

CHITKARA
UNIVERSITY



FOR THOSE SEEKING A CAREER

WITH A PULSE

**INDUSTRY ENDORSED PROGRAMS IN
PHARMACY | HEALTH SCIENCES**

CHITKARA
UNIVERSITY



Pharmaceutical Programs

Approved by Pharmacy Council of India

- 4-Year B. Pharmacy [Punjab | Himachal Pradesh]
- 6-Year Doctoral Program in Pharmacy (Pharm.D)
- 2-Year Master in Pharmacy (M. Pharm)
- 2-Year Diploma in Pharmacy (D. Pharm)
- 2-Year M.Sc in Pharmacovigilance & Clinical Research

Nursing Programs

Approved by Indian Nursing Council of India

- 4-Year B.Sc Nursing [Punjab | Himachal Pradesh]
- 2-Year Post Basic B.Sc Nursing
- 2-Year M.Sc Nursing

Allied Healthcare Programs

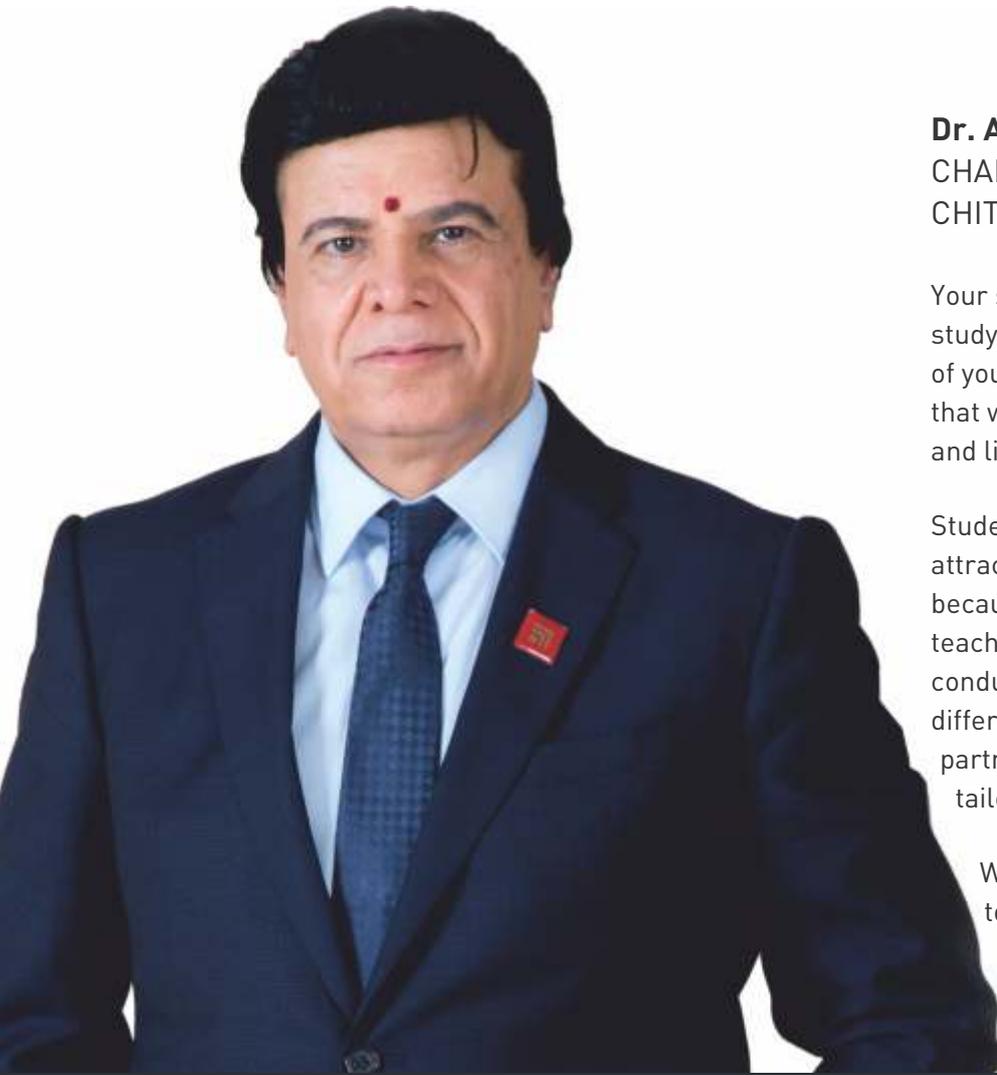
- 4-Year B.Sc Medical Laboratory Technology (MLT)
- 4-Year B.Sc Medical Radiology and Imaging Technology (MRIT)
- 4-Year B.Sc Operation Theater Technology (OTT)
- 4-Year Bachelor in Dialysis Therapy (BDT)

Optometry Programs

- 4-Year Bachelor of Optometry (B. OPTOM)

Physiotherapy Programs

- 4.5-Year Bachelor of Physiotherapy (BPT)
- 4.5- Year Bachelor Occupational Therapy (BOT)
- 2-Year Master of Physiotherapy (MPT)



Dr. ASHOK CHITKARA
CHANCELLOR
CHITKARA UNIVERSITY

Your selection of a University, and a study program marks an exciting phase of your life. You embark upon a journey that will lead to building your career and life.

Students from around the country are attracted to Chitkara University because of our commitment to teaching excellence, because we conduct research that makes a difference, because of our industry partnerships and because of our tailored courses.

We look forward to welcoming you to Chitkara University.

**STRONG
ACADEMIC
HERITAGE**

Dr. MADHU CHITKARA
PRO CHANCELLOR
CHITKARA UNIVERSITY

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

It has a reputation for excellence and innovation among coveted employers for preparing graduates who have the knowledge and skills they need for success in their workplace.

There are many reasons to choose Chitkara University. Our graduates go on to great careers, we're hands-on and responsive in our teaching, we provide a great environment to study and our research is world-class.



“The learning environment at **CHITKARA UNIVERSITY** represents a unique blend of distinguished faculty, brilliant & intellectual students with a proactive collaboration with industry.”



CHITKARA UNIVERSITY PUNJAB

Chitkara Educational Trust established its Punjab campus in the year 2002 on the Chandigarh-Patiala national highway which is 30kms from Chandigarh. In the year 2010, Chitkara University was established by the Punjab State Legislature under "The Chitkara University Act". Chitkara University is a government recognized University with the right to confer degrees as per the sections 2(f) and 22(1) of the UGC Act, 1956.





CHITKARA UNIVERSITY HIMACHAL PRADESH

Chitkara University was established in the year 2008 by the Himachal Pradesh State Legislature under the "Chitkara University Act". Chitkara University is a government recognised 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 sprawling campus located at Atal Shiksha Kunj in Barotiwala is 32kms from Chandigarh and 12kms from Pinjore.



CHITKARA UNIVERSITY in a nutshell

There are so many reasons to choose Chitkara University that we didn't have enough space to cover them all. But here are a few reasons why we think you'll love us and be proud to join us.



STRONG ACADEMIC HERITAGE

Established by passionate academicians with the sole mission of making each and every student "Industry ready".



COUNTED AMONG THE BEST

Our programs are consistently ranked among the top 50 and the University is ranked among top 20 in the country.



STRONG CAMPUS PLACEMENT

We have established an unassailable reputation for strong on-campus recruitments with more than 1500+ companies hiring our graduates year after year.



LEARN FROM THE BEST

You'll work with some of the brightest and most inspiring academicians, lecturers and researchers in the world across all our programs.



5 STARS

All our institutions and academic programs are recognised and approved by UGC and various academic regulators.



CLEANEST CAMPUS

Ranked as one of the Cleanest Universities of India in the 'SWACHHTA' ranking of Govt. of India for the year 2019.



MODERN FACILITIES

We have made huge investments in developing facilities with state-of-the-art labs, design studios, sporting and social facilities.



LEADING INNOVATION

Our Incubator is the largest in North India with more than 100+ start-ups helping turn students' business ideas into reality.

COUNTED AMONG THE BEST



Ministry of Human Resource Development
Government of India

Chitkara University has once again been ranked among the Nation's Best in the NIRF Ranking.



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



Chitkara University excels in the prestigious Times Higher Education Impact Rankings 2020.



We are proud to be included in the QS World University Rankings - Asia.

Chitkara University has been ranked among the best by India leading publications including:

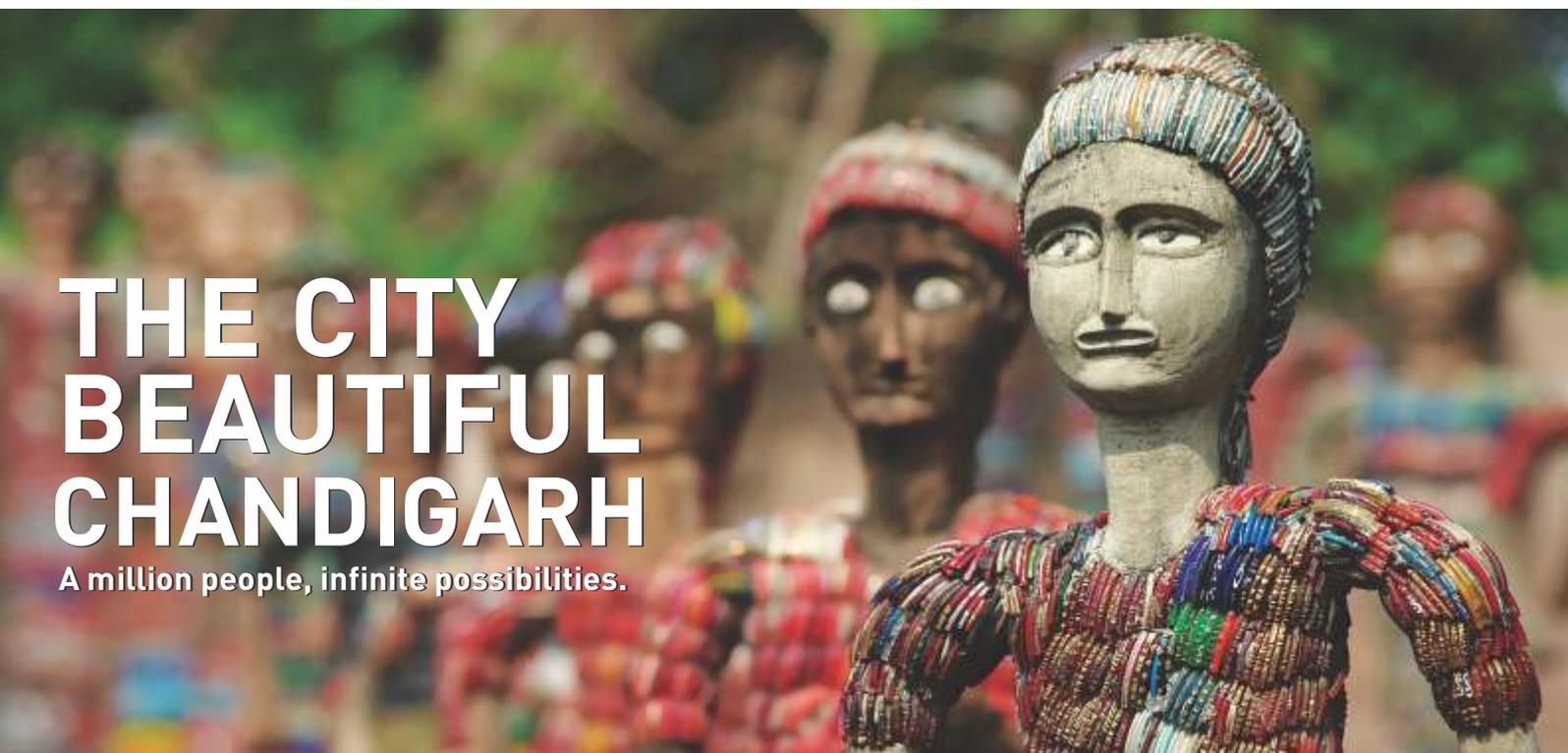
CAREERS360

DATAQUEST

INDIA TODAY

OUTLOOK
THE WEEKLY NEWSMAGAZINE

THEWEEK

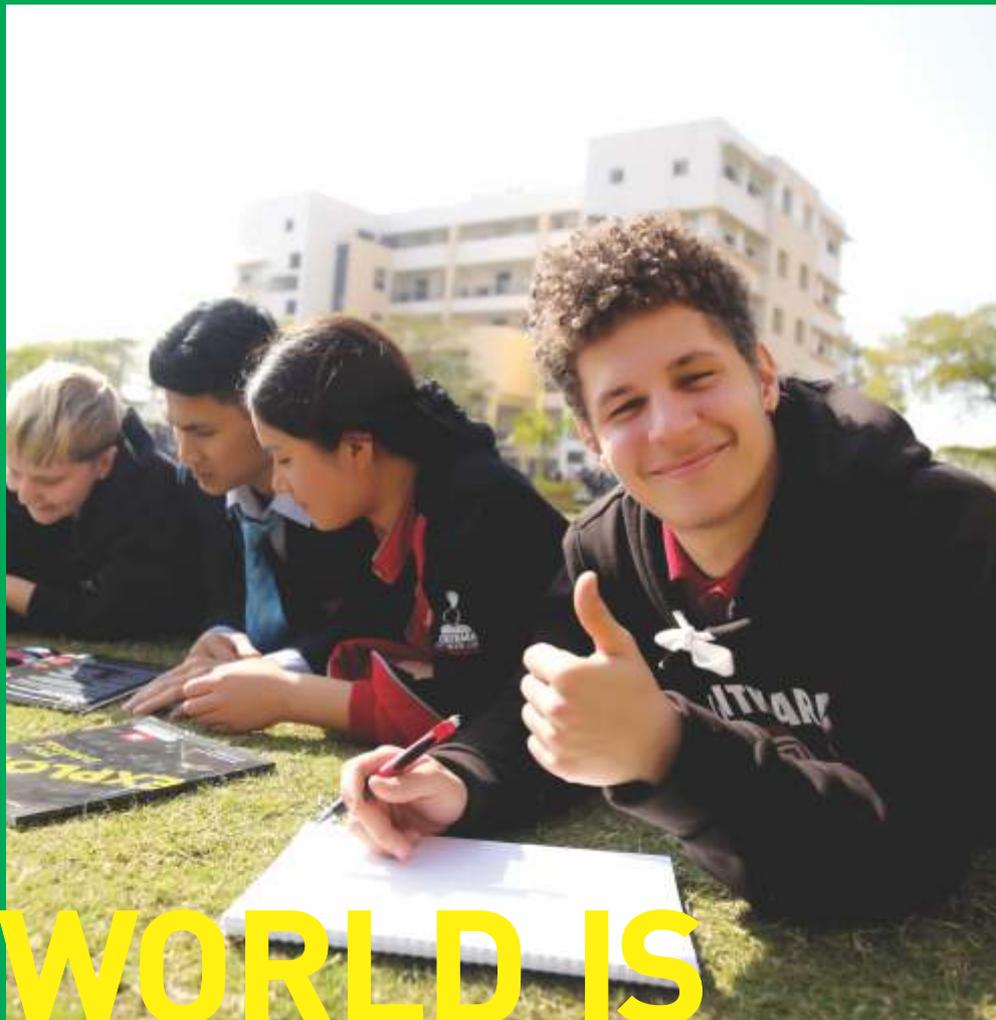




**The Global
University**

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

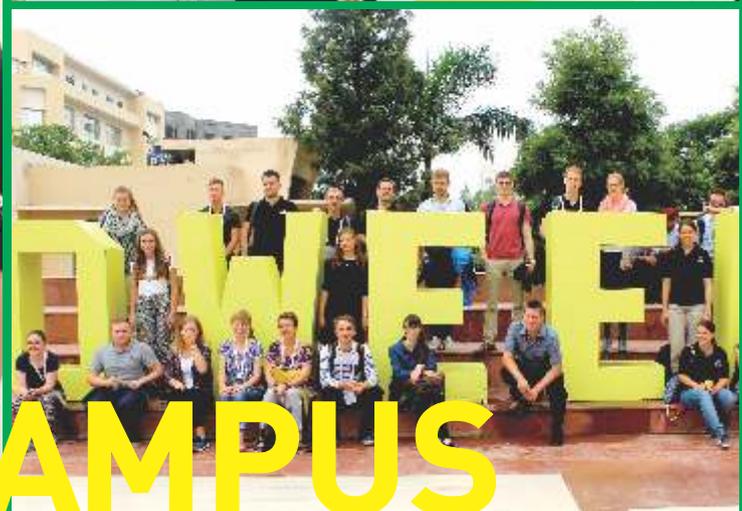
Summer Programs are short duration programs of 2-4 weeks on various specialisations. It adds to the international exposure of the students.

SEMESTER EXCHANGE PROGRAMS

Foster stronger bilateral ties

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

Chitkara University's approach to Global Education rests on the belief that every student needs broad global knowledge and a global mindset. There are many opportunities to globalise your Education.



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.

Global Connections

some of our major global partners across the world



EUROPE

UNITED KINGDOM

- London School of Economics and Political Science (LSE)
- University of Hertfordshire, UK
- University of Birmingham
- University of Nottingham
- Glasgow Caledonian University
- Anglia Ruskin University
- University of Central Lancashire (UCLAN)
- University of West of England, Bristol
- The University College London (UCL)
- Nottingham Trent University
- Heriot-Watt University
- University of Portsmouth
- SOAS University of London

GERMANY

- Cologne Business School
- Karlsruhochschule International University
- Hochschule Osnabrück University of Applied Sciences Osnabrück
- Duale Hochschule Baden Württemberg (DHBW)
- University of Applied Sciences Stuttgart
- Technische Universität Chemnitz
- Hochschule Emden/LEER
- Münster University of Applied Sciences

HUNGARY

- Kodolanyi Janos University Of Applied Science
- Algebra University College

FRANCE

- École pour l'informatique et les nouvelles technologies-EPITECH
- Lycee Emile Combes, Pons
- The Institut Polytechnique des Sciences Avancées, IPSA
- ESIGELEC – School of Engineering Rougen
- Ecole Pour L' Informatique Et Les Techniques Avacees- EPITA
- EM Normandie
- Kedge Business School
- Institut D' Etudes Politiques De Toulouse
- Sciences Po Lille
- ISTIA-Universite Angers
- Université Montpellier 2 Sciences et Techniques
- Institut Sup'Biotech de Paris
- ECAM Strasbourg
- France International Graduate Schools (FIGS)
- Institut Supérieur de Gestion (ISG)
- École supérieure des techniques aéronautiques et de construction automobile (ESTACA)
- Ecole Spéciale de Mécanique et d'Electricité (ESME Sudria)
- Sustainable Development Management Institute
- Ecole De Biologie Industrielle
- EPF Ecole d'ingenieurs (Sceaux)
- Université De Technologies De Troyes
- Groupe EDH (EFAP, ICART, EFJ)
- IAE - Pau Beyonne
- University Clermont Auvergne
- Institute of Communication Strategies and Techniques
- Ecole D' Ingenieurs (ECE Paris)

NETHERLANDS

- Amsterdam University of Applied Sciences
- Fontys University of Applied Sciences
- The Hague University of Applied Sciences

SPAIN

- University of Alicante
- Fundacio Privada Universitat I Technologia
- Universidad de Jaen
- Universidad Católica San Antonio de Murcia (UCAM)
- Universitat Rovira I Virgili
- Universidad de Huelva

BELGIUM

- HECS
- Haute Ecole de La Province De Liege
- Saint-Louis University, Brussels
- Karel de Grote University

SWITZERLAND

- HTMI

CZECH REPUBLIC

- University of Ostrava

FINLAND

- Helsinki Metropolia University of Applied Sciences
- JAMK University of Applied Sciences
- Turku Vocational Institute

PORTUGAL

- Politecnico De Coimbra
- Instituto Superior De Engenharia Do Porto

RUSSIA

- ITMO University

TURKEY

- Abdullah Gul University
- Middle East Technical University
- Istanbul Ayyansaray University
- Altinbas University, Turkey
- Nişantaşı University
- Istanbul Gedik University
- Fenerbahçe University

ALBANIA

- University of New York Tirana

BULGARIA

- Varna University of Management

SOUTH AMERICA

BRAZIL

- PUCRS
- UNICAMP (University of Campinas)
- The Federal University of Lavras
- Federal University of São João del-Rei
- Universidade Federal de Sao Joao del-Rei

PERU

- Universidad San Ignacio de Loyola (USIL)

NORTH AMERICA

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
- Vancouver Film School (VFS)
- Lakehead University
- University of British Columbia
- University of Ottawa
- Medicine Hat College
- Trent University
- Red River College
- York University

MEXICO

- Universidad Autónoma del Estado de Hidalgo (UAEH)
- Benemérita Universidad Autónoma de Puebla
- Universidad Popular Autónoma del Estado de Puebla
- Universidad de Guanajuato

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
- Regents of the University of California, Irvine
- University of La Verne
- The George Washington University
- The University of California San Diego Extension
- The University of California, Berkeley-Extension
- Pennsylvania College Of Optometry
- Texas Southern University
- California State University Monterey Bay
- University of Wisconsin-Parkside
- Kent State University, USA
- California State University San Marcos
- Southern Illinois University Edwardsville (SIUE)
- St. Thomas University
- University of California- Riverside
- Western University of Health Sciences
- Saint Peters' University
- University of Memphis

GRENADA

- Saint George's University,

AUSTRALIA

- Deakin University
- Edith Cowan University
- Flinders University
- Federation University
- Murdoch University
- Griffith University
- James Cook University
- Western Sydney University
- Macquarie University
- University of Southern Queensland
- University of New Castle

ASIA

MALAYSIA

- HELP University
- Management & Science University (MSU)
- University of Nottingham, Malaysia
- Heriot-Watt University, Malaysia
- Universiti Malaysia Perlis

JAPAN

- Kindai University
- Gunma University

THAILAND

- Kasetsart University
- Pathumthani University
- Rajamangala University of Technology Krungthep

PHILIPPINES

- Mapúa University

TAIWAN

- China Medical University
- Providence University
- National Tsing Hua University (NTHU)
- National Chi Nan University
- National Chung Cheng University
- National Formosa University

INDONESIA

- Binus Univesity
- Telkom University
- Airlangga University
- Siliwangi University

SOUTH KOREA

- Soongsil University
- Kookmin University
- Korea University (Sejong Campus)
- Kongju National University
- Chung Ang University
- Kyung Hee University
- Sookmyung Women's University
- Shinhan University
- Jeonbuk National University
- Kyungpook National University
- Chosun University
- Sangmyung University
- Jungwon University
- Kwangwoon University
- Seoul National University of Science & Technology (SeoulTech)
- Woosong University

DUBAI

- Heriot-Watt University, Dubai
- University of Birmingham, Dubai
- Murdoch University
- Gulf Medical University

AFRICA

SOUTH AFRICA

- Regenesys Business School, Johannesburg



Embark on Research from Day One

At Chitkara University, 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

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





Pharmaceutical Programs

Pharmacy programs at Chitkara University in Punjab & Himachal Pradesh are approved by the Pharmacy Council of India. Our Pharmacy programs have become the centre of excellence for Pharmaceutical Sciences in North India and have been consistently ranked among the Top 50 Pharmacy Institutions of the country which speaks volumes about our multi-disciplinary curriculum, strong industry partnerships & highly research focused faculty.



Chitkara University's Pharmacy program has been ranked 38th in the annual NIRF Ranking 2020 out of more than 1000+ pharmaceutical colleges in the country. We have always been ranked in top 50 rankings since the inception of NIRF rankings.

2 COLLABORATIVE RESEARCH
PRODUCT LAUNCH

55+ PATENTS

400+ PUBLICATIONS

Our Academic Programs

B. Pharm Plus

4-Year program with a difference

Undergraduate program with a strong pharmaceutical industry focus and intensive practical exposure for a period of 6 months and more.

B. Pharm Plus M. Pharm

6-Year Dual Degree Program

An integrated program leading to B. Pharm & M. Pharm, with diverse range of specialisation based on the needs of Pharma industry. Additional exposure to value added certification programs such as Regulatory Affairs / IP / Clinical Research.

Pharm. D.

6-Year Doctoral program

A Postgraduate Doctoral program with a strong Pharmaceutical industry focus and intensive practical exposure.

B. Pharm Practice

2-Year program

B. Pharm (Practice) program provides advance specialisation for the diploma students in the areas of clinical therapeutics and Pharmacy and achieve graduate degree in the advanced areas.



**INDUSTRY
ENDORSED
PHARMA
COURSES**

Pharm. D. (Post-Baccalaureate)

3-Year program

Students have an option to pursue lateral entry into Pharm D program. B. Pharm candidates can pursue this program. The candidate will join the program in the 4th year of Pharm D and will subsequently complete the course.

M. Pharm Plus

2-Year program with a difference

Postgraduate program with a strong pharmaceutical industry focus and intensive practical exposure for a period of 6 months and more with specialisations in
Pharmaceutics | Pharmacology |
Drug Regulatory Affairs |
Pharmaceutical Technology.

M.Sc in Pharmacovigilance & Clinical Research

2-Year Masters Program

Aimed at creating skilled Pharmacovigilance professionals who can work with leading Pharma companies & Clinical Research Organizations (CROs) worldwide.

M. Pharm Plus Ph.D

A combination of PG & Research (Integrated Doctoral Program)

Students enrolling for M. Pharm can pursue a doctoral program without taking a break from the course. Financial assistance will be offered to meritorious students.



4-Year Bachelor of Pharmacy (B.Pharm)

Approved by Pharmacy Council of India
(PUNJAB & HIMACHAL PRADESH)

Bachelor of Pharmacy (B.Pharm) is a 4-Year undergraduate program designed to introduce students with the properties and impacts of Pharmaceutical drugs. The program helps students in developing the skills essential to counsel patients about medication and use of drugs.

B.Pharm program at Chitkara University will focus on making our students understand the mechanism of drug action, its dynamics and kinetics, visualise and work on laboratory techniques and improvements. Also, it would prepare them to interpret data arising out of research experience into production, quality control & quality assurance. In addition, the program also concentrates on preparing the students and training them for industry-ready holistic pharmaceutical care in the practice setting. There will also be focus on getting our students to learn skills to use modern Pharmaceutical tools, software and equipment to analyse & solve problems.



The industrial visits and equally important practical sessions ensure students receive a perfect exposure to the real-world situations while learning. The course has been designed to cater to the requirements of a large horizon of healthcare needs for Pharmaceutical and Formulation Industry, Clinical Pharmacy, Pharmacovigilance, Research & Development of drugs including drugs of natural origin, Health Regulatory system and Academia. There will be focus on getting our students the ability to design formulation & Synthetic process as per the needs and specifications in the Pharmaceutical industry.

In addition, the program also concentrates on preparing the students and training them for industry-ready holistic Pharmaceutical care in the practice setting. The industrial visits and practical sessions held on regular basis ensure the students perfect exposure to the real-world situations while learning. The course has been designed to cater to the requirements of a large horizon of health care needs for Pharmaceutical and Formulation Industry, Clinical Pharmacy, Pharmacovigilance, Research and Development of drugs including drugs of natural origin, Health Regulatory system and Academia.

At Chitkara University, there is huge focus on getting our B.Pharm students industry ready for Pharmaceutical industries, Hospitals, Patent cells, IPR sections, Clinical Research Organisations, Retail Pharmacy and other opportunities



Pharm. D.

6-Year Doctoral Program in Pharmacy

Approved by Pharmacy Council of India

A Postgraduate Doctoral program with a strong Pharmaceutical industry focus and intensive practical exposure.

From the academic year 2014, we started offering the 6-year Pharm. D. which is an innovative combination of masters degree and doctoral course that not only saves your time but offers you bright career prospects. It's a post-graduate professional doctoral degree and the student gets authorisation to use prefix Doctor (Dr) to his name.

The Doctor of Pharmacy (Pharm. D.) program at Chitkara University will prepare students to provide high quality Pharmaceutical care that has the patient as its focus and optimal drug therapy and health as its goal. The program stresses knowledge of the chemical, biological, social, and clinical sciences that underline Pharmacy, an understanding of the relevance of that knowledge to patient care and the skills to apply that knowledge to specific care circumstances.

Pharm. D. graduation is a post-graduate professional doctoral degree. It was introduced to improve clinical and hospital Pharmacy services in India which is in direct contact with patient healthcare system and authorised to take critical decisions in in-patient prescription. The Pharm. D. Degree requires five years of classroom and hospital-based didactic study. It is followed by one year of internship training in a hospital setting for Clinical Management of In-Patients, in addition to ongoing practicals and research project. Pharm. D. students and graduates actively participate in direct patient care in hospitals.

Program Objective

The Pharm. D. curriculum is designed to produce a scientifically and technically competent Pharmacist who can apply this education in such a manner as to provide maximum Healthcare services to patients. Students are provided with the opportunity to gain greater experience in patient's close cooperative relationships with health practitioners. It is the goal of all Pharmacy Schools to prepare Pharmacists who can assume expanded responsibilities in the care of patients and assure the provision of rational drug therapy.

Program Structure

Some of the important subjects taught in the various semesters of the 6-Year program are:

- Human Anatomy and Physiology
- Pharmaceutical Inorganic Chemistry
- Community Pharmacy
- Pharmacology
- Pharmaceutical Formulations
- Biostatistics & Research Methodology
- Pharmacoepidemiology
- Clinical Pharmacokinetics
- Pharmaceutics
- Pathophysiology
- Pharmacognosy & Phytopharmaceuticals
- Pharmaceutical Analysis
- Hospital Pharmacy
- Biopharmaceutics
- Pharmacoeconomics
- Pharmacotherapeutic Drug Monitoring

Career Opportunities

Pharm. D. qualification, as prevalent in U.S, U.K, Canada, other European and developed countries, entitles the Pharmacists to prescribe medicines, while the doctor's role is focused mainly on diagnosis. Also, with a Pharm. D., an individual can register as Pharmacist anywhere in the world and practice at a Hospital, Clinic or Community Healthcare Centre. A Pharmacist can also practice as a Clinical Scientific Expert and Clinical Research Associate.

- Hospital Pharmacist
- Community Pharmacist
- Pharmacy Education
- Managed Care
- Governmental Agencies
- Clinic Pharmacy Practice
- Clinical Pharmacist
- Specialised Area Opportunities
- Pharmacoeconomics
- Home Health Care
- Community Pharmacy
- Knowledge processing outsourcing (KPO)

All the jobs related to Hospital/Clinical Pharmacy etc in European/American and other countries are highly paid due to the authority given to the Pharmacist to give prescription and clinical monitoring to admitted patients, while the physicians focus on diagnosis & operative care.

PHARM. D (POST BACCALAUREATE)

Students have an option to pursue lateral entry into Pharm. D. program. B. Pharm candidates can pursue Pharm. D. (Post Baccalaureate) program. The candidate will join the program in the 4th year of Pharm. D. and subsequently complete 4th, 5th and 6th year.



2-Year Master of Pharmacy (M.Pharm)

For this academic year we are offering the following 2-Year Master Degree Programs:

- M. Pharm (Pharmaceutics)
- M. Pharm Pharmaceutical Technology)
- M. Pharm (Pharmacology)
- M. Pharm Pharmacy Practice (Clinical Research & Clinical Pharmacology)

M. Pharm (Pharmaceutics) & M. Pharm (Pharmaceutical Technology)

The M. Pharm (Pharmaceutics) and M. Pharm (Pharmaceutical Technology) Programs lead to specialisation in formulation development, manufacturing technology, and process development areas, which are essential specialisations for manufacturing of traditional and novel drug delivery systems.

The first year involves theoretical and practical sessions in the following areas: dosage form design; advanced pharmaceutical methods of analysis; drug regulatory affairs; Biopharmaceutics and Pharmacokinetics; dosage form technology; advances in industrial pharmacy; and novel drug delivery systems. The second-year projects touch upon formulation development, stability studies, and process validation for traditional and novel drug delivery systems.

Some of the areas that have been taken-up by various batches since 2009 include Hydrogels, Microemulsions, Microspheres, Nanospheres, Nanosuspensions, Gastroretentive systems, solid-solid and solid-liquid dispersed systems, and development of modified excipients.

Continuous interaction with industries including Nectar life Sciences, Abbott Healthcare, Unichem, Jubilant Clinsys, Arbro Pharma, Dr Reddys Labs and other organisations for academic, conferences and placements is a special feature during the course.





M. Pharm (Pharmacology)

This program leads to specialisation in Pharmacology, which is an integral part of the drug discovery and drug design processes. These processes deal with the identification of lead molecules that could have potential therapeutic activity due to specific molecular and receptor affinity, and analogous structure to specific sites and proteins in the body.

In the first year, the Program covers theoretical & practical sessions in the subjects molecular pharmacology; general Pathophysiology; Pharmacology and Pharmacotherapeutics I and II; clinical research methodologies; advanced Pharmaceutical Methods of Analysis; Drug Regulatory Affairs; Quality Assurance and Biostatistics; and other subjects. In the second year of the program, students take-up several projects that are aimed at developing and exploring novel receptor targets, and mechanisms for drug action in the pathophysiological stages of the disease.

M. Pharm (Drug Regulatory Affairs)

The Master's program in Drug Regulatory Affairs is a comprehensive specialisation in pharmaceutical regulations, which are in practice in different countries to ensure validated procedures for Pharma Research, Technology Transfer for large scale continuous Manufacturing Operations, quality Assurance, Distribution records, recall and Pharmacovigilance. A pharmaceutical product has to be approved for safety, efficacy & procedural compliance & documentation for marketing in US by USFDA, in UK by MHRA, in Europe by EMEA, in Japan by PMDA, in India by CDSCO & similarly for other countries. The course gives details of the structures of these organizational procedures & guidelines to submit documents & dossiers and follow up with these regulatory agencies in the form of DMF, CMC documents, CTD & CTD documents. The professionals with M. Pharm Drug Regulatory Affairs specialisation are mandatory & highly paid.



M. Pharm Pharmacy Practice (Clinical Research & Clinical Pharmacology)

This program offers a specialisation in the Clinical Drug Development methodologies, its regulations, and control. Once the safety and efficacy of a novel chemical entity is established for a drug compound in preclinical animal studies, it is put through the process of clinical development. This is where the drug is studied for safety, efficacy and dosing in increasing numbers of human population setting through Phase I–IV clinical trials.

The branch offers exposure to subjects on principles of Pharmacology & Therapeutics; Clinical Research Methodologies; Clinical Drug Development; Advanced Pharmaceutical Methods of Analysis; Drug Regulatory Affairs; Recent Advances in Pharmacology; Quality Assurance & Biostatistics; and other subjects. The second-year clinical projects are done in hospital inpatient /outpatient settings, either in association with a clinical research organisation or a pharmaceutical company.



2-Year Diploma in Pharmacy (D.Pharm)

Approved by Pharmacy Council of India

Diploma in Pharmacy (D.Pharm) is a two-year academic program streamlined to endow in-depth knowledge of science and technique behind the formulation of Pharmacy Practice and Medicines Management. The program fundamentally provides an overview of the conjecture principles and practices implicated in the science of Pharmacy, including core subjects like Pharmaceutical Chemistry, Pharmacognosy, Pharmacology and Pharmaceutics.

The curriculum and syllabi for the program are as per the Pharmacy Council of India (PCI) the statutory body governing pharmacy profession in India. In this program students will gain insights into the chemical and physical properties, chemical structure and the uses of Pharmaceutical formulae. The program encompasses knowledge about the natural medicines which are obtained from plants, animals, marine and biological sources.

In addition, the program focuses on imparting knowledge about drugs used for different diseases, dosage absorption, mechanism of action, drug action, drug interaction and adverse reaction. Candidates seeking advance knowledge in the discipline can apply for higher education.

Some basic courses covered in D.Pharm program are:

- Introduction to Pharmaceutics
- Introduction to Pharmaceutical Chemistry
- Introduction to Pharmacognosy
- Biochemistry & Clinical Pathology
- Human Anatomy & Physiology
- Health Education & Community Pharmacy
- Pharmacology & Toxicology
- Pharmaceutical Jurisprudence
- Drug Store and Business Management
- Hospital and Clinical Pharmacy

Career paths you can choose after completing D.Pharm are:

- Scientific Officer
- Quality Analyst
- Production Executive
- Medical Transcriptionist



Pharmaceutical Industry in India

As per the sectoral report developed by India Brand Equity Foundation, the Indian pharmaceutical market size is expected to grow to US\$ 100 billion by 2025, driven by increasing consumer spending, rapid urbanisation and rising healthcare insurance, among others.

- As per Equitmaster reports, the Indian Pharmaceutical market is the third largest in terms of volume and value respectively. The Indian pharmaceutical industry is expected to grow by 15% every year between 2020-25, according to the India Brand Equity Foundation (IBEF).
- As stated by Pharmaceuticals Export Promotion Council of India (PHARMEXCIL), the Indian pharmaceutical export will witness a staggering 30% increase from US\$ 16.4 billion to US\$ 50 billion before 2025.

These numbers in itself speak volumes about the opportunities which the Indian Pharmaceutical industry is providing. The industry not only needs highly qualified researchers, chemist, technical people but also requires skilled sales and marketing managers who can take the industry forward by managing and taking the complex decisions which are imperative for the growth of the industry. Our pharmacy programs at Chitkara University train students and help them develop skills required in the field to take up the challenging roles in the future.

Career Options

A career in Pharmacy unfolds a vista full of opportunities leading to a golden future for young aspirants in areas such as -

- **Research & Development**

M. Pharms & PhDs are particularly in great demand in the various areas of Pharmaceutical R&D. Areas where professionals are required are:

- **New Drug Discovery Research (NDDR)**

Discovering a new drug has assumed prime importance in the post-GATT era where a pharmaceutical company has to ensure that it is selling original research products.

- **Process Development (P&D)**

One of the important areas in bulk drugs industry is developing viable processes for the manufacture of drugs and intermediates for their commercial production.

- **Formulation & Development (F&D)**

The success of any pharma company lies in the quality of its products, i.e., its formulations & dosage forms and constant research is required to develop new products that are more patient compliant. Formulation development ensures this.

- **Clinical Trials, Bioequivalence studies, Toxicological Studies**

These are some of the areas of clinical research which are in high demand as they are involved in the systematic evaluation of potential drug substances prior to getting them approved by the authorities.

- **Production & Manufacturing**

A Pharmacy professional can work as a production person, involved in the production of bulk drug and intermediates or formulations and dosage forms. Industries in the cosmetics, soaps, toiletries segment, dental products, blood and plasma products also hire pharmacy professionals.

- **Analysis & Testing**

Quality Control (QC) and Quality Assurance (QA) are the most integral areas of the drug and pharmaceutical industry. Highly specialised and trained staff is required to handle sensitive analytical procedures & sophisticated equipment.

- **Marketing**

The Pharma Sales & Marketing is a highly technical field & offers excellent opportunities for the pharmacy graduates. Pharmacy graduates are absorbed as product executives or managers and can progress through group product manager and brand manager positions and rise to national level manager status.

- **Hospital Pharmacy**

Another opening for a Pharmacy professional is "Registered Pharmacist" in the hospitals or drug stores. This is a very sought after profession especially in countries like the U.S.A., Canada, Middle East and European countries. This is a key position and the Pharmacist plays an important role from preparing prescription to the patient's medical history after the medical doctor has diagnosed the disease.

- **Academics**

Excellent opportunities for the professionals are available in teaching profession also. Besides teaching academic related opportunities involve positions on Research Posts and Training programs, Documentation, Library Information Services and Pharma Journalism.

- **Entrepreneurship Opportunity**

All Pharmacy graduates (B. Pharm, Pharm. D.) are entitled by PCI Registration and FDA Licence to take up manufacturing, wholesale and retail business.

Campus Recruitment

Following companies regularly hire our Pharmacy graduates for internship and full time positions-

With a good placement record for the batches graduating since 2009, and many students opting for higher qualifications (M Pharm/MBA either in India or abroad), it is clear that our Pharma programs have managed to carve "a niche of its own". We have established an unassailable reputation for providing on-campus recruitment opportunities in diverse areas in the Pharma field including Production, QA, Marketing/ Retail and Hospital Pharmacy, and on our sheer virtue of intensive focus on making all our graduates "industry ready".

Blue Chip Multinational and National Pharma companies including Ranbaxy Labs Ltd, Cipla, Pfizer Ltd. and Eli Lilly have been the leading campus recruiters for our Pharma graduates since 2009.





2-Year Master (M.Sc) in Pharmacovigilance & Clinical Research

in collaboration with

parexel®

Introduction to Pharmacovigilance

One sector that would always boom and is recession proof is Healthcare and Pharmaceuticals. With many drugs hitting the market, there is a growing need for vigilance to prevent and monitor the adverse effect of drugs. There is a complete science to it. It is called Pharmacovigilance.

Pharmacovigilance also known as Drug Safety, is the Pharmacological Science relating to the collection, detection, assessment, monitoring, and prevention of adverse effects with pharmaceutical products. As such, Pharmacovigilance focuses on adverse drug reactions, or ADRs, which are defined as any response to a drug which is noxious and unintended, including lack of efficacy. Medication errors such as overdose, misuse and abuse of a drug, as well as drug exposure during pregnancy and breastfeeding, are also of interest, even without an adverse event, because they may result in an adverse drug reaction. Simply put, Pharmacovigilance, is drug safety. It can be defined as the study and prevention of adverse effects caused by pharmaceutical products.

Pharmacovigilance is the reason because of which many drugs are withdrawn from or are not even brought into the market at times. The government supports and helps to implement courses in Pharmacovigilance as their primary goal is to ensure students of medicine are aware of the adverse effects of certain drugs.

About Parexel International

Parexel is focused on supporting the development of innovative new therapies to improve patient health and they do this through a suite of services that help life sciences and biopharmaceutical customers across the globe. They have a solid reputation across the globe for transforming scientific discoveries into new treatments for patients. From clinical trial and regulatory and consulting services to commercial and market access - our therapeutic, technical and functional ability is underpinned by deep conviction in what we do.



Program Overview

The 2-year Masters program in Pharmacovigilance is aimed at creating skilled and competent Pharmacovigilance professionals who can work effectively at different levels in Pharmacovigilance departments of leading Pharma companies and Clinical Research Organizations (CROs) worldwide. This program lets the students learn from industry experts to get Internationally Compliance Pharmacovigilance training based on defined Pharmacovigilance Competency Frameworks (PCF).

The curriculum includes in-depth study of Pharmacovigilance related processes, complimented with hands-on training on ICSR processing, quality management, aggregate report (PSUR/ PBRER/ PADER etc.) writing and compliance management, and in turn help students develop internationally accepted competencies to become world-class Pharmacovigilance Professionals.

Program Highlights

Some salient features of this program are -

- India's first program conducted by University and managed by industry leader
- Degree program meet International standards of WHO, JCH, FDA and EMEA
- A program accepted globally based on the skills standards
- Regular interaction with industries including leading Pharmaceutical companies and CROs
- 6 months Internship with Parexel International in last semester to get hands-on learning



Careers in Pharmacovigilance

The field offers a great career scope for Life Science and Pharmacy graduates. It is a scientific discipline that is primarily concerned with reporting and analysing of drug side effects. It is primarily due to the work of these professionals that the drugs in the market that we consume are mostly safe, and those that are found harmful are taken off the market.

After a drug side effect is reported, these professionals enter the event in relevant databases, follow up with the case to gather more information and forward these reports to regulatory authorities and other applicable bodies. Pharmacovigilance professionals identify signals in data that may point towards a potential side effect and probe the case further.

The global pharmacovigilance market size was estimated at US\$ 4.87 billion in 2019 and is expected to witness a CAGR of 13.2% over the next ten years. Some of the common profiles in Pharmacovigilance are -

- Pharmacovigilance Scientist
- Pharmacovigilance Quality Reviewers
- Pharmacovigilance Quality Analysts
- Pharmacovigilance Medical Safety Writers
- Pharmacovigilance System Specialists, etc.

Pharmacovigilance profiles normally include tasks such as -

- Recording and reporting adverse reactions received from healthcare professionals and consumers.³¹
- Conducting in-depth interviews with patients and healthcare professionals.
- Developing a thorough knowledge of products.
- Completing periodic safety update reports on drugs and other treatments.
- Writing and reviewing serious adverse effects report and forms.
- Flagging early warning signs of adverse effects of drugs.
- Minimising the risk of serious side effects.
- Completing safety audits.



Healthcare Industry in India

There is no better time to enter into the field of Healthcare Management. Healthcare Industry is growing globally. Consequent to this growth, there is an explosion of opportunities for HEALTHCARE professionals. In India too, Healthcare has become one of India's largest sectors - both in terms of revenue earnings and employment. Public as well as private players have sensed the immediate demand, and have started to strengthen their coverage & services in the Healthcare domain.

India is a vast country with a huge population of 130 Crore. Despite noteworthy improvements, it is still burdened with age old problems of mother and infant mortality, malnutrition and infectious diseases. Simultaneously, rising incidences of lifestyle diseases like Hypertension, Diabetes, Depression, Psychosis have also made inroads both in urban and rural areas. Added to this dual burden, are epidemics of new diseases (Swine Flu, Bird Flu) and re-emerging diseases (Dengue, Chikungunya) which are posing a huge challenge to the Indian Healthcare space.

India is largely an underserved market with respect to Healthcare facilities. There is a huge scope for improvement and the clamour for affordable and accessible Healthcare has become prominent. Besides, the conventional mode of Healthcare delivery, there is also a growth in demand for modalities like Public Health, Home Healthcare and Telemedicine. To facilitate the whole gamut of Healthcare, there is an emergence of Data Informatics and Analytics, which will bring in a paradigm shift in the way Healthcare is delivered and monitored.

Employment opportunities in Healthcare are growing with each passing year. This has enormously tipped the need for competent & well-groomed professionals. Private as well as public sector jobs are available. The latest window of opportunity has been opened by the Government of India's ambitious, promising and far-reaching National Health Protection Scheme called Ayushman Bharat.

Industry Overview

- India's Healthcare industry is projected to grow to 17% by each year.
- Healthcare industry in India is projected to reach Rs. 27 lakh crore by 2022.
- The Government of India is planning to increase Public Health spending to 2.5% of the country's GDP by 2025.
- 100,000 jobs are expected to be created from Ayushman Bharat, the National Health Protection Scheme.
- India is experiencing 22-25% growth in medical tourism and the industry is expected to reach US\$ 9 billion by 2020.
- According to a report of NITI Aayog, the Indian government will increase public expenditure on Healthcare from 1.1% to 2.5% GDP in the next four years and to 5% in the following 5 years.
- The Government of India aims to increase healthcare spending to three percent of the Gross Domestic Product (GDP) by 2022.
- The world's largest Government Funded Healthcare Scheme, Ayushman Bharat, was launched on September 23, 2018.

Advantage India

Strong Demand	Healthcare market in India is expected to reach US\$ 372 billion by 2022, driven by rising incomes, greater health awareness, lifestyle diseases and increasing access to insurance.
Attractive Opportunities	Rising incomes, greater health awareness, lifestyle diseases and increasing access to insurance will contribute to growth.
Rising Manpower	It is estimated that India will require 2.07 million more health care staff* by 2030 in order to achieve a doctor-to-population ratio of 1:1,000. About 250,000 more health workers are needed to meet the standards set by the World Health Organization – which is 22.8 health workers per 10,000 population.
Policy Support	The world's largest Government Funded Healthcare Scheme, Ayushman Bharat, was launched on September 23, 2018.

Note:* Number of doctors possessing recognised medical qualifications (under I.M.C Act) registered with State Medical Councils | Medical Council of India
<https://scroll.in/article/931857/with-20-medical-professionals-for-every-10000-citizens-can-india-provide-universal-healthcare>



INDUSTRY COLLABORATION WITH FORTIS HEALTHCARE

Fortis Healthcare Limited is a leading integrated Healthcare Delivery Service Provider in India. The Healthcare verticals of the company primarily comprise hospitals, diagnostics and day-care specialty facilities. Currently, the company operates its healthcare delivery services in India, Dubai and Sri Lanka, with 36 healthcare facilities (including projects under development), approximately 4,000 beds and over 415 diagnostic centres.



Fortis Hospital, Mohali



Escorts Heart Institute & Research Centre Ltd, Okhala



Fortis Hospital, Noida



Fortis Ft. Lt. Rajan Dhall Hospital, Vasant Kunj



Fortis La Femme, New Delhi



Fortis Escorts Hospital, Faridabad



Fortis Escorts Hospital, Jaipur



Fortis Malar Hospital, Chennai



Hiranandani Fortis Hospital, Vashi, Mumbai



Escorts Heart Centre, Raipur



Fortis Escorts Hospital, Amritsar



Fortis Jessa Ram Hospital, New Delhi



Fortis Hospital Seshadripuram, Bengaluru



Fortis Clinique Darne, Mauritius



Fortis Modi Hospital, Kota



S.L.Raheja Hospital, Mumbai



Fortis Hospital, Shalimar Bagh, New Delhi



Fortis Memorial and Research Institute, Gurgaon



Fortis Kangra, HP



Fortis Hospital Bannerghatta Road Bengaluru



Allied Healthcare **4-Year B.Sc in Medical Radiology & Imaging Technology (MRIT)** in collaboration with Fortis Healthcare

Medical Imaging is the technique and process used to create images of the human body for clinical purposes that is, medical procedures seeking to reveal, diagnose or examine disease or medical science, including, the study of normal anatomy and physiology. Medical Imaging Technologist performs imaging of the human body for diagnosis or treating medical problems.

Program Contents And Academic Framework

Our B.Sc program in Medical Imaging Technology lays special emphasis on:

- Human Anatomy
- Radiation Physics
- Medical Microbiology
- Radiological Technology
- Human Physiology
- Radio Diagnosis
- Specialised Diagnostic Techniques
- Radiotherapy

Industry Internship

Our students complete their internship at Fortis Hospital. The completion of Internship is mandatory to enable a student to obtain the Bachelor of Medical Imaging Technology.

Employability

- After successful completion of program, a student will be capable of holding assignments in hospital and healthcare institutions, research laboratories and diagnostic centres.
- Students with an instinct to explore deeper can enroll for higher studies in a specialised field of their interest, and progress as Scientists and even enjoy Faculty positions in academic institutions.



Allied Healthcare

4-Year B.Sc in Operation Theater Technology

in collaboration with Fortis Healthcare

The 4-Year Bachelor of Science (B.Sc) program in Operation Theater Technology has been designed for meeting the demand of the growing need of experts in the fields of Operation Theater Management, Medical Ethics, Anaesthesia Technology and Post Operation Care.

Operation Theater and Anaesthesia Technologist are responsible for direct and indirect patient care, equipment set up and operation procedures. They are trained to assist the surgeons during the procedures and assume responsibility for completion of other functions as assigned.

Industry Internship

Our students complete their internship at Fortis Hospital. The completion of internship is mandatory to enable a student to obtain B.Sc Operation Theater Technology Degree.

Program Contents & Academic Framework

Our B.Sc program in Operation Theater Techniques lays special emphasis on:

- Applied Anatomy and Physiology
- Medical Ethics
- Intensive Care
- Clinical Pharmacology
- Anaesthetic Techniques
- Clinical Microbiology
- CSSD Procedures

Employability

Operation Theater Technologists are required across all hospitals for conduct of surgeries which include:

- General Surgery
- Gynecology Surgery
- Neurosurgery
- Urology
- Ophthalmic Surgery
- Plastic Surgery
- Cardio Therapy Surgery
- Orthopaedic
- ENT Surgery
- Spinal Surgery

Allied Healthcare

4-Year B. Sc in

Medical Laboratory Technology

in collaboration with Fortis Healthcare

A Medical Laboratory Technologist (MLT) is a healthcare professional who performs chemical, hematological, immunologic, microscopic, and bacteriological diagnostic analyses on body fluids. The technologist also performs equipment validations, calibrations, quality controls or run-by-run assessment, statistical control of observed data, and recording normal operations.

In clinical rotations, the student experiences hands-on learning in each discipline of the laboratory and, under supervision, performs diagnostic testing in a functioning laboratory. Although not compensated, a student in the clinical phase of training usually works 40 hours per week for 52 weeks, experiencing work as a full-time employee.

At Chitkara School of Health Sciences, the MLTs are promoted to become specialists, qualified by unique graduate education and/or additional training to perform more complex analysis than usual, within a field.

Industry Internship

After having successfully completed their academics in the University, the students need to undergo an internship. The completion of internship is mandatory to enable a student to obtain the Degree of Bachelor of Medical Laboratory Technology.

Program Contents and Academic Framework

Our B.Sc program in Medical Laboratory Technology lays special emphasis on:

- Human Anatomy
- Human Physiology
- Microbiology
- Pathology
- Fundamentals of Hematology
- Cytology & Cytotechniques
- Cytogenetic & Tissue Culture
- Blood Banking

Employability

- After successful completion of the program a student will be capable of holding assignments in hospital and health-care institutions, research laboratories and diagnostic centres.
- Successful candidate can set-up their own establishments.
- Students with an instinct to learn can do higher studies in specialised field of study and can progress as scientists and can even enjoy faculty positions in academic institutions.
- Students can get placed as Scientific Officer or Quality Assurance Officer.



Allied Healthcare

4-Year B.Sc in Dialysis Therapy Technology

in collaboration with Fortis Healthcare

Dialysis is a procedure to keep the body running as normal as possible while the kidneys are under repair or while a person waits for a kidney transplant. Without working kidneys or Dialysis, salts and other waste products would accumulate in the blood and poison the person. Typical Haemodialysis treatments (using an artificial kidney) last about four hours and are needed about three times a week.

Dialysis Therapists work with people whose kidneys no longer work properly or at all. Also sometimes referred to as Hemodialysis Technologists or Patient Care Technologists (PCTs); they operate machines that remove wastes, salt, and extra water from patients' blood while keeping safe levels of certain chemicals. The therapists prepare patients for Dialysis, monitor them and the machine during Dialysis, and perform required procedures when Dialysis is completed.

Scope

Dialysis Assistants work with the Dialysis Therapist to plan implementation of the Dialysis prescription, perform Hemodialysis, manage various intra-dialytic complications and document patient data. The Dialysis Therapist works with the head of department/ Senior Dialysis Therapist to supervise the Hemodialysis Assistants and auxiliary personnel, manage intra-dialytic complications, documents and patient records.

Employability

On completion of the course of study and having successfully passed the examination, the candidate would be able to achieve a satisfactory level of efficiency and be gainfully employed.

- Graduates can expect to be employed in hospitals and private practices as Dialysis Therapists.
- A career in research, following the completion of a PhD, is an option chosen by some graduates.
- Graduates are eligible for employment overseas where their qualifications, training and experience are highly regarded.
- Graduates have good employment prospects, and will enter a field in which the demand for professionals has increased in recent years. Increase in the number of patients with renal failure, stage 5 chronic kidney disease, and end-stage renal ensures a large demand for future graduates.



4-Year B.Sc in Nursing (Basic)

This program is offered at Chitkara University, Punjab and Chitkara University, Himachal Pradesh.

The global population is rising but the number of healthcare workers is decreasing relatively. With more and more nurses migrating abroad, India is facing an acute shortage of faculty and clinical practitioners. This necessitates the initiation of more and more educational institutions to meet local, national and global demand for health care providers. Keeping in view the World Health Organization's (WHO) theme of 'Working Together for Health', Chitkara University initiated Nursing Program to train and develop quality nursing staff to provide health care services at the grassroots and to meet the global demand. The overall aim of nursing program is to prepare a graduate Nurse to work as a frontline worker in the clinical and community field and the educational arena.

Nursing programs under Chitkara University are an excellent opening for candidates who aspire to be trained in India as per international standards. Efforts have gone in to provide various facilities to develop an all round healthy individual who will carry the 'Health' of the needy on their strong shoulders ahead. Students are given training in developing basic skills in the laboratory, in simulated conditions, before they are exposed to actual hospital situations. The faculty of the department is highly qualified and competent in providing excellent theoretical and practical training to students.

Our Pedagogy

Through its pioneering efforts, our Nursing Programs aim to create leaders in the nursing profession by providing a unique and innovative program that is responsive to the market needs, keeping in mind the rapid advance in the health care sector in India as well as abroad. The curriculum emphasises on a holistic approach to Nursing care, in order to ensure an all round growth of the Nursing students. Student Nurses will be trained to meet the international standards of professionalism and maintain the highest standard of clinical practice.



Chitkara University boasts of state-of-the-art labs for Nursing Programs such as:

Nursing Laboratory having hospital-style beds with manikins, CPR dummies, several audio visual aids and equipment for providing the students hands-on training to develop skills in Nursing procedures.

Community Health Nursing Laboratory having large tables as working area and equipment needed for providing services in the community areas. In addition, the laboratory has specially designed community bags to carry the necessary equipment for homecare like thermometer, articles for urine testing, growth monitoring, dressing, physical examination, etc.

Obstetric and Gynecological Nursing Laboratory having all the equipments, delivery table with normal delivery manikins and delivery sets in order to provide the students enough competencies for developing into skilled and competent midwives.

Pre-clinical laboratory having all the equipments, consumable and non-consumable items for providing the students with knowledge regarding basic subjects such as Human Anatomy and Physiology, Biochemistry and Microbiology so that they should be able to correlate this knowledge with practical understanding of disease conditions.

Computer Laboratory is fully equipped to develop the computer literacy in the undergraduate students as IT has had a positive impact on healthcare delivery system worldwide, particularly in the areas of disease control, diagnosis, patient management and teaching.

Some special features of the nursing programs at Chitkara University are-

- Rich clinical experience in all specialisations
- Additional modules are made available to the students over and above prescribed syllabus.
- Communication Skills and Personality Development.
- Principles & Practices of Management and Medico-legal issues offered to the graduate students during the four-year program.
- Workshops on Basic Life Support (BLS) and Advanced Cardiac Life Support, Advanced Trauma Care and Disaster Management Programs, etc.
- Assistance for placement in reputed Institutions of India and abroad.

2-Year Post Basic B.Sc in Nursing

in collaboration with Fortis Healthcare

Program Objectives

Our 2-Year Post Basic B.Sc Nursing at Chitkara School of Health Sciences is a Bridge Course offered to general Nursing Diploma holders to equate them with the graduate nurses. The graduates will be prepared to assume responsibility in the primary, secondary and tertiary care of people as professional nurses.

The program will help students develop an understanding of the philosophy, objectives and responsibilities of Nursing as a profession. The purpose of the course is to orient the students to the current concepts involved in the practice of nursing and developments in the Nursing profession integrating the knowledge of various fields and provide a holistic care to patients and their families through the promotion of healthcare, prevention of disease spread & infection, care during illness, and rehabilitation at the recovery.

Accreditation

The 2-Year Post Basic B.Sc Nursing offered by Chitkara University is fully recognised by the Indian Nursing Council (INC) and the Punjab Nursing Registration Council (PNRC).

Industry Internship

Our collaboration with Fortis (Mohali), plays a key role in providing the necessary "hands on" clinical and paraclinical training & experience; necessary for the students pursuing this hospital-based academic program. The overall aim of Nursing program is to prepare a graduate Nurse to work as frontline worker in the clinical & community field, and the educational arena.

Program Contents and Academic Framework

The main purpose of the Post Basic B.Sc Nursing is to provide an educational program through which the graduates will be prepared to assume responsibility in the primary, secondary and tertiary care of people as professional Nurses. It is expected that graduates are capable of teaching and supervising appropriate Nursing and Healthcare in different settings and participate in the administration of Nursing service and education.

Post Basic B.sc Nursing Objectives

The aim of the program at the Post Basic level is to upgrade the Diploma (GNM) Nurses to:

- Assume responsibilities as professional, competent nurses and midwives at basic level in providing promotive, preventive, curative and rehabilitative services.
- Make independent decisions in nursing situations, protect the rights of and facilitate individuals and groups in pursuit of health and to function in the hospital.
- Community nursing services, and conduct research studies in the areas of nursing practice. They are also expected to assume the role of teacher, supervisor or manager in a clinical/public health setting.



Learning Outcomes

On completion of Post-Basic B.Sc Nursing program, the graduates will be able to:

- Assess health status, identify nursing needs, plan, implement and evaluate nursing care for patients / clients that contribute to the health of individuals, families and communities.
- Demonstrate competency in techniques of Nursing-based on concepts and principles from selected areas of nursing, physical, biological and behavioural Sciences.
- Participate as members of health teams in the promotive, preventive, curative and restorative healthcare delivery system of the country.
- Demonstrate skills in communication and interpersonal relationship.
- Demonstrate leadership qualities and decision-making abilities in various situations.
- Demonstrate skills in teaching individuals and groups in community health settings.
- Demonstrate managerial skills in community health settings.
- Practice ethical values in their personal and professional lives.
- Participate in research activities and utilise research findings in improving nursing practice.
- Recognise the need for continued learning for their personal and professional development.

Some of the important modules taught under this program are:

- Microbiology
- Biochemistry & Biophysics
- Nutrition & Dietetics
- Psychology
- Medical & Surgical Nursing
- Maternal Nursing
- Mental Health Nursing
- Community Health Nursing
- Sociology
- Nursing Foundation
- Child Health Nursing
- Review of Anatomy & Physiology



Optometry Program

Overview

There's a popular saying that goes, "Eyes are the windows to an individual's soul." This poetic notion being acknowledged, eyes offer us a viewpoint of reading, writing, and carrying out everyday tasks both personal and professional. As the caretakers of these eyes, optometrists are eye care specialists that are regarded as one of the most significant and highly looked upon professionals in the field of healthcare.

India has a huge vision deficit with over 300 million people deprived of vision correction and hence solving this gap requires over 100,000 more high-quality optometrists.

Optometry is a field of healthcare that is focussed on dealing with the matters related to the eye. Optometry also involves providing a one-stop-shop for eye and vision care. An optometrist provides primary eye and vision care, performs eye examinations to detect vision problems, and prescribes corrective lenses to correct those problems. Optometry is a discipline that caters to offering the gift of an unobstructed and clear vision. Since the public demand for well-qualified optometrists is rising, high-quality undergraduate programs are required to educate and train the students who aspire to shape a successful career in the field.



4-Year Bachelor of Optometry (B.OPTOM) Collaboration With Lenskart.com

4-Year full time Bachelor of Optometry program at Chitkara University focusses on providing integrated inputs which help develop a high degree of conceptual skills, analytical skills and quality technical knowledge base among future Optometrists and prepares them for a bright future in the healthcare Industry. Optometry is a healthcare profession and a vision care science which deals with the examination, diagnosis, treatment and management of diseases & disorders of the visual system.

This undergraduate degree will train the students with the requisite skills and knowledge that is needed to work as an optometrist. The students who pursue this course will be trained to understand the science behind diseases of the eye, its diagnosis, treatment, rehabilitation and referral as appropriate. Gaining in-depth knowledge will help the students to become professionals who can reduce vision-related issues. Devising ways to offer a functional and effective healthcare delivery system, the field of Optometry is one of the most important and fastest-growing fields.

Students will be groomed and trained by optometry experts, specialised in different areas to meet the demands of a rigorous curriculum. They will be trained to offer comprehensive care for visual systems like vision, detection of all kinds of eye diseases, carefully prescribing eye correction options like suitable eyeglasses, contact lenses and low vision aids.

This is a dynamic and challenging career, which allows one to help people achieve personal growth, community respect, job flexibility and financial success and offers them virtually unlimited opportunities. The training will enable a student to become a competent person in providing service as an Optician, Optometrist, Refractionist and Ophthalmic Assistant to the community in urban, semi-urban and rural settings in private and government healthcare organisations.

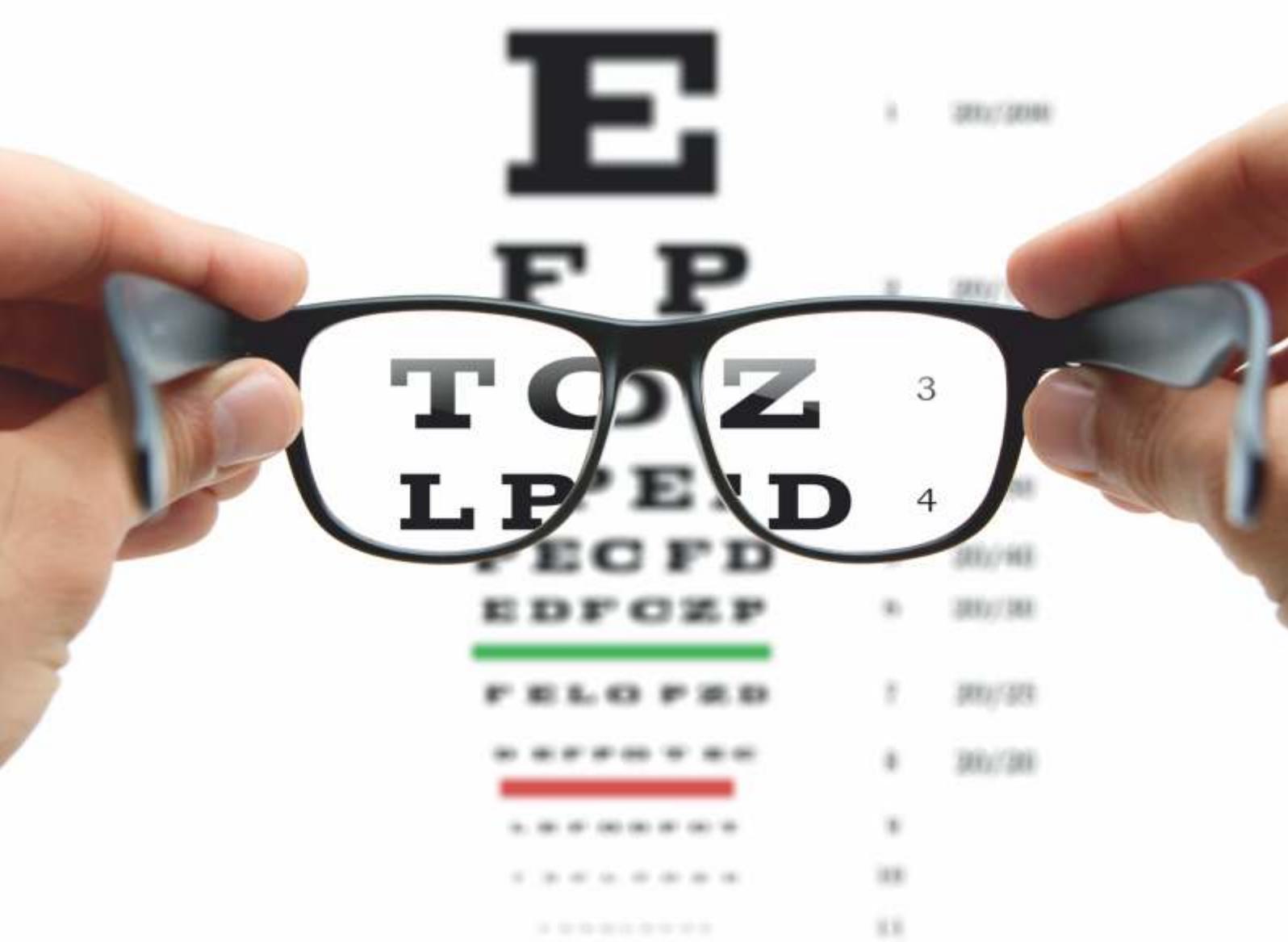


Some of the basic courses covered during the 4 year of the program will

- Basic Biochemistry & Nutrition | General & Ocular Physiology & Anatomy | Physical & Geometric Optics
- Principles of Lighting | Optometric & Visual Optics | Optometric Instruments | CEVS & Ocular Diseases
- Microbiology, Pathology & Pharmacology Clinics | Medical Psychology | Systemic diseases & Glaucoma
Low Vision Aids & Geriatric Optometry Contact Lens | Dispensing Optometry & Occupational Optometry
- Pediatric Optometry, Binocular Vision & Advances in Optometry Project | Clinics & Specialities
- Law & Optometry | Public Health | Epidemiology & Biostatistics

Program Structure

Keeping the above in mind, Chitkara University has planned a dynamic 4-year program which will encompass 3 years of intensive teaching and practicals at Chitkara University followed by 1 year of internship and hands on learning at Lenskart retail store & clinical network and eye Hospitals across the country. At the end of the internship, students will have priority placement with Lenskart and other eye care organisations.



Career Options In Optometry

Take a look at the figures: every third blind person in the world lives in India, 75% of whom can be ascribed to preventive blindness (cataract, refractive error), underscoring the need for timely detection & treatment. Whereas, India needs more than 40,000 Optometrists, the figure stands at below 10,000. Moreover, with most people over 40 (and even earlier) requiring glasses/lenses, a skilled & experienced Optometrist is always in demand.

An Optometrist tests the visual acuity and prescribes corrective lenses. Adept at handling eyetesting equipment to examine a person's vision, the Optometrist also fabricates lenses to prescribed specifications and fits them and other low-vision aids to suit individual requirements. In fact, Optometry is the first line of defence against blindness as it deals with refraction, eyewear Rx, contact lens fitting, low-vision aid evaluation and referrals mainly to Ophthalmology. With an increasing aged population and the growing incidence of Macular Degeneration and Diabetic Retinopathy — Optometrists can be an important part of the primary eyecare. Besides the need for spectacles and contact lenses, low-vision aids and co-management of eye disorders spell good news for Optometry as a profession.

Optometrists usually work in eye hospitals, clinics and opticians' outlets or with multinational vision care companies. You may also specialise in particular types of vision disorders (squints, colour blindness etc). After gaining experience in a private establishment or with a lens manufacturer, you can open your own practice. Flexibility in practice and myriad choices in geographic location form the icing on the cake.

collaboration with



Lenskart, a leading Indian Optical eyewear retail chain with the largest spectacles labs and optical store chains with eye testing facility in India and it continues to pioneer the market of Indian optical prescription eyewear retail with over 600 stores situated over 150 Indian cities. Chitkara University has tied up with Lenskart to provide industry exposure and final placement opportunities for our optometry students.





Collaboration with Eye Hospitals

We have strong collaboration with the best eye hospitals to provide opportunity for hands on clinical learning to our optometry students

Advanced centre for eyes | AnandrishijiNetralaya | Bharat Vikas Parishad Charitable Medical Centre
 Centre for sight group of eye hospitals | KalyanamKaroti | Raj eye hospital | Ratan Jyoti Netralaya
 Sanjeevani eye and medicare centre | Thind eye hospital | Dr. Kamdar Eye Hospital
 Sankar foundation eye institute Vizag | Garib Nawaz Eye Care | Gomabai Netralaya
 Drishti Eye Hospital | Trilochan Netralaya | Dr. Monica' Eye Clinic | Kantai Nateralaya
 Sharp Sight Group of Eye Hospitals | PGI Chandigarh Advanced Eye Centre | SM Eye Hospital

Some of the major campus recruiters for our optometry students through the years have been -





Physiotherapy Programs

Physiotherapy is a healthcare profession that works with people to identify and maximise their functions and movement. This means that Physiotherapy plays a key role in enabling people to improve their health, well-being and quality of life.

Due to mechanisation and sedentary lifestyles, people face common musculoskeletal problems which include issues such as backache, stiff shoulders and neck, osteoarthritis knee, etc. In treating the disorders, the Physiotherapists work wonderfully in the multidisciplinary doctors team. Physiotherapy can be considered as a health profession which is concerned with maximisation of mobility and quality of life. A qualified Physiotherapist can:

- Establish a physical diagnosis and determine a client's movement potential.
- Plan and implement physiotherapy treatment programs, using specialised knowledge and skills in exercise prescription and hands-on techniques for the prevention and treatment of movement dysfunction.
- Undertake related professional activities such as research, teaching, administration and consultation.

Collaboration With Synapse

Synapse Physio is a team of dynamic physiotherapists, dedicated to the field of Physiotherapy & Rehabilitation. Currently, around 150 well-qualified & experienced Physiotherapists are working with Synapse, to offer Physiotherapy care to multitude of patients at various levels in top hospitals of the country.

Synapse is our industry partner for the Physiotherapy courses.



4.5-Year Bachelor of Physiotherapy (BPT) Collaboration With SYNAPSE PHYSIO

Physiotherapy involves assisting and encouraging patients to help themselves to reach greater levels of independence. The emphasis of the first two years of study is on theory, and is designed to give students a firm foundation in the subject area. This includes visualisation of dissection of the human body in order to obtain a thorough knowledge of the structure of the body. In the third and fourth year of study, more clinical and practical work is done, including ward rounds and clinical demonstrations and discussions.

Program Objectives

Our Bachelor of Physiotherapy program is designed to meet the international standards and is taught by highly qualified faculty. The program has a balanced exposure of both academic and clinical training and will be a full-time course of minimum 4 years plus minimum six months of compulsory internship.

On completion of the course of study and after having successfully passed the examination, the student would be able to achieve a satisfactory level of efficiency:

- To detect and evaluate anatomical patho-physiological and psychosomatic impairments resulting in physical dysfunction in various age groups.
- To understand the rationale and basic investigative approach to the medical system and surgical intervention regimens; and accordingly plan and implement specific Physiotherapy measures effectively.
- To be able to select strategies for cure and care; adopt restorative and rehabilitative measures for maximum possible independence of a client at home, workplace and in the community.
- To ensure quality assurance and motivate the client and his family for desirable result.



4.5-Year Bachelor of Occupational Therapy (BOT) Collaboration With SYNAPSE PHYSIO

American Occupational Therapy Association defines Occupational Therapist as someone who “helps people across the lifespan to participate in the things they want and need to do through the therapeutic use of everyday activities (occupations). Common occupational therapy interventions include helping children with disabilities to participate fully in school and social situations, injury rehabilitation and providing support for the senior citizens experiencing physical and cognitive changes”.

Occupational Therapy is a client-centered health profession concerned with promoting health and well-being through occupation. The primary goal of occupational therapy is to enable people to participate in the activities of everyday life. Occupational Therapists achieve this outcome by working with people and communities to enhance their ability to engage in their desirable occupations.

The purpose of the program is to qualify the graduate to independently perform, coordinate and manage the patient’s problems related to activities in their daily life with evidence-based practice. Through the program, the student will achieve both theoretical and clinical competencies in relation to health promotion, illness prevention, rehabilitation as well as palliation.

As a part of the curriculum, students are mandated to assist with clients on a one-to-one basis and design treatment programs to suit each person’s needs and lifestyle. The work could include programs like teaching an elderly patient recovering from a stroke on how to dress themselves, encouraging someone suffering with depression to take up a hobby or activity which they enjoyed earlier, or helping patients adjust to permanent disabilities, etc.

2-Year Master of Physiotherapy (MPT) Collaboration With SYNAPSE PHYSIO

The Master of Physiotherapy program teaches students to develop the ability to use highly-developed clinical reasoning skills to assess, diagnose and treat people with movement problems caused by a wide variety of joint, muscle, nerve and metabolic disorders.

Program Objectives

To prepare postgraduate students towards their professional autonomy and inculcate the concept of research and evidence based practice. To incorporate the concept of Management in Physiotherapy, experience in clinical training, partly undergraduate teaching and acquainting a student with the concept of quality care at the institutional as well as the community levels.

During the two-year degree, you will explore introductory and advanced Musculoskeletal, Neurological, and sports Cardiopulmonary Physiotherapy applied to patients across the lifespan. Biomechanics, Occupational Health and Community Health are incorporated in various units of study, and evidence-based practice and professional practice are embedded throughout the curriculum.

Exposure

During the two year master program the students will have an opportunity to access and explore the patient assessment and handling skills from NABH & JCI accredited corporate hospitals to NGO's and community wellness center. Students will also have an opportunity to get exposed to advanced technologies in physiotherapy such as 3- D Motion Analyser, EMG- Biofeedback, Virtual Reality, cardiopulmonary exercise testing – VO2 max analyser and pediatric sensory gym along with other recent advanced manual therapy approaches like spinal manual therapy, PNF, NDT, Sensory integration, visceral manipulation, Aquatic therapy, Brain Gym, Dry-Needling, Kinesiotaping and Craniosacral therapy.

Scope

The program makes use of modern teaching methods and the combination of theoretical aspects of the subjects with practical reinforcement endows the students with a superior knowledge and enables them to discover their hidden potential, realise the ever importance of hard work and hone their intellectual, analytical and managing skills towards a successful and fulfilling career, supplemented and guided by experienced and quality teaching throughout the course of study.

Following specialisations are offered:

- Neurology
- Cardiology
- Sports
- Orthopaedics

Duration

The duration of Master of Physiotherapy course shall be extended over a period of two continuous years on a full time basis. Any break in the career, the power of extension of the course and the fixation of the term shall be vested with the University.

Career options in Physiotherapy

There are different employment opportunities for physiotherapists available in the market and there are varied industries and firms that hire physiotherapists. Apart from various employment opportunities, physiotherapists can start their own practice and open their clinic on their own terms and conditions.

With the changing health conditions and lifestyle of the people, the requirement of physiotherapists has increased and this increment will continue in the near future. Candidates can check the list of these industries and select one according to their choice, interest and requirement.

Hospitals: Hospitals mainly hire physiotherapists to help treat the patients for different departments. The patients can be affected with orthopedic problems, obstetric problems, rehabilitation process for cardiology patients, medical and surgical problems, etc. These professionals work in close contact with the different specialists and experts of the medical field.

Corporate Houses: Physiotherapists hired by the corporate houses work for the health and fitness of their employees. The physiotherapists organise workshops and exercise sessions for the employees and promote them to stay fit and fine, both mentally and physically.

Healthcare Centers: Physiotherapists of a healthcare center work on the patients' wellness and fitness and focus on areas of improvement. They also guide patients with their dietary plans and supplements that will help in boosting their metabolism.

Private Clinics: Work of a physiotherapist in a private clinic is similar to that of a hospital. The difference lies in the number of patients and the different categories of treatments and specialties. A clinic generally focuses on two or three specialities, unlike the hospitals which are often termed as multi-specialty hospitals.

Universities: In universities, the physiotherapists are hired to teach students the healthy way of living. They are hired either as professors or trainers to guide students through the subject-matter. They teach technical and theoretical parts to the students so that the batch of new and well-trained physiotherapists are ready for the nation.

Rehabilitation Centers: As the name suggests, these centers work mainly on improving the lives of patients admitted there. A physiotherapist here will help and support the experts working on the patients. Different exercises, for both mind and body, are taught by the physiotherapists in a rehabilitation center.

Orthopaedic Clinics: An orthopaedic clinic focuses on problems related to deformities of muscles or bones. The role of a physiotherapist here is to train the patients to come out of their deformities with regular exercises. The physiotherapists work under the orthopaedic doctors and provide sessions to their patients at the clinic or at home.

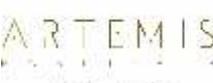
Sports and Fitness Centers: A physiotherapist at a sports and fitness center works with the experts for the fitness of the clients. Maintaining the records of the clients and to figure out which fitness program should be scheduled for a particular day, is also a task of the physiotherapists of the sports and fitness centers.

Defence Establishments: At a defence academy or establishment, the role of the physiotherapist rotates from planning the exercise sessions to treating the injuries of the defence personnel.



Campus Recruitment for Healthcare Graduates

Our Healthcare Programs have always enjoyed special preference among Healthcare recruiters on account of its excellent performance since inception. Graduates are offered placement in sectors like Consultancy, Diagnostics, Hospital, Insurance, IT, Medical Equipment, Pharmaceuticals, NGOs & Public Health and Clinical Research Labs.



PHARMACY
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PHYSIOTHERAPY



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