

CHITKARA
UNIVERSITY



DISCOVER ENGINEERING

IMAGINE | INNOVATE | INSPIRE

Engineering
Viewbook 2021

CHITKARA
UNIVERSITY



Explore
Your
Potential



Engineering Education ahead of its time.

Engineering programs at Chitkara University in Punjab and Himachal Pradesh do more than just develop world-class engineers and computer scientists. We help these bright minds develop into changemakers with the global perspective, technical prowess and leadership skills to make a difference in the world.

Get ready to chart your course to a career that is as meaningful as it is successful. Every possible path starts with a common engineering core curriculum for the first year and a half, which lets you explore your options and discover the discipline that's right for you.

There are many forces behind our strength: our academic reputation, top rankings, varied specialisations, small class sizes and 100% campus recruitment.

Come and Explore Your Potential at Chitkara University.

CHITKARA
UNIVERSITY



A few things we're proud of

THERE ARE SO MANY REASONS TO CHOOSE CHITKARA UNIVERSITY THAT WE RAN SHORT OF SPACE TO COVER THEM ALL. BUT HERE ARE A FEW REASONS WHY WE THINK YOU'LL LOVE US AND BE PROUD TO JOIN US.

Punjab
Himachal Pradesh



STRONG ACADEMIC HERITAGE

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

INDUSTRY-LED COURSES



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



TOP 20 RANKING

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



5 STARS

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

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.



COUNTED AMONG THE BEST

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



TOP SKILLS

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

WORLD-CLASS RESEARCH EXCELLENCE



With more than 150 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.



MORE CEOs

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

CAMPUS PLACEMENTS

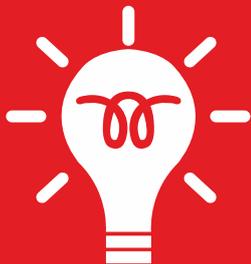


Chitkara University has established an unassailable reputation for strong on-campus recruitments. Our students have gained employment in diverse professional roles and areas across the globe. From managing hotels to discovering new drugs to helping patients in hospital to analysing the stock market,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



LEARN FROM THE BEST

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



LEADING INNOVATION

Chitkara Innovation Incubator helps turn students' business ideas into reality. Student ventures with scalable, commercial potential are given access to high tech, collaborative office space, 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.



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.



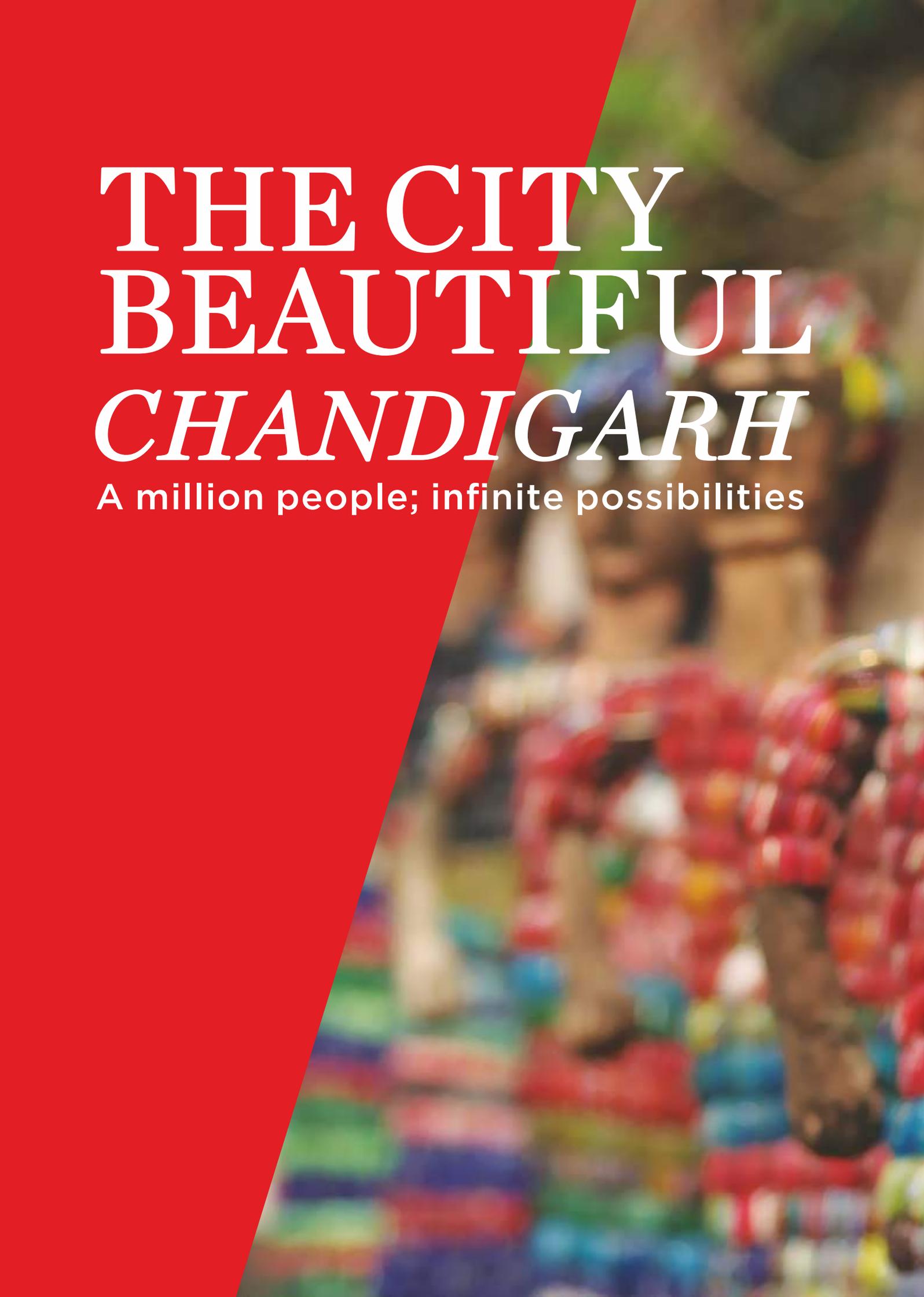
BEST LOCATION

With a high quality of living and vibrant student mix, Chandigarh is a city that comes under 'Times 15 Best Asian Spots'.



SAFE & SOUND

We take great pride in looking after our students.



THE CITY BEAUTIFUL *CHANDIGARH*

A million people; infinite possibilities





Step into a new world

You solve problems. Build. Innovate. You take things apart to see how they work and think about how to make them better—it's why you're drawn to engineering. And maybe you can already see a better way forward with cleaner energy, more efficient travel or new technologies that will change the world. We can help you get there.

Committed to your success from day one

We offer you the resources of a big university with the caring and personal attention of a small college. We believe the cornerstone of your education should be hands-on experience, which is why you'll take what you learn in the classroom and apply it to the real world from day one.

Experience speaks volumes to employers

When you graduate from Chitkara University, you'll be a functional, experienced engineer ready to contribute to your industry from the day you're hired—which is why many of our students have jobs lined up well in advance of graduation.



Discover a higher standard in education

Practicing what we profess

Our faculty are as accomplished in the field as they are in the classroom. And with an open-door policy and regular office hours, they're dedicated to guiding and mentoring you.

Building personal connections

Smaller classes mean you get individual attention. With average class sizes under 50 students, you'll get to know your professors.

Programs customized to your pursuit

Get the support you need in your studies to pursue internships, collegiate athletics or passions in different avenues of engineering.

Cutting-edge, career-ready curriculum

A state-of-the-art curriculum grounded in experiential learning, plus strong industry partnerships, mean our classes teach the skills employers want. Our faculty are always looking ahead, designing new classes that keep us at the forefront of innovation.

Engineering programs with a real-world reputation..

Join Engineering programs at Chitkara University and we will place you at the very heart of everything we do. We 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

Whichever of our courses 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.

FRIENDLY, KNOWLEDGEABLE FACULTY

As a Chitkara Engineering student, you'll learn from friendly, approachable teaching faculty with considerable knowledge and a genuine desire to help you achieve your full potential. Our tutors have considerable industry experience. Many of them are also heavily involved in providing consultancy and knowledge transfer for local and national companies. With extensive business links, they bring current thinking, expertise and innovation into their teaching. So not only will you gain an underpinning 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 & intensive focus on new ideas and technologies.





HIGHLY RATED PROGRAMS

As a mark of their quality, 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



Ministry of Human Resource Development
Government of India

Our Engineering programs have once again been ranked among the Nation's Best in the 2020 NIRF Ranking.



ARIIA
ATAL RANKING OF INSTITUTIONS
ON INNOVATIONS ACHIEVEMENTS

Chitkara University has been ranked in the Top 25 Universities of the country out of 500+ institutions in the prestigious ARIIA 2020



Chitkara University is proud to be included in the QS World University Rankings: Asia for the first time ever in 20-21 edition.



We are the only Indian university shortlisted for 'Technological Innovation of the Year' in 'Times Higher Education Asia Awards 2020'.



Chitkara University makes it into top 200 in Clarivate Analytics' leading innovators list 2020



THE TIMES OF INDIA

Chitkara Engineering is ranked in the top 30 Engineering programs.



Chitkara University rated in 'Top 50' of 2020 annual Engineering Rankings.



Chitkara Engineering ranked as one of the top Engineering programs of the country.



Consistently ranked Chitkara Engineering among the best in India.



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



Awarded Outstanding Engineering University for 2020 for placements.



Chitkara University Engineering programs Rated 'AAA+'.



Chitkara University rated in 'Top 50' in the Engineering Rankings.



CHITKARA
UNIVERSITY



INDIA

**FORMULA
STUDENT**

**Division of
MECHANICAL
ENGINEERING**

096

**CHITKARA
UNIVERSITY, PUNJAB**





Key Facts

Here are just a few key reasons why Engineering programs at Chitkara University in Punjab & Himachal Pradesh are rated as one of 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 Engineering 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 supportive team helps Engineering students from different Maths background 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

Wherever possible, 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, Virtusa among 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 across our region.

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'll 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 NOVEATE, an opportunity for graduating students to showcase their work to employers and industry specialists.



Hands-on and state of the art

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 our 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 some 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 Systemes.





Labs & facilities

- Advanced Materials & Manufacturing Lab
- Apple IOS Lab
- ARM Research Lab
- Artificial Intelligence Lab
- Automation Lab
- Building Energy Efficiency Ergonomics Lab
- CAD/CAM Lab
- Cadence Microelectronics Lab
- CISCO Networking Lab
- Dassault Systemes
- Digital Communications Lab
- Digital Signal Processing Lab
- Electrical Engineering Design Lab
- Electrical Engineering Lab
- Electrodynamics Lab
- Ergonomics Lab
- Fluid Applications Lab
- Fluid Dynamics Lab
- Fiat Chrysler Automobile Lab
- Google Innovation Lab
- Honda Design Lab
- Integrated Circuit Design Lab
- Internet of Things Lab
- Lean Manufacturing Lab
- Mahindra Rise Innovation Lab
- Microsoft Innovation Lab
- Mitsubishi Electric Lab
- Metrology Lab
- Microwaves & Electromagnetics Lab
- 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
- Virtusa Full Stack Lab

The transformation of complexity by applying Engineering



Interdisciplinary Engineering Programs

Over the past several years, there has been a rapidly increasing interaction between the traditional fields of engineering, as well as between engineering and other disciplines. Examples of this include biomedical engineering, mechatronics, environmental engineering, and industrial design. It has also become very common for students to complete an undergraduate program in engineering and then continue on to pursue graduate work and careers in fields such as medical device design and technology, patent law, medicine, robotics, and nanotechnology.

Students who wish to pursue careers in these increasingly diverse and interdisciplinary 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 interdisciplinary 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.

Multidisciplinary engineering degree programs allow students to develop unique skill sets and specialize in areas that may not be provided in traditional degree programs. Such specializations may be driven by emerging technical fields or by a student's desire to have an immersive multidisciplinary 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 highly sought after across a range of industries. You'll find our graduates working in renowned companies all over the world. Google, Amazon, IBM, Microsoft and Accenture are just some the companies hiring our interdisciplinary Engineering graduates.

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



Harness the power of the LIBERAL ARTS

Complementing our Engineering training, 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 such 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 emphasized 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 set up for academic success

Our aim is to mould the technical minds of our future Engineers into an informed, socially responsible faculty, that turns an individual into a lifelong learner with the ability to think critically and make informed judgement.

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.

The Engineering programs at Chitkara University combine classroom and laboratory learning in technical areas with a broad liberal arts curriculum and industry assignments to give you an Education tuned to the 21st Century wavelength.

CHITKARA
BUSINESS
SCHOOL 



Accelerate your career with our specialised MBA programs

Chitkara Business School, an associate institution of Chitkara University, is now recognised as one of the premier B-School in the country and has established an unassailable reputation for strong campus recruitment of our Business graduates with Fortune 500 companies.



NIRF (National Institutional Ranking Framework-2019), the most premier Business School ranking in India ranked Chitkara Business School among Top 75 Management Institutions of India out of 630 Business School of the country.

Management Programs at Chitkara Business School have been consistently rated as one of the finest in the country which provides an insight into our unique blend of distinguished faculty and brilliant & intellectual students with proactive industry collaborations.

5-Year Integrated MBA Program

Our Engineering students have the option to join Chitkara Business School's highly ranked MBA programs after finishing their Engineering degree. Our MBA Programs have established an unassailable reputation for strong campus recruitment of graduates with Fortune 500 companies. Students who join our integrated MBA program will cover additional courses during their graduation in summer terms. There will be an intensive focus on developing strong communications skills and mastering management principles during the summer terms across first 3 years of the program.

After finishing the undergraduate Engineering program, students will be joining the 2nd year of the MBA programs and will have option to choose the following specialisations:

- Marketing
- Finance & Banking
- Business Analytics
- Supply Chain Management
- Healthcare Management

Apart from their specialisation, students will also undertake internship in blue chip companies across sectors and kick-start their corporate journey from there on.

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.





ARM



cādence



ERICSSON



FIAT CHRYSLER AUTOMOBILES



Infosys



nVIDIA



SIEMENS



Accelerating Business Outcomes

vmware





Be the talent employers want

98%

OF ELIGIBLE
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

Overview of Campus recruitment for our Engineering programs

Our Engineering graduates go on to great careers, as we're hands on and responsive in our teaching, we provide a great environment to study and our research is world class. 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". Our brilliant campus recruitment is also the end result of our teaching approach which is learning-centric, enhancing knowledge, skills, and understanding through practical experience.

20th batch of Engineering graduates from Chitkara University, Punjab & 12th batch of Engineering graduates from Chitkara University, Himachal Pradesh appeared for the campus recruitment process this year.

Some of the major highlights of the campus recruitment for the batch graduating in the year 2020 were:

- 550+ companies came on-campus for hiring Chitkara Engineering students (Most of the companies are listed on the next page)
- Out of batch of 1600 around 550 students got "Dream Job Offers" from marquee companies such as Adobe, Deloitte, Carrefour, VECO, Amazon, Adani Power, HP Labs, Verizon, FICO, Evalueserve, MakeMyTrip, Reliance Industries, HP & Quick Heal.
- 100+ offers given by StartUp unicorns Byju's / OYO / Zomato / swiggy / PlaySimple / GoJek / HyperDart GreyOrange / Quickr / PolicyBazaar / Grab Taxi / Bobble.Ai / Lightplane / Sprinkle Data / Travel Tek
- Some of the top on-campus recruiters were as follows -
Infosys / Wipro / Capgemini / Mindtree / Cybage / ITC Infotech / iNautix / Hitachi / Newgen
Unisys / Virtusa / Sears Holding / TechMahindra / NIIT / Mountblue / EXL Services / HighRadius.
Capgemini / Cognizant Technology Solutions / DXC Technology / Bajaj Finserv
- For Mechanical Engineering students, some of the major companies that visit our campus are -
Reliance / Mahindra & Mahindra / Hyundai / Honda / Eaton / SML ISUZU / Yamaha / L& T / Escorts / Jindal Saw
Mondelez / Godrej & Boyce / Coca Cola / Panasonic / Piaggio / Hyundai Infrastructures / JCB India
Ranault Nissan / Adani Wilmar / Adani Power / Atlas Copco / Grauer & Veil
- For Civil Engineering students, some of the major companies which visit our campus are -
L&T Construction / Sobha Developers / 3 C / Shapoorji Pallonji / Sterling & Wilson / Cinda Construction / Lafarge
Afcons / DLF / Raheja Construction / JSW Steel / Mahindra EPC

550+

campus recruiters
for batch of

1600

Engineering Graduates

**+
175**

Super
Dream
Offers of
10 lakh+

131+

Companies Visiting
IITs / NITs also
Hired from our Campus

Highest Salary
offered by

ADOBE

40 Lakh

484

Dream Offers of

8 lakh

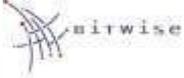
Students
Recruited by
DXC
INFOSYS
WIPRO
CAPGEMINI
COGNIZANT

On Day1

**+
1000**

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

IT INDUSTRY





HEAVY ENGINEERING /AUTOMOBILE / CONSTRUCTION



HEAVY ENGINEERING /AUTOMOBILE / CONSTRUCTION

 HINDUJA	 HONDA	 HYUNDAI ENGINEERING & CONSTRUCTION	 Ingersoll Rand Inspiring Progress™	 ISGEC ISGEC HEAVY ENGINEERING LTD.
 JCB	 JINDAL	 JINDAL ITF NURTURING THE FUTURE	 JINDAL SAW LTD. INFRA TOTAL PIPE SOLUTIONS	 JINDAL STEEL & POWER
 JK TYRE & INDUSTRIES LTD.	 Johnson Controls	 JSW Steel	 KEC KEC INTERNATIONAL LIMITED	 Kirlaster
 KONE	 L&T Construction	 LAFARGE Enabling better world™	 LAVA	 LG
 Linde	 LUMINOUS Engineering & Technology Services	 Mahindra	 MG	 MIND
 Mondelēz International	 MRF	 NEROLAC HEALTHY HOME PAINTS	 novem CONTROLS	 PIAGGIO
 PRISM JOHNSON LIMITED (FORMERLY PRISM COHENT LIMITED)	 Punj Llyod	 talbros QH Talbros Ltd.	 RAHEJA DEVELOPERS	 RALSON Tyres
 RASCO	 Reliance Industries Limited	 RMC	 ROYAL ENFIELD	 SANDHAR Sandhar Technologies Limited
 SECURE	 Shapoorji Pallonji	 SIEMENS	 SKODA	 SML ISUZU
 SONALIKA INTERNATIONAL	 Steel Strips Wheels Limited	 STERLING & WILSON	 TATA TATA TECHNOLOGIES	 TATA TATA MOTORS
 THE 3C COMPANY CREATE CARE CONSERVE	 u-shin	 VE COMMERCIAL VEHICLES A VOLVO GROUP AND ISUZU MOTORS JOINT VENTURE	 vivo	 VOLTAS beko

SEMI CONDUCTORS / KPO / CONSULTING

STARTUPS



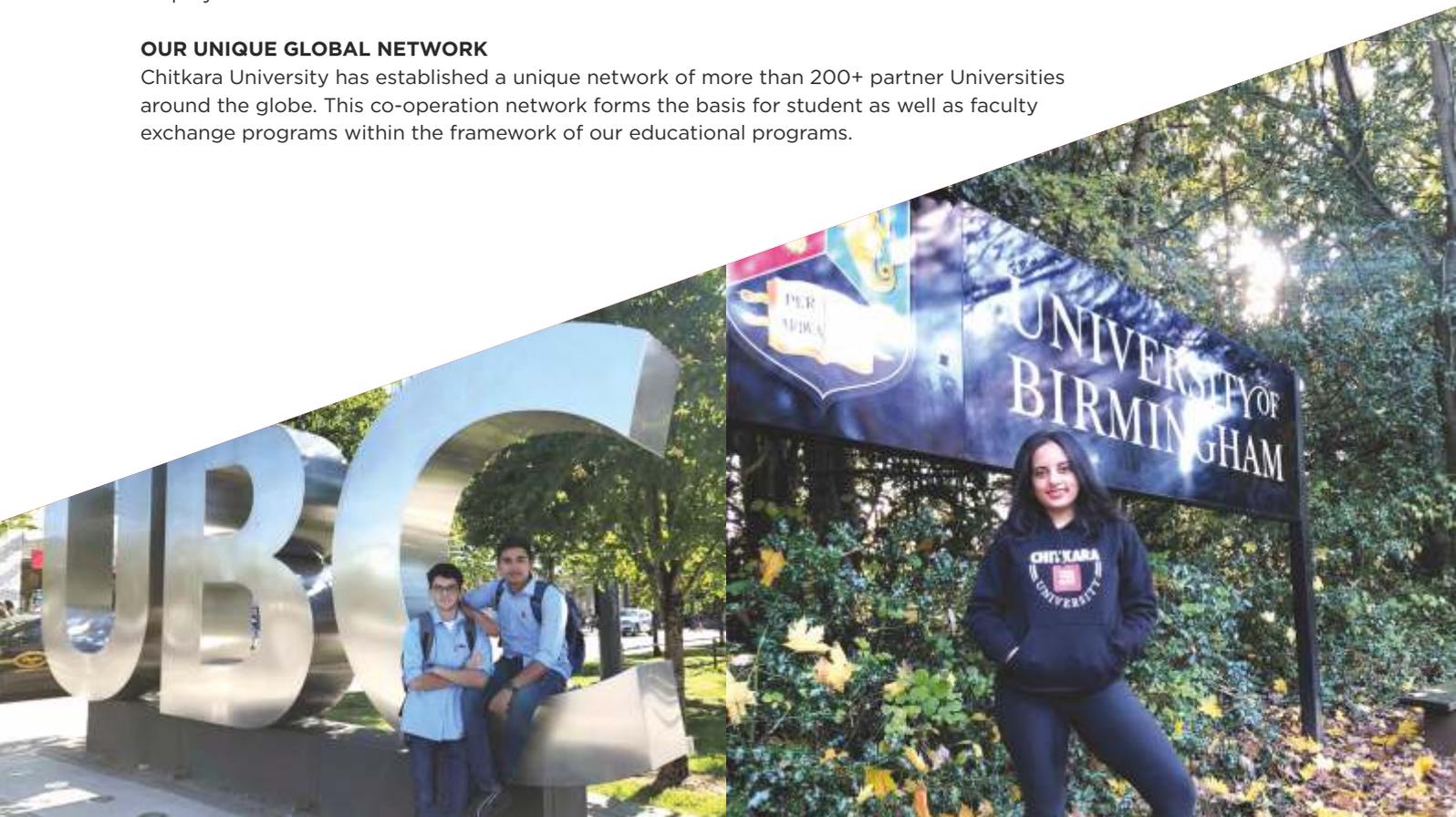
Global Engineering

Internationalisation and globalisation are key characteristics of today's environment. The world has become a "Global Village" where economic, political, social and cultural dimensions are tightly intermingled. Such a platform offers 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 "Global Ready" for tomorrow's world and by helping them in developing skill sets desired by future employers.

OUR UNIQUE GLOBAL NETWORK

Chitkara University has established a unique network of more than 200+ 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

Combining an international education and study abroad experience is a strong asset in today's marketplace. It gives candidates a huge competitive advantage but also greatly contributes to students' personal development.

Engineering Students from Chitkara University enjoyed unforgettable experiences during their study abroad programs, such as semester exchange and summer school programs, at partner universities across the world.

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 & intercultural 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.

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, automotive and business weeks.

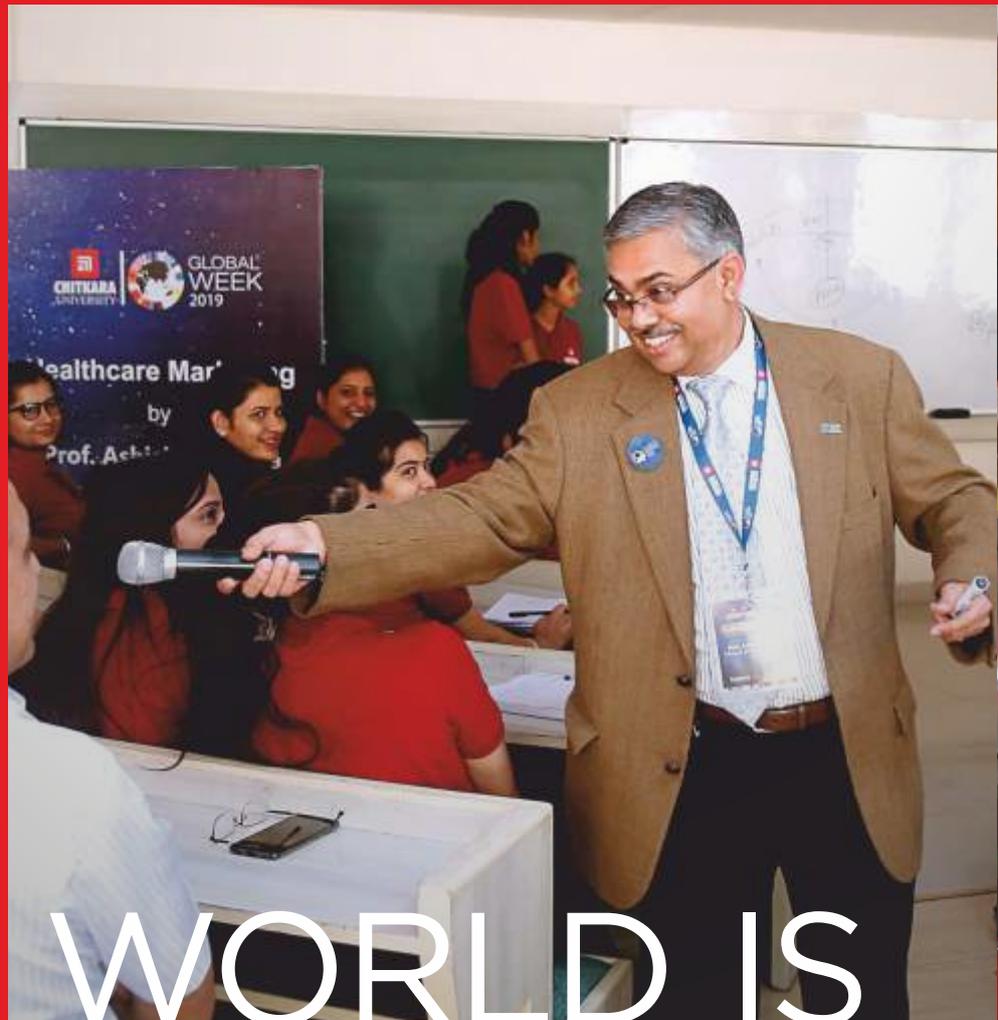




The Global
University

Live independently.
Gain cultural awareness. Expand your social network to span the globe. 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. Lend a hand to those in need. 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 in 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 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 broad global knowledge and a global 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 go on 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 and the human touch

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

Collaboration With



**Harvard Business
School Online**

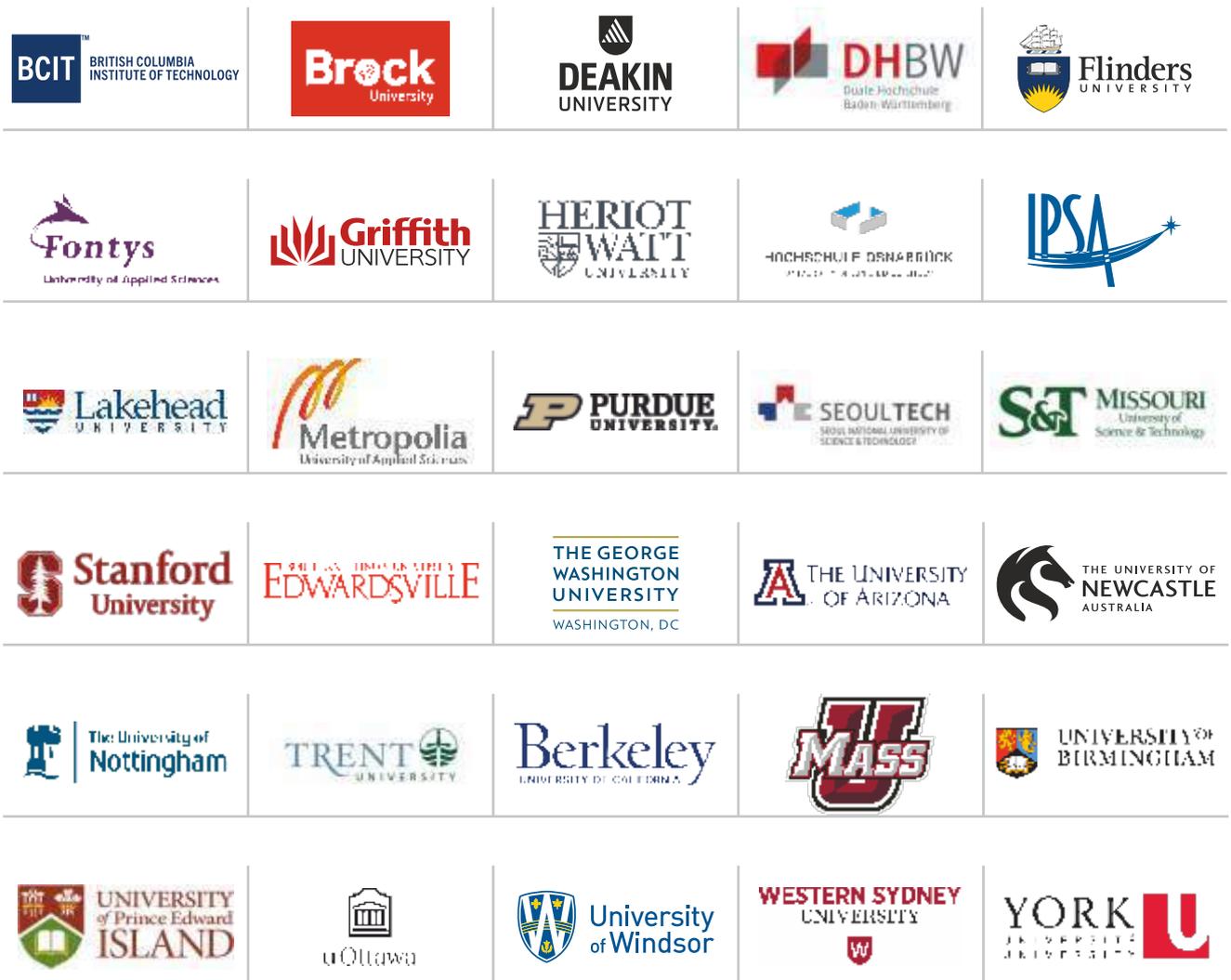


Chitkara University has a strong collaboration with Harvard Business School Online to provide world class Business programs online in Business Analytics, Disruptive Strategies, Leadership Development, Negotiation Mastery, Global Business, Sustainable Business Strategy, Entrepreneurship Essentials. Our graduates can take some online courses on Harvard Business School platform towards completing their required Engineering credits.

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 and there's something for every Chitkara Engineering student.

For the year 2019-20, more than 300+ Chitkara Engineering students had experienced global mobility across 50+ Universities on internships, summer school and semester exchange.



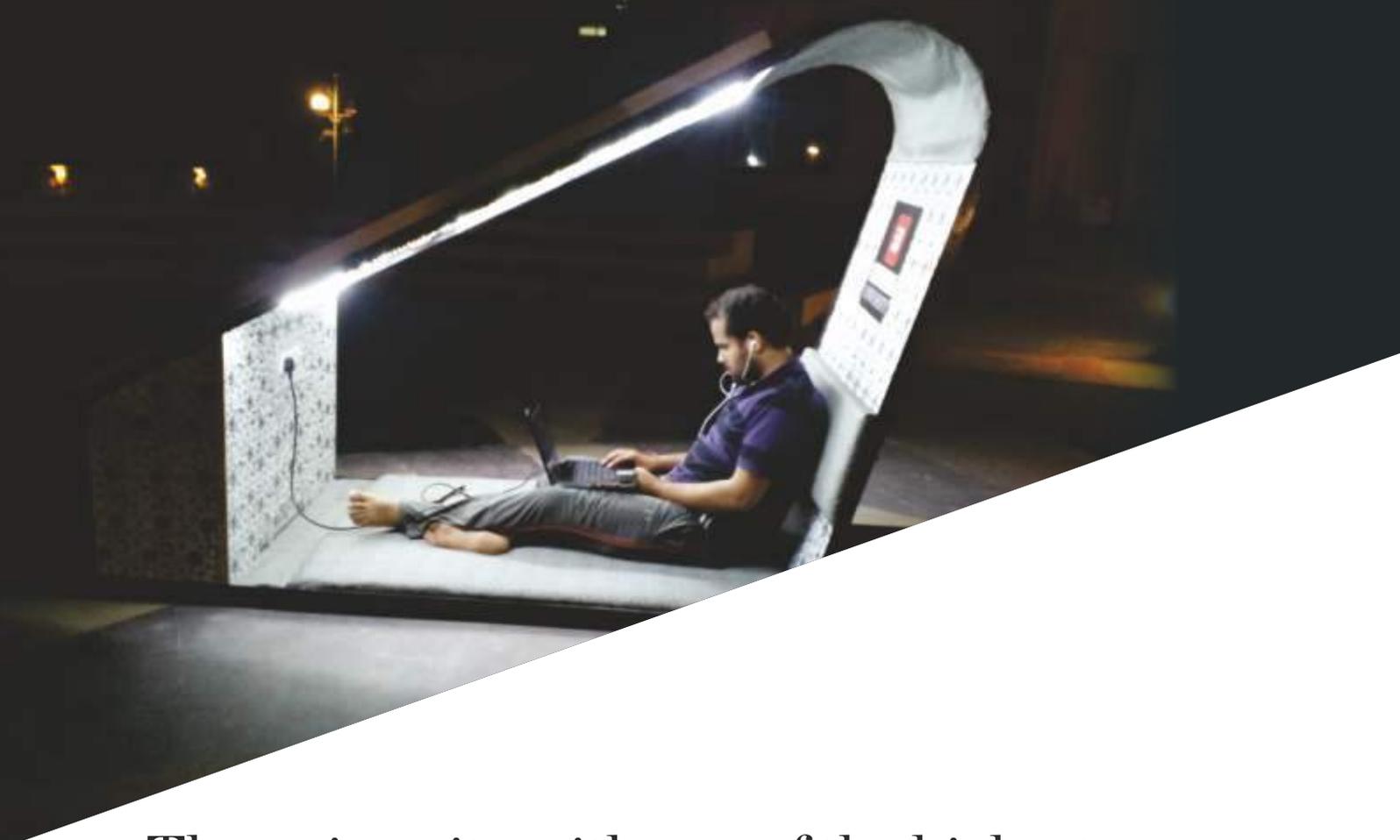
Embark on Research from Day One

At Chitkara Engineering, we believe every student benefits from being taught by experts active in research and practice. You will discuss the very latest ideas, research discoveries and new technologies in seminars and in the field, and you will become actively involved in a research project yourself.

Through Chitkara University Research and Innovation Network (CURIN), our researchers, staff and students work across disciplines to extend the boundaries of knowledge.

36 Centres of advanced research under CURIN build and sustain Chitkara University's competitive advantage through leadership. These centers and institutes are the locus of research for collaborative groups of investigators pushing the frontiers of knowledge forward.





The university with one of the highest number of **patents** in the country*



INTELLECTUAL
PROPERTY **INDIA**

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

600+
Patents

36 Centres of
Excellence

35 Crore+
Research Grants

500+
Scopus indexed
research papers

10+
Joint research
projects with
Global Universities

One of the largest
University grants'
recipient for the
European Commission
Erasmus+ Programme

* According to 2 years ranking by the Office of the Controller General of Patents, Designs, Trade Marks and Geographical Indications, India

Engage in real research

Our faculty and undergraduates are actively engineering solutions to problems around the world through research sponsored by private industry and public agencies, including Department of Science & Technology (DST) and other Government agencies.

Research opportunities for undergraduates abound, from participating in a faculty-led research project to working an internship to student organisation projects like building an intelligent traffic management solution or braille based educational kit.

Right from Year 1, students can initiate their research journey at 36+ centre of excellence units or work with faculty on their startups. The University provides complete hand-holding and financial assistance provided for students' participation in innovation, entrepreneurship events and hackathons.

There are always numerous Engineering Research Projects in progress, funded by the industry, charities, government departments and research councils. Our undergraduate students benefit through access to up-to-date equipment, industrially linked projects and staff expertise.

So our Engineering students get involved in cutting edge research, exploring new technologies to improve the country's infrastructure and safety — and contributing to society through many other discoveries and innovations.



Research opportunities
are open to 100% of
Chitkara Engineering students.



Make your mark, make a difference

For our Engineering students, there are ample opportunities to showcase their research work and compete in our university-wide Undergraduate Research and Design Day. Each semester, graduating seniors apply what they've learned to real-world product design, system solutions or process improvements. Many senior design projects address specific requests from local businesses, and are judged by faculty, alumni and corporate partners.

Chitkara University also has Government of India sponsored New Generation Innovation and Entrepreneurship Development Centre (NewGen IEDC) wherein a funding of INR 2.87 crores has been received for five year period to support upto 100 students' projects.

Apart from this we also have prestigious funding support for establishing 'Science, Technology and Innovation (STI) Hub' from the Department of Science and Technology, DST, Government of India.

Few notable inventions patented by our undergraduate Engineering students that got funded by Govt agencies and other investors during the last year have been:

- Braille based educational kit for visually impaired children developed by our student entrepreneurs
- Zadd Automotive - A student start-up designed an electronic bike. This first prototype of the e-bike was 3D printed in rapid prototyping lab of the university
- Anukai Solutions - a student start-up based on building Intelligent Traffic Management System raised funding of USD 55,000 from the investors
- Air Purifier that kills different types of viruses designed using Quantum dots Based Air Filter
- A revolutionary 80-wash product which offers a waterless wash of clothes in 80 seconds
- Develop the popular BhuGoal project which predicts weather in an ultra precise manner

Traffic signals in Mohali to go smart, intelligent

First 3-D Smart Traffic Signal Starts Working

Mohali: The traffic police in Mohali on Friday launched the country's first 3-D Smart Traffic Signal system operating in Mohali on pilot project basis. The system will regulate the traffic signals with a smart hertzio-vision wireless sensor system.

The system was launched by additional director general of police (ADGP) - Traffic Signal Suresh Chaudhan. He said this will be first-ever system that would also defend the green corridors for ambulances while controlling the traffic movement. The system has been launched at the traffic crossing near Quora City on Airport Road.

The Punjab Police have adopted the system devised by the students of Chitkara University over three years of research.



Punjab Police have adopted the system devised by students of Chitkara University over three years of research

approaching the signals through self-sensing technique. This system will also support the green corridor concept by sensing the arrival of ambulances and fire tenders.

A memorandum of understanding to conduct research and development in the areas of IT and computation for traffic police with the start-up Anukai Solutions of Chitkara University was signed in the month of September 2018 and immediately after that team was assigned to this task, he added.

The actuated signals incur high initial and on-going maintenance costs than fixed time signals, varying from Rs 70 lakh to Rs 1 crore. This simple mechanism will just cost 1% of the fixed signal cost and will start working as a fully actuated signal. Not only huge saving in costs, but this will also reduce the tendency of drivers to jump traffic light and reduce travel time by cutting the time spent at traffic signal. Each second saved at the traffic signal is saving in litres of fuel and emissions. This system costs just Rs 50,000, said state traffic advisor Navdeep Asija.

be duplicated in other phases soon, said ADGP Chaudhan. ADGP Chaudhan said, it is the country's first 3-D Smart Traffic Signal system. Traditional methods of traffic police controlling and regulating traffic are much labour-intensive and 2-dimensional. Employing the 3-D technique to make traffic signal fully actuated and on a real-time basis is first of its kind in the country. It will regulate the traffic movement based on the gravity of traffic

Fuel your curiosity

Creating, inventing, innovating, attacking challenges, solving problems, improving the quality of life - these are the driving forces for an Engineer. And this ingenuity is a driving force of our society. From space stations to microsystems, the potential for innovative Engineering is endless.

If you're wondering what the future might look like, Chitkara Engineering programs can show you the way. Our courses enable you to develop your Engineering knowledge, skills, imagination and experience to the highest levels in readiness for your future career.



Chitkara University has been the proud host of Mahindra Baja SAE India Competition for last 3 years where more than 500+ teams participate from Engineering institutions across the country.



Tune in, charge up

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 and race vehicles or robots, join a professional organization or honours society, or make a difference in a service club. The Society of Women Engineers is dedicated to promoting STEM education to children, for example, and Engineers Without Borders designs life-changing solutions like solar power grids and water filtration systems for people around the world.

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

CHITKARA INNOVATION INCUBATOR

The largest Campus based incubator in North India

Chitkara Innovation Incubator is one of the largest Government supported incubators in North India with more than 200+ student start-ups. It is designed to provide aspiring student entrepreneurs with the education, resources and funding to start and expand their businesses.

- 30,000 sq. ft. Incubators in Chandigarh / Punjab Campus / Himachal Campus
- 500+ Entrepreneur mentores
- Earn while you learn programs
- Entrepreneurship & Innovation as a specialisation track

SUPPORTED BY



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



Ministry of Electronics and
Information Technology
Government of India



Chitkara University Incubated Startup, RidezNow - startup providing mobility solutions to university students raised investment to the tune of Rs 50 Lakh during India Fund Fest 2020.



Specialisation for Engineering Students

ENTREPRENEURSHIP & INNOVATION

The specialisation in Entrepreneurship & Innovation for our Engineering graduates is designed to prepare future entrepreneurs with the skills & knowledge to start their own businesses. The specialisation will focus on identifying, analysing and evaluating global & 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 & developing effective business plans to obtain financing, legal issues related to starting and operating a family-owned business.

MAJOR PROGRAM OBJECTIVES 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 valuation.
- Effectively understand and implement a marketing plan for a new venture.

A unique and focal aspect of the program is the opportunity to gain real world industry experience and build strong industry links through the development of your Industry Experience Portfolio (IEP). You are able to tailor your portfolio to the industry of your choice and in your final year you will be required to apply your portfolio knowledge to plan, manage and analyse your own business idea.

STUDENT LIFE

EXCITEMENT DEFINED



CHITKARA UNIVERSITY



There are countless opportunities to get active and involved, engaged and enriched, and we want you to become a part of our diverse community of people who work together to make an impact on the future and have fun in the present. With more than 100+ student clubs and organisations based on a wide range of academic, cultural, and recreational areas of interest, you can find a way to express yourself.

Join, lead, or start your own—the important thing is to participate. Engaging with these organisations builds strong connections with fellow students, provides personal growth, and enhances your Chitkara experience.



accelerates business outcomes
and high-value services
systems integration firms: the
cost effectiveness associated with offshore IT outsourcing firm, and
the ability to streamline and continually improve their software
platforms and application.

- Kris Canekaratne, Chairman & CEO, Virtusa Corporation

Computer Science Engineering

The goal of this M.Tech program with specialisation in Full Stack Web Development is to offer a unique course designed by technology leader Virtusa to equip students with the unique skills they need to build database-backed APIs and web applications and make them industry ready right from Day 1.

Some Program highlights

- Curriculum designed by Virtusa Software team
- Intensive focus on Full stack Web development
- 1 Year of intensive learning at Chitkara University
- 2nd Year Internship at Virtusa's offices
- Problem based learning with real life case studies
- Assured placement opportunities in Virtusa | other bluechip IT companies after graduation

2-Year M.Tech in COMPUTER SCIENCE ENGINEERING

in collaboration with

virtusa

PROGRAM OBJECTIVES

After the completion of this highly specialised Master's program, the graduate will be able to design and build databases for software applications, create and deploy database-backed web APIs, and secure and manage user authentication and access control for an application backend along with learning to deploy a Java-based web application to the cloud. Some of the main technologies and tools which you will learn during the course of this 2-Year Master's program are -

FOUNDATION

This program will start with a deep dive into the software development fundamentals. Get familiar with Agile and Scrum methodologies to deliver projects on time. Also get an in-depth understanding of GIT to manage version control systems.

- OOP using Java, Data Structures & Algorithms. ● Agile Methodology
- Design Patterns & Software Architecture ● Version control with Git



FRONT END ENGINEERING – FEE

Build real-world websites and applications using the front-end stack technologies such as HTML5, CSS3-SASS, JavaScript, and React.

- Front end development with HTML5, CSS3, Javascript
- ES6 & Advanced Javascript
- ReactJS - component states, props object, and JSX



SERVER SIDE ENGINEERING – SSE

Master server side engineering by implementing back end logic using SQL, Spring Framework and ORM with Hibernate. Work with RESTful web services and learn to connect databases with your applications.

- Understand basics of SQL including DDL and DML
- MVC Architecture using Spring
- ORM using PostgreSQL and Hibernate
- Build RESTful web services
- Refactoring and Test-Driven Development



DATA ENGINEERING – DE

Data Design – RDBMS & NoSQL RDBMS – ACID, DDL, DML, TCL, SQL, PLSQL and all Concepts NOSQL – CAP Theorem, Document, Collection, Key Value, Document Type, Optimization Techniques, Sharding, Replication



DEVOPS – DO

Master DevOps principles to automate your software deployment to the AWS Cloud. Create seamless development and product environments using containerization with Docker and manage applications on Amazon S3 servers.

- Understand CI/CD pipeline. ● Get familiar with AWS and its services such as EC2, IAM, S3, EBS, and VPC
- Develop and deploy modern web applications with Docker

MOBILE APP DEVELOPMENT

Learn about mobile app development with React Native, a popular framework maintained by Facebook that enables cross-platform native apps using JavaScript. Students would have the option to choose at least 4 electives from the following areas

- Python ● IOT ● Blockchain ● BigData ● MicroApps ● Scalable UI Apps





industry collaboration with

virtusa

At Virtusa, they accelerate business outcomes for their clients through their expert information technology consulting and outsourcing services. They support a wide variety of Forbes Global 2000 firms with services that span the entire spectrum of the IT services lifecycle. Their industry-leading solutions transform businesses not only for a better today, but also for a better future.

VIRTUSA IS ONE OF THE RENOWNED DAY 1 CAMPUS RECRUITER ACROSS TOP UNIVERSITIES IN THE COUNTRY



Automotive Engineering with ARAI

Enrol in 2 Year full time M.Tech in Automotive Engineering at Chitkara University in collaboration with Automotive Research Association of India (ARAI), Pune.

1st Year of the program would be taught at Chitkara University in Chandigarh and 2nd year would be taught at ARAI in Pune with assured placement opportunities in top automotive companies of India and the world.





About

ARAI[®]

Progress through Research

Automotive Research Association of India (ARAI), established in 1966, is the leading automotive R&D organization of the country set up by the Automotive Industry with the Government of India. ARAI is an autonomous body affiliated to the Ministry of Heavy Industries and Public Enterprises, Government of India. The Department of Scientific and Industrial Research, Ministry of Science and Technology, Government of India, has recognized ARAI as a Scientific and Industrial Research Organisation (SIRO). Further, ARAI is the prime Testing and Certification Agency notified by Government of India under Rule 126 of Central Motor Vehicle Rules, 1989. ARAI has been playing vital roles in the progress of Indian automotive sector for five decades.

ARAI has been playing a pivotal role in assuring safe, less polluting, more efficient and reliable vehicles. Working in harmony and confidence with its Members, Customers and Government, it provides services and expertise in the areas of Engineering Services, Certification & Standardisation, Research & Development, Technology Development and Knowledge Initiatives. It also offers Automotive Technologies and India Specific Data Bases for automotive product development for Indian market. As well, ARAI has been assisting Government in formulating automotive standards and regulations.

ARAI serves hundreds of customers in a year including Automotive OEMs; Engine, Component and Systems Suppliers; large number of SMEs; and host of Industries/ Organisations from Non-Automotive sectors too.

The institute has many strategic alliances with Domestic and Global Organisations in the automotive and other fields too. A strong team of most-experienced and well-trained human resource of 700+ is the main strength of ARAI. It is certified to ISO 9001, ISO 14001 and OHSAS 18001; and is also accredited for its testing and calibration scope as per ISO/IEC 17025 by NABL. ARAI has been playing a vital role in the progress of Indian automotive sector for five decades.



CHITKARA UNIV



2-Year M.Tech in Automotive Engineering

in collaboration with



PROGRAM OBJECTIVES

This M.Tech program intends to develop a new breed of Automotive engineers required for the task of design and development in the automotive industry. We strive to improve the technical and professional skills of students through various teaching methods, hands-on and out-of-classroom education.

- Highly specialised Automotive program for B.Tech graduates
- 1st Year of intensive learning at Chitkara University's campus
- 2nd Year program that includes core modules delivery, innovative guided projects & path breaking masters thesis in newer Automotive domains shall take place at ARAI-Pune
- Industry endorsed curriculum for the Master's program
- Regular interaction with industry leaders from Automotive sector
- Placement opportunities in leading Automotive companies after the completion of the program
- Focus on project based learning that integrates research, education and outreach

PROGRAM FRAMEWORK

Chitkara University's unique master's program in collaboration with ARAI will help you kickstart your careers in the rapidly growing Automotive industry. Automotive programs at Chitkara University are renowned for their great industry collaborations and stellar placement record. In this program you will get access to state of the art Automotive Engineering laboratories.

Semester 1 (at Chitkara University Campus)

- Advanced Mathematical Methods ● Foreign Language ● Student Centered Minor Project
- Mechanical CADD ● Automotive Body & Chassis Systems ● Automotive Engines and Combustion

Semester 2 (at Chitkara University Campus)

- Automotive Transmission Systems ● Foreign Language ● Student Centered Minor Project
- Additive Manufacturing ● Automotive Electrical & Electronics ● Vehicle Dynamics and Control

Semester 3 (at ARAI, Pune)

- Noise, Vibration & Harshness ● Vehicle and Engine Testing ● Engine Design and Development
- Automotive Safety & Crash Worthiness / Automotive Fuels & Emissions
- Engine Electronics & Management Systems / Automotive Aerodynamics & Styling
- Autonomous & Connected Vehicles / Hybrid Electric Vehicles

As part of the curriculum, it is mandatory to do a 6 month guided project in the last semester with ARAI and/or with assigned Automotive company.

Engineering Programs 2021

Computer Science | Information Technology

Global Software Engineering

Electrical | Electronics & Communication

Civil | Mechanical | Mechatronics

Marine Engineering | Nautical Sciences

CHITKARA
UNIVERSITY



PUNJAB
HIMACHAL PRADESH

www.chitkara.edu.in

www.chitkarauniversity.edu.in

admissions@chitkara.edu.in

For more information about the University
give a miss call on 1800 267 1999

Admissions Helpline
95011 05714 | 95011 05715

WhatsApp
98590 00000