Hello future.

HIMACHAL PRADESH
Information Brochure
Academic Year 2015
We are hands-on and responsive in the way we teach

The entire teaching approach at Chitkara University is learning-centric enhancing knowledge, skills, and understanding through practical experience.

1. Strong Academic Heritage
Chitkara University in Himachal Pradesh is a dream envisioned and realised by Dr. Ashok Chitkara and Dr. Madhu Chitkara, who are academicians dedicated to the mission of spreading Education and have created a learning environment that represents a unique blend of distinguished faculty, brilliant students with a proactive collaboration with industry.

2. We provide a great environment for study
Chitkara University in Himachal Pradesh has a student population of more than 4000 from all over the country and our campus is designed to enhance teaching-learning processes so that it becomes a second home for students.

3. People who study here do well
Chitkara University has established an unassailable reputation for strong on-campus recruitments on the sheer virtue of our intensive focus on making all our graduates “industry ready”. We aim to provide resources to succeed in tomorrow’s changing global job market and are committed to help each and every student attain a position best suited to their long term career goals.

4. We are hands-on and responsive in the way we teach
The entire teaching approach at Chitkara University is learning-centric enhancing knowledge, skills, and understanding through practical experience.

5. This is a place of opportunity
Whether you want to broaden your mind, advance your career, increase your knowledge, travel the globe or change the world, Chitkara University can provide you with the opportunity and real life skills to do it.
Chitkara University was established in the year 2008 by the Himachal Pradesh State Legislature under the "Chitkara University Act". Chitkara University is a government recognized University with the right to confer degrees as per the sections 2f and 22(1) of the UGC Act, 1956 and is included in the list of universities maintained by the University Grants Commission. Our 17 acres campus located at Atal Shiksha Kunj in Barotiwala is 32 kms from Chandigarh and 12 kms from Pinjore. It currently has more than 4000 full time students and over 1000 faculty.

Chitkara School of Engineering & Technology (CSET) was established in the year 2008. Since inception, CSET has been at the forefront of forging strong collaborations with companies like ARM, Cadence, Microsoft, etc. In a short time it has become one of the premier Engineering Institutions of the country.

FOR THE ACADEMIC YEAR 2015, CSET IS OFFERING THE FOLLOWING PROGRAMS:

- 4-year Bachelor of Engineering (B.E.) Programs in
  - Computer Science & Engineering
  - Electronics & Communication Engineering
  - Civil Engineering
Chitkara University was established in the year 2008 by the Himachal Pradesh State Legislature under the “Chitkara University Act”. Chitkara University is a government recognized University with the right to confer degrees as per the sections 2f and 22(1) of the UGC Act, 1956 and is included in the list of universities maintained by the University Grants Commission. Our 17 acres campus located at Atal Shiksha Kunj in Barotiwalais 32 kms from Chandigarh and 12 kms from Pinjore. It currently has more than 4000 full time students. and over 1000 faculty.

Chitkara School of Engineering & Technology (CSET) was established in the year 2008. Since inception, CSET has been at the forefront of forging strong collaborations with companies like ARM, Cadence, Microsoft, etc. In a short time it has become one of the premier Engineering Institutions of the country.

FOR THE ACADEMIC YEAR 2015, CSET IS OFFERING THE FOLLOWING PROGRAMS:

4-year Bachelor of Engineering (B.E.) Programs in
- Computer Science & Engineering
- Electronics & Communication Engineering
- Civil Engineering
SO WHAT DOES IT TAKE TO BECOME AN ENGINEER?

Technical Excellence

As a top-50 Engineering school of the country, it’s given that you will be challenged technically at Chitkara University. Our students take Engineering classes from day one, as well as calculus and other technical electives. Classes normally have a lecture, a lab, and practical. We offer undergraduate degrees in three traditional disciplines: Computer Science & Engineering, Electronics & Communication Engineering and Civil Engineering.

Exploration and Innovation

Our students must have the ability to think for themselves. Chitkara students are passionate and focused. Our students all have that drive—the need to investigate and ferret out solutions, to build, to invent, to design, to develop. Not only do we recognize it, we welcome you to bring it on!

We prioritize teaching students how to bring their ideas to fruition, not just by enhancing technical skills, but by teaching them how to foster innovation. We teach students to manage the process, to make sure that you have the skills to take your ideas to the highest possible level. We know you have the passion; we will teach you how to harness and apply it.

Intellectual Curiosity

At Chitkara, you should expect more than a course schedule and books. We want you to get your hands dirty. Majority of our students participate in research during their undergraduate years. You will be given opportunities to work with faculty and can even apply for financial support for your own research projects.

Communication Skills

The stereotypes of engineers are a thing of the past. Students who graduate from Chitkara must be capable of articulating their ideas, contributing successfully in teams, and working collaboratively with non-engineers, such as product designers or business managers. To manage projects, to solve problems, to partner on ideas, to successfully advance your career.

Verbal and written communication is also essential to being a world class engineer. You can have the best idea in the world, but if you can’t articulate it, it probably isn’t going very far. Chitkara students are required to fulfill general education requirements that include intensive focus on communication skills.
BE PART OF A TECHNOLOGICAL FUTURE

SO WHAT DOES IT TAKE TO BECOME AN ENGINEER?

Technical Excellence
As a top-50 Engineering school of the country, it's given that you will be challenged technically at Chitkara University. Our students take Engineering classes from day one, as well as calculus and other technical electives. Classes normally have a lecture, a lab, and practical. We offer undergraduate degrees in three traditional disciplines: Computer Science & Engineering, Electronics & Communication Engineering and Civil Engineering.

Exploration and Innovation
Our students must have the ability to think for themselves. Chitkara students are passionate and focused. Our students all have that drive—the need to investigate and ferret out solutions, to build, to invent, to design, to develop. Not only do we recognize it, we welcome you to bring it on!

We prioritize teaching students how to bring their ideas to fruition, not just by enhancing technical skills, but by teaching them how to foster innovation. We teach students to manage the process, to make sure that you have the skills to take your ideas to the highest possible level. We know you have the passion; we will teach you how to harness and apply it.

Intellectual Curiosity
At Chitkara, you should expect more than a course schedule and books. We want you to get your hands dirty. Majority of our students participate in research during their undergraduate years. You will be given opportunities to work with faculty and can even apply for financial support for your own research projects.

Communication Skills
The stereotypes of engineers are a thing of the past. Students who graduate from Chitkara must be capable of articulating their ideas, contributing successfully in teams, and working collaboratively with non-engineers, such as product designers or business managers. To manage projects, to solve problems, to partner on ideas, to successfully advance your career.

Verbal and written communication is also essential to being a world class engineer. You can have the best idea in the world, but if you can't articulate it, it probably isn't going very far. Chitkara students are required to fulfill general education requirements that include intensive focus on communication skills.
At Chitkara University, Engineering students receive a quality education that prepares them to advance the frontiers of technology. Through our “hands-on” curriculum, students design and construct all-terrain vehicles; design, build and load steel bridges; produce computer animations and video games; and harness the power of the sun to race cars that they design, build and test. Our Engineers don’t just learn theory – they expand upon it and apply it.

- **Engaging Student centric Education** dedicated laboratories allows students to combine their practical and theoretical studies beginning in their first year and continuing throughout their four year program.

- **Courses have compulsory projects** as part of the curriculum. Students are engaged in engineering design from the first year itself.

- **Size and educational philosophy.** Our students have competed in many national and international design projects like solar car, mini-Baja, steel bridge and video game design.

- **Small Classes allow faculty to provide for individual attention.** Students learn in small groups, receive hands on experience every semester and participate in faculty research projects.

- **CU facilities include a number of instructional and research laboratories** including the Microsoft Innovation Centre, nVidia CUDA Teaching Centre, NXP Semiconductors Signal Lab and Dassault Design Centre.

- **Students can participate in research projects** of national character and work with blue chip companies such as Google, Texas Instruments & Hewlett Packard (HP) as well as the state governments.

- **Study abroad opportunities** are an integrated part of our Engineering curriculum which helps our students to become Global Engineers.

- **Strong Industry Collaborations.** Chitkara University has very strong industry collaborations with global industry leaders. These companies such as ARM, Cadence, Wipro, Infosys, Oracle, Microsoft, SAP and Dassault Systemes provide a platform for our budding Engineers to experience the latest technologies hand-on.

- **Campus recruitment by the best in the Industry.** We are the preferred university for fresher intake for many leading blue chip companies around the country including Microsoft, Google, Amazon and Google.
At Chitkara University, Engineering students receive a quality education that prepares them to advance the frontiers of technology. Through our "hands-on" curriculum, students design and construct all-terrain vehicles; design, build and load steel bridges; produce computer animations and video games; and harness the power of the sun to race cars that they design, build and test. Our Engineers don't just learn theory – they expand upon it and apply it.

Engaging Student centric Education dedicated laboratories allows students to combine their practical and theoretical studies beginning in their first year and continuing throughout their four year program. Courses have compulsory projects as part of the curriculum. Students are engaged in engineering design from the first year itself.

Size and educational philosophy. Our students have competed in many national and international design projects like solar car, mini-Baja, steel bridge and video game design.

Small Classes allow faculty to provide for individual attention. Students learn in small groups, receive hands on experience every semester and participate in faculty research projects.

CU facilities include a number of instructional and research laboratories including the Microsoft Innovation Centre, nVidia CUDA Teaching Centre, NXP Semiconductors Signal Lab and Dassault Design Centre.

Students can participate in research projects of national character and work with blue chip companies such as Google, Texas Instruments & Hewlett Packard (HP) as well as the state governments.

Study abroad opportunities are an integrated part of our Engineering curriculum which helps our students to become Global Engineers.

Strong Industry Collaborations. Chitkara University has very strong industry collaborations with global industry leaders. These companies such as ARM, Cadence, Wipro, Infosys, Oracle, Microsoft, SAP and Dassault Systemes provide a platform for our budding Engineers to experience the latest technologies hand-on.

Campus recruitment by the best in the Industry. We are the preferred university for fresher intake for many leading blue chip companies around the country including Microsoft, Google, Amazon and Google.
HANDS-ON TEACHING

Our degree programs prepare students for the real world and offer the opportunity for practical, hands-on experience, internships and projects. Take advantage of this experience to gain the practical skills employers are looking for and open your mind to career opportunities. Academics at Chitkara University keep pace with workplace demands and ensures that students are ‘work ready’ and in touch with what’s expected in a professional environment.

Academic Excellence
Our academic programs enjoy a great reputation in the industry. To maintain our leadership position, we focus on inducting the best faculty from across the industry and academia. Our faculty is known for its strong academic orientation contributing to the creation of knowledge in a dynamic, ever changing environment. Classes are built around experiential learning where students are pushed to their limits to take conceptual framework and apply them. Teaching methods include lectures and tutorials that emphasize a learning-centric approach and application of knowledge. Faculty brings their broad based experience into the classroom to enrich the learning process and to ensure that coursework reflects current industry practices.

Problem Based Learning (PBL)
Some of our courses are being taught using the PBL approach where students apply their knowledge to solve problems they may encounter in a professional context and in doing so, extend their experience beyond their text books. Elements of the work situation are brought into the classroom by the PBL approach. Students undertake a series of tasks that bring industry problems into the academic environment.
Guest Lectures
Guest lectures are regularly organised by eminent industry experts, entrepreneurs and HR managers from large and medium sized companies to give information to students on latest trends and happenings.

Applied & Project Based Learning
Applied learning is a hallmark of all teaching at Chitkara University. We believe that the best way to learn is by “doing” and that’s why we emphasize a hands-on approach. We lay stress on project based learning. Thus, the need for independent thinking and creativity is encouraged among students resulting in interesting and novel projects. Further, a significant increase in the open category credits enables students to have a broad base and pursue interests and adopt a multi-disciplinary approach.

Specialisation Options
In every program, further specialisation and electives are offered in the last year of the study. To help a student in this task, various tracks have been identified through our curriculum geared towards a variety of specialisations. Our goal is to prepare students for a satisfying career in Engineering. Following a particular curricular track will equip a student with the skills needed for progressing further in the chosen career.

Faculty
Chitkara University boasts of strong faculty with Masters and Doctorate degrees in different specialisations with appropriate academic and research blend of mind. The entire faculty has been drawn from leading academic institutions and corporations from across the country with years of teaching and research experience. Our faculty enjoys a good reputation and strong relations with leading industrial houses in terms of consultancy and research work. Our faculty not only focuses on conceptual understanding of various academic concepts but also gives first hand experience to all students through role plays, experiential exercises, industrial visits and classroom lectures.
LEARN ANYWHERE ANY TIME

Chitkara University has an intensive focus to guide its faculty in the appropriate use of technology to enrich teaching and learning. Latest technologies drive our classrooms, labs, and other learning environments. Chitkara University faculty takes advantage of information technology to enrich the educational experience of their students by creative and innovative uses of technology in courses to actively engage learners in acquiring and assimilating the core principles and experiences of a discipline.

MOOC (Massive Open Online Courses)
At Chitkara University we supplement our academic curriculum with some innovative courses delivered with the MOOC platform like COURSERA & EDX. With these platforms our students get the benefit of connecting with the best faculty of some of the leading universities of the world. In the coming years Chitkara University would like to be in the forefront of online education in India.

Collaborative Platforms for Teaching and Learning
When such a huge and growing part of teaching and learning happens digitally, it is crucial to have platforms that foster both collaboration and communication. We work to design, provide, and maintain a wide variety of platforms here at Chitkara University that support multiple pedagogical approaches and allow opportunity to extend far beyond the walls of the classroom. Our aim is to help faculty explore the ever-changing nature of teaching with technology.

University Management System
Chitkara University has implemented Chalkpad's UMS solution which allows administrators, teachers, students, parents and alumni to easily connect, communicate, share information, and manage information. Chalkpad works actively with our faculty, staff and students of Chitkara to identify new and effective ways to use technology in completing their academic goals. Critical information relevant to the students is made very effective through this powerful information management solution. Chalkpad helps parents to stay abreast with their ward's progress – with e-mail updates and on-line access to time-table information, marks/grades, fee payment details, attendance information, important notices from the University and comments from the faculty.
TECHNOLOGY IN LEARNING AND TEACHING

Chitkara University has an intensive focus to guide its faculty in the appropriate use of technology to enrich teaching and learning. Latest technologies drive our classrooms, labs, and other learning environments.

Chitkara University faculty takes advantage of information technology to enrich the educational experience of their students by creative and innovative uses of technology in courses to actively engage learners in acquiring and assimilating the core principles and experiences of a discipline.

MOOC (Massive Open Online Courses)

At Chitkara University we supplement our academic curriculum with some innovative courses delivered with the MOOC platform like COURSERA & EDX. With these platforms our students get the benefit of connecting with the best faculty of some of the leading universities of the world. In the coming years Chitkara University would like to be in the forefront of online education in India.

Collaborative Platforms for Teaching and Learning

When such a huge and growing part of teaching and learning happens digitally, it is crucial to have platforms that foster both collaboration and communication. We work to design, provide, and maintain a wide variety of platforms here at Chitkara University that support multiple pedagogical approaches and allow opportunity to extend far beyond the walls of the classroom. Our aim is to help faculty explore the ever-changing nature of teaching with technology.

University Management System

Chitkara University has implemented Chalkpad’s UMS solution which allows administrators, teachers, students, parents and alumni to easily connect, communicate, share information, and manage information. Chalkpad works actively with our faculty, staff and students of Chitkara to identify new and effective ways to use technology in completing their academic goals.

Critical information relevant to the students is made very effective through this powerful information management solution. Chalkpad helps parents to stay abreast with their ward’s progress – with e-mail updates and on-line access to time-table information, marks/grades, fee payment details, attendance information, important notices from the University and comments from the faculty.
Library services at Chitkara University are the cornerstone of our education system. The mission of our library services is to facilitate creation of new knowledge through acquisition, organisation and dissemination of knowledge resources.

The libraries at Chitkara University Himachal Pradesh have spacious reading hall, periodical centre, group discussion rooms and online database browsing area.

The University libraries offer a wide range of materials in a variety of formats—from traditional books and serials to films, multimedia and networked information from around the world. Highly skilled staff assists students to use the local collections and find information on specific topics.

Our libraries are a learning space where students are inspired to explore, research, and create. Our libraries are not only the place to think, but also an informal work area where students gather to collaborate. Social elements include a café and vending machines, lounge areas, and newspapers. Use our libraries to study for exams, finish assignments, and to balance study and work.

Our libraries house a collection of more than 20,000 items including books, journals, microfilms, audio-visual material and CD-ROMs. Furthermore, the students have access to more than 10,000 electronic journals available online.

We have access to a large number of e-resources, ASCE Journals, ASME Journals, IEL online, Science Direct, EBSCO, EMERALD, SCIINDER, SAE-Tech Papers, Indian Standards Codes, ACM, ABI / Inform Complete (PRO QUEST), Springer Link and Engineering Referex. Our libraries have a Video Conferencing facility and also provide classroom teaching through EDUSAT programs and NPTEL video courses in the different fields of education.
Library services at Chitkara University are the cornerstone of our education system. The mission of our library services is to facilitate creation of new knowledge through acquisition, organisation and dissemination of knowledge resources. The libraries at Chitkara University Himachal Pradesh have spacious reading hall, periodical centre, group discussion rooms and online database browsing area. The University libraries offer a wide range of materials in a variety of formats—from traditional books and serials to films, multimedia and networked information from around the world. Highly skilled staff assists students to use the local collections and find information on specific topics. Our libraries are a learning space where students are inspired to explore, research, and create. Our libraries are not only the place to think, but also an informal work area where students gather to collaborate. Social elements include a café and vending machines, lounge areas, and newspapers. Use our libraries to study for exams, finish assignments, and to balance study and work.

Our libraries house a collection of more than 20,000 items including books, journals, microfilms, audio-visual material and CD-ROMs. Furthermore, the students have access to more than 10,000 electronic journals available online. We have access to a large number of e-resources, ASCE Journals, ASME Journals, IEL online, Science Direct, EBSCO, EMERALD, SCIFINDER, SAE-Tech Papers, Indian Standards Codes, ACM, ABI/Inform Complete (PRO QUEST), Springer Link and Engineering Referex. Our libraries have a Video Conferencing facility and also provide classroom teaching through EDUSAT programs and NPTEL video courses in the different fields of education.
Chitkara Engineering has established an unassailable reputation for very strong campus recruitment on the sheer virtue of our intensive focus on making all our graduates "Industry Ready". For our Engineering programs, we realize that our technical graduates are the foundation of the new knowledge-based Indian economy. We also know that an active industry-academic interface is required to achieve the goal of producing "industry ready" students who are well-rounded and quick learners. For this purpose, linkages have been established with industry partners such as CISCO, CA, Dassault Systems, National Instruments and Cadence Design Systems to develop and deploy industry-relevant curricula on various technologies.

Marquee companies such as nVidia, ARM, Cadence, nXP semiconductors and Texas Instruments have recently supported us in terms of supplying state-of-the-art latest equipments for best hands-on training for our students.

Chitkara University is privileged to be part of the SAP University Alliance.

The Google Student Ambassador Program is an opportunity for students to act as liaison between Google and the University.

Microsoft Innovation Centre at Chitkara University provides incubation and expert hands-on support on Microsoft technology innovation, research, and software solutions.

nVIDIA which is one of the leading companies in the parallel computing space has granted the status of "CUDA teaching Centre" to Chitkara University.

Marquee companies such as ARM, Cadence and nXP Semiconductors are supporting us in terms of supplying state-of-the-art equipments for best hands-on classroom training.

Infosys Campus Connect and Wipro 10X Mission has provided us an important framework for our Engineering curriculum.

Strong linkages with Industry leaders such as CISCO, Ericsson & National Instruments to develop and deploy industry-relevant curricula on various technologies for our Engineering curriculum.
STRONG INDUSTRY COLLABORATIONS

Chitkara Engineering has established an unassailable reputation for very strong campus recruitment on the sheer virtue of our intensive focus on making all our graduates “Industry Ready”.

For our Engineering programs, we realize that our technical graduates are the foundation of the new knowledge based Indian economy. We also know that an active industry-academic interface is required to achieve the goal of producing “industry ready” students who are well rounded and quick learners. For this purpose, linkages have been established with industry partners such as CISCO, CA, Dassault Systems, National Instruments and Cadence Design Systems to develop and deploy industry-relevant curricula on various technologies.

Marquee companies such as nVidia, ARM, Cadence, nXp semiconductor and Texas Instruments have recently supported us in terms of supplying state of the art latest equipments for best hands-on training for our students.

- Chitkara University is privileged to be part of the SAP University Alliance.
- The Google Student Ambassador Program is an opportunity for students to act as liaison between Google and the University.
- Microsoft Innovation Centre at Chitkara University provides incubation and expert hands-on support on Microsoft technology innovation, research, and software solutions.
- nVIDIA which is one of the leading companies in the parallel computing space has granted the status of “CUDA teaching Centre” to Chitkara University.
- Marquee companies such as ARM, Cadence and NXP Semiconductors are supporting us in terms of supplying state of the art equipments for best hands-on classroom training.
- Infosys Campus Connect and Wipro 10X Mission has provided us an important framework for our Engineering curriculum.
- Strong linkages with Industry leaders such as CISCO, Ericsson & National Instruments to develop and deploy industry-relevant curricula on various technologies for our Engineering curriculum.
Wipro Technologies has been hiring Engineering graduates from Chitkara School of Engineering and Technology for the last three years. Looking at the academic standards and performance of our alumni, Wipro Technologies has conferred "The Trusted Academic Partner" status to Chitkara University. Our Engineering curriculum now boasts of Wipro’s Talent++ series which consists of bouquet of student engagement initiatives exclusively designed for Chitkara University students.

Integrated Circuit (IC) design is a crucial Engineering field, where one has to learn the nitty-gritty involved in designing chips for complex applications. Cadence has its largest market share in design of state of the art EDA tools. Chip design in India has also moved into the big league with multinationals, design services companies, product companies and start-ups in the country growing by the day. Chitkara University has invested in procuring the necessary industry standard tools which enables innovators to design a full-fledged integrated circuit chip right from inception of an idea to layout to customize for the full scale design. Many microelectronic circuits design courses have been embedded into the course curriculum for Electronics and Communication Engineering students.

ARM is the world’s leading semiconductor intellectual property (IP) supplier. The technology designed by ARM is at the heart of many of the digital electronic products sold. ARM Technologies has taken an initiative in establishing a Microcontroller laboratory by donating state of the art mbed kits. This enables students to explore their potential and use the latest technologies to build the applications, which can compete with the best in the world.

NXP semiconductors lab has been established by a 4 billion dollar Multi National company with its presence in 25 different countries of the world. NXP Semiconductors provides High Performance Mixed Signal and Standard Product solutions that leverage its leading RF, Analog, Power Management, Interface, Security and Digital Processing expertise. As a part of this laboratory, Chitkara University has been granted state of the art software as well as hardware for realizing various electronic circuit design applications.
Integrated Circuit (IC) design is a crucial Engineering field, where one has to learn the nitty-gritty involved in designing chips for complex applications. Cadence has its largest market share in design of state of the art EDA tools. Chip design in India has also moved into the big league with multinationals, design services companies, product companies and start-ups in the country growing by the day. Chitkara University has invested in procuring the necessary industry standard tools which enables innovators to design a full-fledged integrated circuit chip right from inception of an idea to layout to customize for the full scale design. Many microelectronic circuits design courses have been embedded into the course curriculum for Electronics and Communication Engineering students.

ARM is the world’s leading semiconductor intellectual property (IP) supplier. The technology designed by ARM is at the heart of many of the digital electronic products sold. ARM Technologies has taken an initiative in establishing a Microcontroller laboratory by donating state of the art mbed kits. This enables students to explore their potential and use the latest technologies to build the applications, which can compete with the best in the world.

NXP semiconductors lab has been established by a 4 billion dollar Multi National company with its presence in 25 different countries of the world. NXP Semiconductors provides High Performance Mixed Signal and Standard Product solutions that leverage its leading RF, Analog, Power Management, Interface, Security and Digital Processing expertise. As a part of this laboratory, Chitkara University has been granted state of the art software as well as hardware for realizing various electronic circuit design applications.
Cisco Networking Academy program is an e-learning program that delivers Web-based educational content, online testing, student performance tracking, instructor training and support, as well as hands-on labs. The Networking Academy program combines lectures and online learning with hands-on laboratory exercises in which students apply what they learn in class while working on actual networks. Chitkara University seeks to play a major role to provide individuals the knowledge, and teach problem-solving abilities and critical thinking skills they need to pursue a career in ICT industry in the 21st century workplace. Cisco programs prepare students for industry-recognized certification exams such as the Cisco Certified Network Associate (CCNA), Cisco Certified Network Professional (CCNP), and NetPlus+.

Oracle Workforce Development Program (WDP) is one of the most popular database management education programs in the world and we have integrated important elements of WDP in some of our programs.

Texas is the company of the world, which boasts of the design of first Integrated Circuit sometime in late 60s. For more than 80 years, Texas Instruments has used increasingly complex signal-processing technology–with advances ranging from the incremental to the revolutionary–to literally and repeatedly change the world. TI has sponsored a full fledged laboratory with grant of beageboard kits, which enables students to fly their imagination and create their own electronics applications.

nVIDIA is a giant company in the design of world class Computers Graphics cards. Founded in 1993, nVidia has continuously reinvented itself to delight users and shape the industry. Of late, they have harnessed the parallel computing capabilities of the GPU to advance high-performance computing and this move from nVidia into mobile domain has put them at the center of one of the industry's fastest-growing segments. Chitkara University has been granted the status of CUDA Teaching Center (CTC) owing to a consistent performance in terms of organisation of large number of workshops on Parallel Programming and also offering courses on most advanced graphics supporting language CUDA.
Cisco Networking Academy program is an e-learning program that delivers Web-based educational content, online testing, student performance tracking, instructor training and support, as well as hands-on labs. The Networking Academy program combines lectures and online learning with hands-on laboratory exercises in which students apply what they learn in class while working on actual networks. Chitkara University seeks to play a major role to provide individuals the knowledge, and teach problem-solving abilities and critical thinking skills they need to pursue a career in ICT industry in the 21st century workplace. Cisco programs prepare students for industry-recognized certification exams such as the Cisco Certified Network Associate (CCNA), Cisco Certified Network Professional (CCNP), and NetPlus+.

Oracle Workforce Development Program (WDP) is one of the most popular database management education programs in the world and we have integrated important elements of WDP in some of our programs.

Infosys Campus Connect is an industry-academia partnership initiative taken by Infosys to assist the budding engineers improve their employability skills and make them industry ready. Chitkara has partnered with Infosys for this program to increase competitiveness and to enhance the pool of highly capable talent for growth requirements in IT space. The courseware comprises of the IP and experience of Infosys in training thousands of entry-level engineers from diverse backgrounds and disciplines so that they perform their best in delivering world-class projects to global customers. Chitkara University has integrated the foundation program in the curriculum for all engineering programs which covers essential generic topics like:

- Computer hardware and system software concepts
- Programming fundamentals
- RDBMS
- System development methodology
- Analysis of algorithms
- Object oriented concepts
- User interface design
- Web technologies Client/server concepts

Texas is the company of the world, which boasts of the design of first Integrated Circuit sometime in late 60s. For more than 80 years, Texas Instruments has used increasingly complex signal-processing technology—with advances ranging from the incremental to the revolutionary—to literally and repeatedly change the world. TI has sponsored a full fledged laboratory with grant of beagleboard kits, which enables students to fly their imagination and create their own electronics applications.

nVIDIA is a giant company in the design of world class Computers Graphics cards. Founded in 1993, nVidia has continuously reinvented itself to delight users and shape the industry. Of late, they have harnessed the parallel computing capabilities of the GPU to advance high-performance computing and this move from nVidia into mobile domain has put them at the center of one of the industry’s fastest-growing segments. Chitkara University has been granted the status of CUDA Teaching Center (CTC) owing to a consistent performance in terms of organisation of large number of workshops on Parallel Programming and also offering courses on most advanced graphics supporting language CUDA.
CAMPUS RECRUITMENT

Our Engineering programs have always enjoyed special preference of public as well as corporate recruiters on account of the excellent work place performance of our graduates through the years. Blue Chip companies across various Engineering sectors have been the leading campus recruiters for our Engineering graduates since inception. Even during tough economic conditions in the last couple of years, we have been shortlisted by major campus recruiters which speaks volumes about our academic prowess. The major criteria for this ranking is based on the observations put forward by major campus recruiters and is a very strong indicator of our proactive industry partnerships.

For the Engineering batch graduating in 2015, top companies such as Google, Microsoft, Amazon, Infosys, Wipro, L&T, Virtusa and Oracle have already visited the campus and picked up the best Engineering minds.
Our Engineering programs have always enjoyed special preference of public as well as corporate recruiters on account of the excellent work place performance of our graduates through the years. Blue Chip companies across various Engineering sectors have been the leading campus recruiters for our Engineering graduates since inception. Even during tough economic conditions in the last couple of years, we have been shortlisted by major campus recruiters which speaks volumes about our academic prowess. The major criteria for this ranking is based on the observations put forward by major campus recruiters and is a very strong indicator of our proactive industry partnerships.

For the Engineering batch graduating in 2015, top companies such as Google, Microsoft, Amazon, Infosys, Wipro, L&T, Virtusa and Oracle have already visited the campus and picked up the best Engineering minds.

Some of our Major Campus Recruiters for Engineering Programs

<table>
<thead>
<tr>
<th>NEC Technologies</th>
<th>Capgemini</th>
<th>IGATE</th>
<th>EVALUATE SERVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYNTEL</td>
<td>Kirladran</td>
<td>Punjab Lloyds</td>
<td>Bank of America</td>
</tr>
<tr>
<td>WNS</td>
<td>Persistent</td>
<td>Airtel</td>
<td>Jindal</td>
</tr>
<tr>
<td>CSC</td>
<td>Verizon</td>
<td>Xansa</td>
<td>NIIT</td>
</tr>
<tr>
<td>AFCONS</td>
<td>Shapoorji Pallonji</td>
<td>Sterling and Wilson</td>
<td>Maccaferri</td>
</tr>
<tr>
<td>Sobha</td>
<td>Tata</td>
<td>IREO</td>
<td>KEC</td>
</tr>
<tr>
<td>Headstrong</td>
<td>Newgen</td>
<td>Emerson</td>
<td>Calsoft</td>
</tr>
<tr>
<td>DENSO</td>
<td>Birlasoft</td>
<td>Citrix</td>
<td>RPG</td>
</tr>
<tr>
<td>Henkel</td>
<td>Convergys</td>
<td>Virtusa</td>
<td>UST Global</td>
</tr>
<tr>
<td>Steria</td>
<td>NetCracker</td>
<td>ARM</td>
<td>Orange</td>
</tr>
</tbody>
</table>

www.chitkarauniversity.edu.in | 21
Programs taught in English by local and international faculty, student exchanges from partner universities all over the world, international research co-operation, dual-degree and twinning program development by international partners, international faculty exchange; all of these are key features of Chitkara University.

Twinning Programs
Chitkara students have option to finish the last 1/2 years of their degree programs at our partner Universities which helps them gain Dual degrees in they chosen specialisations.

Semester Exchange
Students visit Partner Universities for six months to one year for completing their semesters abroad.

Summer Programs
Summer Program is short duration program of 15 days to one month on various specialisations. It adds to the international exposure of the students.

International Competitions
Students participate in competitions conducted by several institutions & organisations at International Level such as MUN.

International Conferences
Students participate in International conferences that help them to experience International academic standards.

Leadership Camps
Student based leadership camp for 15 days or more and as off now the students generally travels to South Korea.

Study Based Scholarships
Partner Universities offer full year scholarships and semester long scholarships to students through which study is absolutely free for the students for those terms.

International Faculty
We regularly invite faculty from accredited Institutions across the world and it helps our students to understand diverse Education standards.
Programs taught in English by local and international faculty, student exchanges from partner universities all over the world, international research cooperation, dual-degree and twinning program development by international partners, international faculty exchange; all of these are key features of Chitkara University.

Twinning Programs
Chitkara students have the option to finish the last 1/2 years of their degree programs at our partner universities which helps them gain dual degrees in their chosen specializations.

Semester Exchange
Students visit partner universities for six months to one year for completing their semesters abroad.

Summer Programs
Summer Program is a short duration program of 15 days to one month on various specializations. It adds to the international exposure of the students.

International Competitions
Students participate in competitions conducted by several institutions and organizations at International Level such as MUN.

International Conferences
Students participate in International conferences that help them experience International academic standards.

Leadership Camps
Student-based leadership camp for 15 days or more and currently, the students generally travel to South Korea.

Study-based Scholarships
Partner universities offer full-year scholarships and semester-long scholarships to students through which study is absolutely free for the students for those terms.

International Faculty
We regularly invite faculty from accredited institutions across the world, helping our students understand diverse education standards.

THE EXCHANGE EXPERIENCE

American Idol
Global Connections

CHITKARA UNIVERSITY HAS STRONG AGREEMENTS FOR FACULTY AND STUDENT ACADEMIC EXCHANGE WITH TOP EDUCATION PROVIDERS ACROSS THE WORLD. SOME OF THE MAJOR INSTITUTIONS ARE

**ASIA**

**SOUTH KOREA**
- Soongsil University
- Kookmin University
- Korea University (Sejong Campus)
- Kongju National University
- Chung Ang University
- Kyung Hee University
- Sookmyung Women’s University
- Hanbuk University
- Chonbuk National University
- Kyungpook National University
- Chosun University
- Sangmyung University
- Jungwon University

**CHINA**
- Qilu University of Technology
- Zhejiang University of Science & Technology
- Qingdao Technological University Qindao College

**INDONESIA**
- Binus University
- Telkom University

**TAIWAN**
- China Medical University
- Providence University

**MALAYSIA**
- HELP University

**AUSTRALIA**
- Deakin University
- Edith Cowan University
- Flinders University

**SOUTH AMERICA**

**BRAZIL**
- The Pontificia Universidade Catolica DO Rio Grande Do Sul

**NORTH AMERICA**

**U.S.A**
- Central Michigan University
- University of Florida
- Purdue University
- San Diego State University
- University of Massachusetts, Lowell
- Missouri University of Science and Technology
- Northern Illinois University
- Northern Arizona University
- Portland State University

**CANADA**
- George Brown College
- British Columbia Institute of Technology
- Kings University College at Western University
- University of Prince Edward Island (UPEI)
- Vancouver Island University
- Georgian College
CHITKARA UNIVERSITY HAS STRONG AGREEMENTS FOR FACULTY AND STUDENT ACADEMIC EXCHANGE WITH TOP EDUCATION PROVIDERS ACROSS THE WORLD. SOME OF THE MAJOR INSTITUTIONS ARE:

**MEXICO**
- Universidad Autonoma Delestado De Hidalgo

**EUROPE**

**U.K**
- Glasgow Caledonian University
- Anglia Ruskin University

**NETHERLANDS**
- Fontys University of Applied Sciences

**SPAIN**
- University of Alicante

**FINLAND**
- Helsinki Metropolia University of Applied Sciences

**GERMANY**
- Cologne Business School
- Karlshochschule International University
- Hochschule Osnabruck University of Applied Sciences Osnabruck
- Duale Hochschule Baden Wurttemberg (DHBW)

**BELGIUM**
- IHECS

**PORTUGAL**
- Politecnico De Coimbra

**FRANCE**
- ESIGELEC – School of Engineering Rouen
- Ecole Pour L’ Informatique Et Les Techniques Avancees - EPITA
- EM Normandie
- Kedge Business School
- Institute D’ Etudes Politiques De Toulouse
- Sciences Po Lille
- ISTIA-Universite Angers
- Université Montpellier 2 Sciences et Techniques
COMPUTER SCIENCE & ENGINEERING
4-Year Bachelor of Engineering (CSE)

Program Objectives

The fundamental objective of our Computer Science program is to provide the opportunity for our students to develop a firm foundation in Mathematics, Science, and design methodology of computing systems. Our course covers all fundamentals, working and expert subjects that provide a holistic learning environment where students understand and are able to apply the most contemporary and essential tools needed in the breadth and depth of Computer Science & Engineering.

Student Outcomes for our Computer Science Programs

- An ability to design a software or digital hardware system, component or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
- Knowledge of probability and statistics, including applications to Computer Science and Engineering.
- Knowledge of Mathematics through differential and integral calculus, basic science, Computer Science, and engineering sciences, necessary to analyze and design complex systems containing hardware and software components, as appropriate to Computer Engineering.
- Knowledge of advanced Mathematics, including linear algebra, numerical computing methods for Engineering, and discrete Mathematics.
- Knowledge of algorithms and data structures
- An ability to apply design and development principles in the construction of software systems of varying complexity.
- Knowledge of concepts of programming languages.
- Knowledge of computer organisation and architecture.
- Knowledge of theoretical foundations.
- Knowledge of problem analysis and solution design.
- An ability to apply Mathematical foundations, algorithmic principles, and Computer Science theory in modeling and design of Computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices.

Program Contents and Academic Framework

Our curriculum lays intensive focus on:

Program Objectives

The fundamental objective of our Computer Science program is to provide the opportunity for our students to develop a firm foundation in Mathematics, Science, and design methodology of computing systems. Our course covers all fundamentals, working and expert subjects that provide a holistic learning environment where students understand and are able to apply the most contemporary and essential tools needed in the breadth and depth of Computer Science & Engineering.

Student Outcomes for our Computer Science Programs

- An ability to design a software or digital hardware system, component or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
- Knowledge of probability and statistics, including applications to Computer Science and Engineering.
- Knowledge of Mathematics through differential and integral calculus, basic science, Computer Science, and engineering sciences, necessary to analyze and design complex systems containing hardware and software components, as appropriate to Computer Engineering.
- Knowledge of advanced Mathematics, including linear algebra, numerical computing methods for Engineering, and discrete Mathematics.
- Knowledge of algorithms and data structures.
- An ability to apply design and development principles in the construction of software systems of varying complexity.
- Knowledge of concepts of programming languages.
- Knowledge of computer organisation and architecture.
- Knowledge of theoretical foundations.
- Knowledge of problem analysis and solution design.
- An ability to apply Mathematical foundations, algorithmic principles, and Computer Science theory in modeling and design of Computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices.

Program Contents and Academic Framework

Our curriculum lays intensive focus on:


Cutting Edge Labs

Chitkara University has excellent infrastructure, including domain specific laboratories associated with the technical divisions. Industry leaders like IBM, Cisco, Google, Microsoft & nVidia have established their laboratories in collaboration with the School.

Major Laboratories include: Theoretical Computer Science and Language Processing/ Open Source technologies/ Data technology/ Grid-Cloud Computing/ Software Systems/ Computational Intelligence, High Performance Computing/ Mobile Computing and Intel Multi-core laboratories and Image Processing. All labs are equipped with the latest Hardware & Software for the upgradation of education and upliftment of research for students to meet the challenging needs of the IT sector.

Scope of Employment

- As Developers and Specialists in high-end services and IT-product companies
- As Development Engineers, Technical Leaders and Managers.
- As Consultants, Solution Developers and Entrepreneurs.
- As Computing Specialists in Research Labs and Technology Providers
- As System/ Network Performance Analysts and Simulation / Evaluation Specials in IT companies.

Careers

We have leading blue chip companies such as; Google, Microsoft, Amazon, Infosys, Wipro & HCL Technologies coming to campus year after year for recruitment events.
ELECTRONICS & COMMUNICATION ENGINEERING
4-Year Bachelor of Engineering (ECE)

Program Objectives

Electronic Engineering drives our world of new technologies. Devices designed by Electronic Engineers feature in all aspects of modern life, including computers, mobile phones, robotics, the internet, digital television, satellites, aerospace, medical scanners, security systems and sustainable energy. Engineering degrees are a fascinating and challenging choice, with well-qualified graduates being in high demand in global industries.

All courses begin by providing students with an understanding of the basic principles of electronic engineering, whilst developing their skills in maths and computing. Modules then combine these fundamental elements into systems that meet the needs of particular applications.

Running through all courses is a significant portion of project work. In early years, group design/project work is incorporated into many of the modules. In later years, a team software engineering project enables students to simulate operating as a commercial business. Final year students have substantial individual projects, sometimes out in industry. The Department fully recognises the vital nature of this kind of supervised study to prepare students for the world of work. In turn, we have a widely recognised reputation for producing high quality graduates with skills relevant to a range of career paths.

Program Contents and Academic Framework

<table>
<thead>
<tr>
<th>YEAR - 1 &amp; 2</th>
<th>YEAR - 3</th>
<th>YEAR - 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provides students with a thorough introduction to Electronics, covering the key areas of circuits and operational amplifiers. Covers basic circuit analysis skills, operational amplifiers from a theoretical and practical basis, and the associated mathematical concepts and tools.</td>
<td>Introduces students to the propagation of high-speed signals around circuits and systems and the principles of noise within them. Considers the concepts of Signal Integrity and Electromagnetic Compatibility, the effects of not achieving EMC on system operation and some of the fundamental concepts that lead to these problems and their mitigation.</td>
<td>Engineers are often involved in the entire life cycle of a product, from concept through design and computer modelling, to a hardware device. Students experience many of these real-world practices by working in teams – taking a technical problem, capturing the requirements, creating a specification for a solution, simulating it using industry-standard software tools, before final implementation in hardware.</td>
</tr>
</tbody>
</table>
Program Objectives

Electronic Engineering drives our world of new technologies. Devices designed by Electronic Engineers feature in all aspects of modern life, including computers, mobile phones, robotics, the internet, digital television, satellites, aerospace, medical scanners, security systems and sustainable energy. Engineering degrees are a fascinating and challenging choice, with well-qualified graduates being in high demand in global industries.

All courses begin by providing students with an understanding of the basic principles of electronic engineering, whilst developing their skills in maths and computing. Modules then combine these fundamental elements into systems that meet the needs of particular applications.

Running through all courses is a significant portion of project work. In early years, group design/project work is incorporated into many of the modules. In later years, a team software engineering project enables students to simulate operating as a commercial business. Final year students have substantial individual projects, sometimes out in industry. The Department fully recognises the vital nature of this kind of supervised study to prepare students for the world of work. In turn, we have a widely recognised reputation for producing high quality graduates with skills relevant to a range of career paths.

Electronics & Communication Engineering

4-Year Bachelor of Engineering (ECE)

Program Contents and Academic Framework

YEAR - 1 & 2
Provides students with a thorough introduction to Electronics, covering the key areas of circuits and operational amplifiers. Covers basic circuit analysis skills, operational amplifiers from a theoretical and practical basis, and the associated mathematical concepts and tools.

YEAR - 3
Introduces students to the propagation of high-speed signals around circuits and systems and the principles of noise within them. Considers the concepts of Signal Integrity and Electromagnetic Compatibility, the effects of not achieving EMC on system operation and some of the fundamental concepts that lead to these problems and their mitigation.

YEAR - 4
Engineers are often involved in the entire life cycle of a product, from concept through design and computer modelling, to a hardware device. Students experience many of these real-world practices by working in teams – taking a technical problem, capturing the requirements, creating a specification for a solution, simulating it using industry-standard software tools, before final implementation in hardware.

Cutting Edge Labs

The department is well established with state of art technology to impart knowledge for future industrial and educational needs. It is furnished with DSP, microprocessor, communication, optical, VLSI and embedded systems. The labs offer students to work on a wide range of advanced software packages.

We boast of fully equipped laboratories with modern equipment supported by special purpose software packages like ETAP, MATLAB, CAPSA, LABVIEW, ORCAD, MULTISIM, KEIL, PSIM and MAGNET.

Industrial Connections

Marquee companies such as nVidia, ARM, cadence, NXP semiconductors and Texas Instruments have recently supported us in terms of supplying state of the art equipments for best hands-on training for our students.

Careers

Our students have obtained prestigious placements at leading companies such as Infosys, nVidia, Texas Instruments, Cadence, ARM and many more.
CIVIL ENGINEERING
4-Year Bachelor of Engineering (CE)

Program Objectives

The primary objective of this program is to produce well-balanced Civil Engineers capable of entering the Civil Engineering profession or continuing their studies at the post graduate level. Graduates will be well-prepared to solve current Civil Engineering problems, and they will have the ability to adapt to problems of the future. The achievements of Civil Engineers are well-known to the general public, because Civil Engineers build the world’s infrastructure. In doing so, they can shape the history of nations.

Projects that Civil Engineers work on include: airports, bridges, buildings, dams and waterways, drainage and sewer systems, city roads, and highways. The Undergraduate program offers a balanced approach to Civil Engineering education. The program is also designed to give students a solid foundation in Engineering and Science. Students take courses in Chemistry, Physics, and Mathematics, in addition to a core set of Engineering courses common to most Engineering disciplines.

The Civil Engineering courses teach students the fundamentals of Engineering design, as well as potential applications. Students are taught how to use Computer Software to expedite the design process, and they are also taught how to balance engineering designs with economic constraints. During their senior year, Undergraduate students work with a professor on a design project.

Student Outcomes for our Civil Engineering Program

- Our Students function successfully in the fundamental areas of Civil Engineering, and within a specialty, such as structural, geotechnical or water resources Engineering.
- Graduates are prepared for advanced education in Civil Engineering and related fields.

Program Contents and Academic Framework

Students take a common core of Civil Engineering courses, and they can specialize in the areas of geotechnical, or structural engineering etc. Our curriculum lays intensive focus on:

Program Objectives
The primary objective of this program is to produce well-balanced Civil Engineers capable of entering the Civil Engineering profession or continuing their studies at the post graduate level. Graduates will be well-prepared to solve current Civil Engineering problems, and they will have the ability to adapt to problems of the future. The achievements of Civil Engineers are well-known to the general public, because Civil Engineers build the world’s infrastructure. In doing so, they can shape the history of nations.

Projects that Civil Engineers work on include: airports, bridges, buildings, dams and waterways, drainage and sewer systems, city roads, and highways. The Undergraduate program offers a balanced approach to Civil Engineering education. The program is also designed to give students a solid foundation in Engineering and Science. Students take courses in Chemistry, Physics, and Mathematics, in addition to a core set of Engineering courses common to most Engineering disciplines.

The Civil Engineering courses teach students the fundamentals of Engineering design, as well as potential applications. Students are taught how to use Computer Software to expedite the design process, and they are also taught how to balance engineering designs with economic constraints. During their senior year, Undergraduate students work with a professor on a design project.

Student Outcomes for our Civil Engineering Program

- Our Students function successfully in the fundamental areas of Civil Engineering, and within a specialty, such as structural, geotechnical or water resources Engineering.
- Graduates are prepared for advanced education in Civil Engineering and related fields.

Program Contents and Academic Framework

Students take a common core of Civil Engineering courses, and they can specialize in the areas of geotechnical, or structural engineering etc. Our curriculum lays intensive focus on:


Cutting Edge Laboratories & Facilities

Students have access to every facility in the form of 9 well-equipped labs. These are

- Structure and construction engineering lab
- Computer lab
- Soil mechanics lab
- Hydraulics and fluid machinery lab
- Strength of materials lab
- Concrete and highway lab
- Survey lab
- Environmental engineering lab
- Remote sensing and GIS lab

Careers

Many of the world’s largest construction and engineering including L&T, HCC, Technip, GMR Infrastructure, Shapoorji Pallonji & Co. and Gammon Infra regularly visit our campus for recruitments.
GREAT PLACE TO STUDY

You will be part of a diverse community located in an inspirational campus setting, with access to one of the most multicultural cities in India. The world-class facilities, rich cultural assets and wealth of sporting opportunities will support and enhance your learning experience and friendships you make and the experiences you share will shape your future.
www.chitkarauniversity.edu.in
admissions@chitkarauniversity.edu.in

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

Admissions Helpline:
Chandigarh : +91 95011 05714 | 95011 05715