNATIONAL AND SUPPORTIVE STUDY ENVIRONMENT
With its growing number of international students and faculty, Chitkara University offers a truly international study environment. International faculty from partner universities teach short-term courses to students of Chitkara University during global events such as global engineering, automobile and business weeks.

Global Mobility of our
Engineering Graduates

Our Engineering graduates have the option to study the first 2 years of Engineering programs at Chitkara University campus and then complete their Degree at a partner global University. Chitkara University offers study abroad programs across the world.

Through the years annually more than 500+ Chitkara Engineering students experience global mobility across 75+ Universities on internships, summer school and semester exchange.

CHITKARA INNOVATION INCUBATOR

THE LARGEST CAMPUS BASED INCUBATOR IN NORTH INDIA

Chitkara Innovation Incubator Foundation (CIIF) is one of the largest Government supported incubators in North India with more than 200+ start-ups. It is designed to provide aspiring student entrepreneurs with the education, resources and funding to start and expand their own businesses. In line with the Government of India's initiative of Startup India (https://www.startupindia.gov.in/), CIIF empowers founders who are and will be solving some of the world's most pressing challenges through technology-based solutions.

Key facts:

- Startups incubated since inception: 270+
- Total valuation of incubated startups: USD 46 million
- Total mentors: 81+
- Solutions commercialised: 79+
- Jobs created by startups: 2400+

- External funding raised by the startups: USD 3.4 million
- Total no. of Patents filed by Incubates: 470+
- Current Incubates: 79+
- Ecosystem Partnerships & collaborations: 59+
- Supported & approved by Department of Science & Technology, Govt. of India

SUPPORTED BY

Department of Science and Technology
Ministry of Science and Technology
Government of India

ISBA

TiE

startup himachal

STARTUP PUNJAB

Ministry of Electronics and Information Technology
Government of India

#startupindia

MEITY STARTUP

t-hub

FICCI for Startups

JSAC

LAUNCH PAD
Technology Business Incubator

India Fund Fest

CHANDIGARH ANGELS NETWORK

NIDHI PRAYAS

Chitkara University incubated startup "Chai Nagri" raises $122k at Investor Fest

Entrepreneurship & Innovation Specialisation

Whether you already have an idea for a startup or are still brainstorming, Chitkara University's specialisation in Entrepreneurship and Innovation offers workshops to help you develop and refine your strategy before you jump into building an actual company. You can take part in Chitkara University's 'Launch Your Big Idea' program and gain the necessary training and resources to prepare your startup for success - plus a chance to pitch your idea and win seed funding. You can also connect with like-minded student entrepreneurs through events hosted by the Chitkara Innovation Incubator.

Chitkara University's Entrepreneurship programs for our Business graduates is designed to prepare future entrepreneurs with the skills and knowledge to start their own businesses. The specialisation will focus on identifying, analysing and evaluating global and local business opportunities, creating new independent business ventures or new ventures within existing firms; developing creativity and understanding innovation; environment assessment for new ventures; marketing research and developing effective business plans to obtain financing, legal issues related to starting and operating a family-owned business.

Major learnings from these programs will be:
- Be critical thinkers who are capable of identifying business opportunities by using cutting-edge analytical tools.
- Communicate clearly to develop and evaluate business plans and funding proposals.
- Apply relevant financial principles to assess start up capital needs, cash flow needed for growth, break-even analysis and pre- and post-funding.
- Effectively understand and implement a marketing plan for a new venture.

Get Mentored
By Leading
Entrepreneurs

Gain invaluable insights through mentorship with industry pioneers and startup leaders. Gain firsthand knowledge from their experiences, strategies, and challenges as they share their secrets to success.
This exclusive opportunity empowers you to forge valuable connections, sharpen your vision, and cultivate the skills essential for thriving in today's fast-paced business environment. Elevate your journey toward success.

Vineeta Singh
CEO & Co-Founder,
Sugar Cosmetics

Ankur Warikoo
Entrepreneur, Angel Investor
and Bestselling Author

Ghazal Alagh
Founder, Mamaearth

Aman Gupta
Co-founder, boAt Lifestyle

Raj P Narayanam
Founder, Zaggle

Ananya Birla
Chairperson & Director
Chaitanya India Fin Credit Pvt Ltd.

STUDENT LIFE HERE IS:

DYNAMIC

3,000

More than **3,000** events offered each year through the Office of Student Affairs

DIVERSE

100%

One of the most diverse campuses in the country

INCLUSIVE

200

More than **200** recognised student organisations

SAFE

One of the safest University campuses offering a safe and healthy environment

TIER 1

ENGAGING

More than **1000** educational and social programs organised for hostel students

1000

ACTIVE

More than **50** team and individual sport programs are offered throughout the academic year

50

SUPPORTIVE

Cross-disciplinary tutors are available more than **60** hours a week in the Centre for Learning Resources

60 HOURS

Specialisation in Computer Science Engineering
ARTIFICIAL INTELLIGENCE

When it comes to the best jobs for the future, few industries stand out as much as artificial intelligence. 2020 Gartner Report shows that enterprise applications for AI have grown 270% in four years, fueling a level of demand that outstrips the current supply of qualified job candidates.

This is great news for students seeking machine learning jobs and related careers in artificial intelligence. The number of industries using AI is also expanding to the point where virtually no major enterprise will be untouched by this rapidly unfolding technology revolution.

Our specialised Engineering program in Artificial Intelligence gives you the in-depth knowledge you need to transform large amounts of data into actionable decisions. The program and its curriculum focus on how complex inputs — such as vision, language and huge databases — can be used to make decisions or enhance human capabilities. The curriculum includes course work in Computer Science, Mathematics, Statistics, Computational Modeling, Machine Learning and Symbolic Computation.

Students in this program will take courses in Mathematics & Statistics, Computer Science, AI, Science & Engineering and Management. The program builds a solid foundation by covering the most popular and widely used deep learning technologies and its applications, including Computer Vision, Convoluted & Recurrent Neural Networks, Natural Language Processing and Tensor Flow.

COMPUTER SCIENCE
Computer Systems and Programming | Principles of Imperative Computation | Principles of Functional Programming
Data Science Essentials | Parallel and Sequential Data Structures and Algorithms | Agile Software Development
Logic Programming and Computational Logic

CORE SUBJECTS IN ARTIFICIAL INTELLIGENCE
Machine Learning, Deep Learning & Reinforcement Learning | Information Theory, Inference & Learning Algorithms
Neural Networks for Machine Learning | AI Representation and Problem-Solving | Natural Language Processing
Computer Vision and Image Analysis. Once you master some of the fundamentals, we will offer AI subfields that most interest you and you can shape your coursework accordingly. Some sample artificial intelligence clusters and subjects are mentioned below:
Machine Learning
Deep Reinforcement Learning and Control | Applied Machine Learning | Machine Learning for Text Mining
Advanced Data Analysis
Decision-Making and Robotics
Neural Computation | Autonomous Agents | Cognitive Robotics | Strategic Reasoning for AI
Robot Kinematics & Dynamics
Perception and Language
Information Retrieval and Search Engines | Speech Processing | Computational Perception | Vision Sensors
Computational Photography
Human-AI Interaction
Designing Human -Centered Systems | Human-Robot Interaction | Robotic Manipulation | Safe and Interactive Robots

Companies hiring in AI include not only the usual suspects — namely, Google, Amazon, and Apple — but also a host of startup artificial intelligence companies specialising in niche industries.

4-Year Bachelor of Engineering
COMPUTER SCIENCE ENGINEERING

INTRODUCTION
The fundamental objective of Computer Science Engineering at Chitkara University is to provide our students with an opportunity to develop a firm foundation in Mathematics, Science and Design methodology of computing systems. Our course curriculum, which covers design, implementation and management of information system, of both hardware and software, has been designed keeping in mind a holistic learning approach, where students are equipped to apply their knowledge and skillset to 'real time' scenarios in the field of Computer Science Engineering.

LEARNING OUTCOMES
- Design software or digital hardware system, component or process to meet targets within realistic constraints, such as economic, environmental, social, political, ethical, health & safety, manufacturability and sustainability.
- Gain knowledge of probability and statistics, including applications for Computer Science & Engineering.
- Gain knowledge of Mathematics through differential and Integral Calculus, Basic Science, Computer Science and Engineering Sciences.
- Gain knowledge of advanced Mathematics, including Linear Algebra, Numerical Computing Methods for Engineering and Discrete Mathematics.
- Gain knowledge of Algorithms and Data Structures.
- Apply design and development principles in the construction of software systems of varying complexity.
- Understand concept of programming languages.
- Learn computer organisation and architecture.

Your undergraduate degree in computer science is designed for flexibility and will provide you with ever-increasing opportunities to solve problems through computing. You might create your own start-up or work with one of the well-established powerhouses of the software industry. Chitkara University professors work closely with the top companies in the industry, so you'll have a chance to work together with individuals and groups that are changing the IT world.

Plus you'll be able to work side by side with some of the top minds in the business—your professors are not only experts in the computing field, but they are terrific mentors and will help you find the best application of your talents and interests. In addition, you'll be getting a superb liberal arts education that will enrich your technical and scientific training and help you to become a better problem solver, team member and manager.

SCOPE OF EMPLOYMENT
Blue chip companies including Google, Microsoft, Amazon, Infosys and Wipro among others have been recruiting our Computer Science Engineering graduates since the inception of the program.
Some roles for which our graduates get hired include:
- Developers and Specialists in high-end Services and IT-product companies
- Development Engineers, Technical Leaders and Managers
- Consultants, Solution Developers and Entrepreneurs
- Computing Specialists in Research Labs and Tech Providers
- System / Network Performance Analysts

Specialisation in Computer Science Engineering

FULL STACK DEVELOPMENT

INTRODUCTION

Our specialisation in Full Stack Engineering is designed for students who wish to start their career in the IT industry by mastering a full stack of multiple technologies, acquiring an ability to architect high impact solutions, envision and design great new products, solve complex problems and manage cross-functional collaborations.

The program is designed to build skills in high-demand areas such as SDLC, application development for web, mobile & cloud and DevOps.

SOME IMPORTANT COMPONENTS OF THIS COURSE WILL BE

- **Overview of Full Stack Engineering**
  Overview of the modern application landscape; Typical structure of an end-to-end application: components and connections; Design considerations and implementation choices; Case study for each of the topics discussed.
- **Web Development**
  Components of front-end web application development: User interfaces, rendering, Document Object Model, Event and State handling; Languages/tools such as HTML, CSS, JavaScript, AJAX; Web apps development frameworks; Components of back-end web development: Web Server essentials; Server Side scripting; REST architecture; Database interactions; Integration with code repositories.
- **Mobile Application Development**
  Mobile application building blocks such as the screens (UI), background services; Communication between the application components; Application development using native multi-platform development; Interaction of applications with Internet resources, REST APIs, databases; Unit testing of applications; Integration with code repositories.
- **Cloud Native Development**
  Basics of cloud computing; Different types of services; Virtual machines vs Containers deployment; Characteristics of cloud native application; Elements to build cloud-native applications; Cloud native architecture and micro-services; Design, decomposition of applications to micro-services; Developing micro-services; Interactions with data services and databases.
- **Agile and DevOps**
  Overview of Agile methodology: Scrum, Test driven development, DevOps, Continuous Integration/Continuous Delivery (CI/CD); Code repository: Multi-user, distributed development, version control; Continuous inspection of code quality; Build and build tools; Automated Testing; Integration tools; Implementing CI/CD.
- **Deployment of Micro-services 2**
  Containerising applications by creating container configuration files and build processes; Manage deploying, scaling, and updating applications with micro-services using container management platforms such as Kubernetes; Configure and launch auto-scaling, self-healing clusters; Best practices for container management, when architecting and developing new microservices.
- **Capstone Project**
  Full stack applications demonstrating the UI, server and database components of an end to end multi-user application; Usage of one or more well-known development frameworks; Demonstration of scalability and reusability by applying design concepts such as microservices and container-based deployment on the cloud; Demonstration of compliance with principles of agile and CI/CD.

CAREERS

Full Stack Developers design complete apps and websites. They work on all facets of development from front-end to back-end, database, debugging and testing. Full Stack Developers are more sought after because of their expertise in multiple technologies. They can handle all aspects of development and it can result in a more seamlessly created product.

Specialisation in Computer Science Engineering

CLOUD COMPUTING & VIRTUALISATION TECHNOLOGY
in academic collaboration with

Chitkara University has prepared the curriculum under the guidance of AWS Educate to make it focused on Cloud Computing and "Industry Aligned", right from Year 1, with the outcome that its students can make their career in the ever-growing field of Cloud Computing & Virtualisation.

The proposed specialisation will prepare students to understand the emerging technologies of Cloud Computing & Virtualisation, their principles, modeling, analysis, design, deployment and industry-oriented applications. All major solution architectures and enabling technologies will be covered under this program.

The curriculum lays focus on introduction to Cloud Computing and its techniques, issues and services that lead to design and development of a simple Cloud Service along with basic fundamentals. Also there would be focus towards security, standards and applications in Cloud, including Cloud Security challenges, software as a service security and its common standards.

This program has been designed keeping the below points in consideration:
- **Technology Skills:** Apply current technical tools and methodologies to create cloud solutions.
- **System Specifications:** Design secure cloud information systems.
- **Technology Analysis:** Evaluate cloud computing trends, practices, and products.
- **Cloud Analysis:** Evaluate the potential impact of cloud-based information systems on business processes.
- **Project Management:** Apply project management practices, tools, and methods to cloud solutions.
- **Professional Development:** Recognise the ethical considerations for IT professionals locally and globally.

COLLABORATION WITH AWS EDUCATE
Chitkara University has collaborated with AWS Educate so that our students can access AWS Certifications and start their career in the ever growing field of Cloud Computing & Virtualisation. Some of the topics covered under these certifications are:
- Align curriculum with the cloud computing skills and competencies that employers seek in working professionals.
- Train faculty through professional development sessions in cloud concepts.
- Provide students with resources and training to understand and set goals towards a career path in cloud computing.
- Engage employers with academic institutions to build a pipeline into in-demand cloud career opportunities.

CAREERS
All graduating Engineers with specialisation in Cloud Computing & Virtualisation find excellent placements in companies that require specific development skills towards working with Amazon Web Services (AWS), Microsoft Azure or Google Cloud Platform
- Cloud Solution Architects
- Cloud Security Specialist
- Cloud System Administrator
- Cloud Application Development

Specialisation in Computer Science Engineering
DATA SCIENCE AND ANALYTICS

INTRODUCTION

Our program in Data Science and Analytics is designed to meet the growing demand for data scientists and data analysts with deep analytical and technical skills who can analyse massive amounts of data and extract information from complex data sources. Data Science is very important for organisations as it helps to harness their data and use it to identify new opportunities, leading to smarter business moves, more efficient operations, higher profits and happier customers.

Data scientists need expertise in the three core areas: computer science, mathematics and information management. They also need good critical thinking and effective communication skills.

Our interdisciplinary Engineering curriculum emphasises the core areas of data science, including courses in programming, math, statistical modelling, machine learning and data management. Students learn all the aspects of the data science process from data collection and data understanding to model building and model validation and develop communication and critical thinking skills through real world applications.

The specialisation in Data Analytics equips students with the skills to draw out intelligent analysis of data, which is a crucial component in numerous business applications and supporting business decisions.

The program is designed to cater to the ever-changing needs and demands of the industry. Data Analysis experts are among the most sought-after professionals in IT sector with demand for skilled technocrats in that field outpacing other IT jobs by a wide margin. Some important components of this program are:

- Data Science principles, tools, and techniques to solve "real world" business problems and suggest suitable solution with relevant findings.
- Recognise issues in everyday business; apply Data Science for better understanding of data-driven management decisions to help get an edge over competition.
- Provide insights into leading analytic practices, design and lead iterative learning and development cycles.
- Produce new and creative analytic solutions, which can become a part of any business core deliverables.
- Get insights on how to improve business results by building data-fuelled products.

Some important skill sets taught in this specialisation:
Predictive Analytics | Data Analysis & Management | Data Visualisation | Business Intelligence | SAS Programming
Programming tools like R, Python

CAREERS

According to NASSCOM, the Data Analytics market will reach $16 billion by the year 2025, growing eightfold from its market worth in 2016. India alone will require over 500,000 data scientists, as per various industry insights.

TYPES OF COMPANIES / ORGANISATIONS LOOKING FOR DATA ANALYSTS:
- Big IT companies who have an Analytics Practice - Infosys, TCS, Cognizant, Wipro, Oracle
- Analytics KPOs - Genpact, WNS, Evalueserve, HSBC, EXL
- In-house Analytics Units of large corporates - Citibank, Dell, HP, Spencers, Sears
- Core Analytics firms - Brainmatics, Fractal Analytics, Mu Sigma

Specialisation in Computer Science Engineering
CYBER SECURITY

INTRODUCTION

Cyber Security is a branch of Digital Forensic Science pertaining to legal evidence found in the cyber space and digital storage media. Cyber Security technologies, processes and practices are designed to protect networks, computers, programs and data from damage or unauthorised access.

Specialisation in Cyber Security offers you the opportunity to gain a comprehensive and critical understanding of the theory and techniques of contemporary Cyber Security and how to apply these in response to "real-world" business problems. The specialist qualification in one of the most in-demand areas of IT, combining - advanced aspects of security, its practical application and the implications of security within a business.

As we all know, the technology industry has taken huge strides in the 21st century with inventions that brought the whole world to our fingertips. While it has made our lives undeniably easier, it has also opened up a world of possibilities for criminals who could make use of the information that has been put online for the wrong reasons. This is where cybersecurity comes in.

CAREERS

With digitalisation moving in the fast lane, it is estimated that a whopping 3 million cyber security professionals will be required in the country to support its fast-growing internet economy.
Our Cyber Security Engineers shall find excellent placements in research-oriented industries and top ranking global companies, with their careers ranging from:

- Cyber Security Specialist ● Security Architect ● Cyber Operations Analyst ● System Administrator
- Security Software Developer ● Security Engineer ● Cyber Forensics Architect ● Cyber Malware Analyst

Specialisation in Computer Science Engineering
GAME DESIGN & TECHNOLOGY

INTRODUCTION

We have all played and enjoyed games, but how do people actually design them? What are the basic elements? How do designers create an experience for the player? What about prototyping and iterating? This specialisation in Game Design will help students explore the above questions and much more.

Students will be introduced to Game Design - its concepts, emphasising the basic tools: paper and digital prototyping, design iteration and user testing. They will also learn about the challenging, multi-disciplinary subject area of Augmented Reality (AR), where they will learn the skills required to create VR/AR simulations, games, visualisations and apps.

Students will study the creation of digital content and the practical application of VR/AR technologies. Some highlights of the program are:

- Research and develop your own VR/AR concepts by creating 2D and 3D digital artwork.
- Study the evolving theories and principals of design-led VR/AR. This includes designing for immersive environments, location-based mobile apps and wearable technologies.
- Research and explore theories of user-centred design and user experience.

CAREERS

According to Statista, Gaming and AR market size was around $6.1 billion in 2016 but is expected to reach $215 billion by 2023. Although companies have spent several years developing and refining this technology, demand for skilled professionals is experiencing a major uptick as more technologies make it out of R&D and enter the marketplace.

- Developers typically collaborate closely with Software Designers and 3D Artists, as well as Design Architects and Engineers who plan and create the hardware on which XR Software runs.
- System Validation Engineers test systems and help resolve technical issues, and circle back with developers to ensure applications get modified accordingly.
- Project Managers coordinate and oversee entire development teams, interface with other business units and work with clients.

3-YEAR BCA
Bachelor of Computer Applications

The Bachelor of Computer Applications (BCA) is a three-year undergraduate program designed for students aspiring to build a career in the field of information technology and computer applications. It provides a comprehensive understanding of computer science fundamentals, programming, and software development, making it a popular choice among tech enthusiasts.

The program focuses on teaching essential programming languages like C, C++, Java, Python, and web development technologies such as HTML, CSS, and JavaScript. It also covers advanced topics, including data structures, algorithms, database management systems (DBMS), computer networks, operating systems, and software engineering. Many universities integrate emerging technologies like artificial intelligence, machine learning, cloud computing, and cybersecurity into the curriculum to keep pace with industry trends.

BCA emphasises both theoretical knowledge and practical skills. Students undertake hands-on projects, practical labs, and internships to gain industry exposure and apply their learning in real-world scenarios. Mathematics and analytical subjects like discrete mathematics and statistics are also included to strengthen problem-solving skills.

Graduates of the BCA program are well-equipped for roles such as software developer, web developer, database administrator, system analyst, and IT support specialist. The degree also serves as a stepping stone for higher studies like Master of Computer Applications (MCA) or certifications in specialized IT domains.

Engineering Programs 2025

B.E. Computer Science
Bachelor of Computer Applications

CHITKARA
UNIVERSITY

CHITKARA UNIVERSITY - HIMACHAL PRADESH
Pinjore-Barotiwala National Highway
Himachal Pradesh | India
www.chitkarauniversity.edu.in

INFORMATION CENTRE
Unit No. A 201-202, Elante Mall Office Complex
Industrial Area Phase I, Chandigarh, 160002

Admissions Helpline:
Chandigarh: 95011 05714 | 95011 05715
Delhi/NCR: 95993 68734

For more information about our programs
give a miss call on **1800 267 1999**

WhatsApp : 98590 00000

admissions@chitkara.edu.in