



NIRMA
UNIVERSITY

INSTITUTE OF PHARMACY

NAAC ACCREDITED 'A' GRADE

B.Pharm Handbook – II

2020-21



B.Pharm
Hand Book - 2020-21
Volume - II

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Section - I

Vision

Striving to excel in pharmaceutical education, research & innovation to develop outstanding professionals catering to the health care needs of the humankind.

Mission

The institute aims to develop employable students, researchers and entrepreneurs by inculcating critical thinking, problem solving ability, ethical values and leadership skills. Institute provides vibrant environment for continuous learning by strengthening industrial collaboration for developing competent professionals.

Programme Educational Objectives (PEOs)

PEO No.	Programme Educational Objectives
PEO1	To acquire effective knowledge of pharmaceutical sciences leading to hold key position in industry as well as health care sector
PEO2	To attain practical training and technical expertise in pharmaceutical fields
PEO3	To inculcate professional and ethical standards with effective interpersonal communication skills.
PEO4	To develop interdisciplinary pharmaceutical approach towards society benefit, problem solving and lifelong learning.
PEO5	To adapt and implement best practices in the profession by enrichment of knowledge and skills in research and critical thinking.

PROGRAMME OUTCOMES

No.	Program Outcomes
PO1	Pharmacy Knowledge: Possess knowledge and comprehension of the core and basic knowledge associated with the profession of pharmacy, including biomedical sciences; pharmaceutical sciences; behavioral, social, and administrative pharmacy sciences; and manufacturing practices.
PO2	Planning Abilities: Demonstrate effective planning abilities including time management, resource management, delegation skills and organizational skills. Develop and implement plans and organize work to meet deadlines
PO3	Problem analysis: Utilize the principles of scientific enquiry, thinking analytically, clearly and critically, while solving problems and making decisions during daily practice. Find, analyze, evaluate and apply information systematically and shall make defensible decisions.
PO4	Modern tool usage: Learn, select, and apply appropriate methods and procedures, resources, and modern pharmacy-related computing tools with an understanding of the limitations
PO5	Leadership skills: Understand and consider the human reaction to change, motivation issues, leadership and team-building when planning changes required for fulfillment of practice, professional and societal responsibilities. Assume participatory roles as responsible citizens or leadership roles when appropriate to facilitate improvement in health and well-being.
PO6	Professional Identity: Understand, analyze and communicate the value of their professional roles in society (e.g. health care professionals, promoters of health, educators, managers, employers, employees).
PO7	Pharmaceutical Ethics: Honor personal values and apply ethical principles in professional and social contexts. Demonstrate behavior that recognizes cultural and personal variability in values, communication and lifestyles. Use ethical frameworks; apply ethical principles while making decisions and take responsibility for the outcomes associated with the decisions.
PO8	Communication: Communicate effectively with the pharmacy community and with society at large, such as, being able to comprehend and write effective reports, make effective presentations and documentation, and give and receive clear instructions
PO9	The Pharmacist and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety and legal issues and the consequent responsibilities relevant to the professional pharmacy practice
PO10	Environment and sustainability: Understand the impact of the professional pharmacy solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO11	Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. Self-assess and use feedback effectively from others to identify learning needs and to satisfy these needs on an ongoing basis

PS01	Drugs and diseases: Understand different classes of drugs, their mechanism of action, dynamics, kinetics, structure activity relationships, pathophysiology and pharmacotherapeutics of various diseases.
PS02	Drug development: Ability to synthesize, develop and/or evaluate various pharmaceuticals and their formulations and cosmeceuticals products
PS03	Analytical skills: Develop skills in qualitative and quantitative analysis of various pharmaceuticals.
PS04	Training: Acquire technical knowledge and hands on training on equipments, instruments and software used in the field of pharmaceutical sciences.

STUDENT'S RIGHTS AND RESPONSIBILITIES

Within the context of the Mission and Vision values of Nirma University, the charter of student rights and responsibilities has been prepared. This charter sets out the fundamental rights of the students with respect to their responsibilities towards their institution. To build the quality and standard of higher education the entire responsibility heads on teachers, administrative authorities, students, and internal quality assurance cell to improve the eminence of learning along with the National Assessment and Accreditation council (NAAC) playing a synergistic role by providing guidelines and direction.

The charter recognizes that students are central to a dynamic University while, the University recognizes the importance of student rights, responsibilities and opinion and encourages diversity within the student body. The rights and responsibilities enunciated in this document acknowledge the role of students as well as institution to ensure excellence in education.

For this students must be aware of their rights to get quality education and also their duties towards the organization, this in turn encourages Higher Education Institutions (HEIs) to enhance quality. This mutual commitment helps in assuring quality in multiple dimensions.

Institution's responsibilities towards students:

The Institution shall

1. Communicate the vision, mission, programme educational objectives, programme outcomes, rules and regulations of the institution to all students
2. Offer programmes in-line with pharmacy regulatory authorities.
3. Offer relevant courses with acceptable academic flexibility.
4. Provide relevant learning resources to students.
5. Inform well in advance about academic calendar, examination and other relevant information.
6. Use feedback from students in the initiation, review and redesign of new programmes
7. Facilitate for effective teaching-learning of the students.
8. Implement a well-conceived plan for observing student development constantly.
9. Ensure that the student evaluation processes are consistent, effective and transparent.
10. Provide flawless information to students about the admission procedures, fee structure, scholarship assistance and student mentoring services.
11. Ensure welfare support services to all students.
12. Encourage values, social responsibilities and moral citizenry in all students.

Student's responsibility of Learning:

The Students shall:

1. Respect the institutional vision, mission and programme education objectives.
2. Participate and contribute in various institutional activities.
3. Have information of the programmes, admission procedures, evaluation guidelines of the institution.
4. Follow the rules and regulations of the institution
5. Undertake systematic and in-depth study of learning materials
6. Make optimum use of the learning resources and other support services available in the institution
7. Regularly appear in continuous internal assessment and term-end examinations
8. Provide constructive and genuine feedback for institute development
9. Live as worthy alumni of the institution.

CURRICULUM

The institute has introduced an innovative curriculum befitting the needs of the day. It is continuously updated to integrate the rapidly occurring advances in the field of pharmaceutical sciences and drug research. It is vital that universities and teachers recognize their responsibility in preparing not only responsible members of healthcare team but also valuable members of the society, who must have top quality scientific and professional skills, and an unquestionable sense of ethics.

The content of course have been carefully considered to ensure that they are relevant and up-to-date and special consideration has been given to the application of knowledge, communication, language and patient care skills, healthcare system organizations, the development of professional identity, critical thinking and lifelong learning. It is mandatory for all the university to follow the curriculum of Pharmacy Council of India (PCI) and institute is following the syllabus of PCI with modification in learning process.

Special features

The Institute of Pharmacy is a constituent unit of Nirma University. The BPharm programme is approved by Pharmacy Council of India (PCI) with an intake of 100 seats. The special features of our programmes are:

- A 125-acre sprawling campus in picturesque surroundings, which provides a refreshing environment, stimulating intellectual alertness and creativity
- Innovative dynamic curriculum befitting the current needs of industry and adopting OBE
- Teaching of value added, enrichment and add-on courses, university electives, audit courses, MOOC courses and self-study course in curriculum, social extension and NSS related activities, and inputs and seamless university examination system for evaluation and grading
- Classroom plus ICT based interactive teaching learning using Modern Tools, Web Resources and Wi- Fi facility
- Supplementary Learning Activities with Practical Training in Industries during summer
- State- of –the- Art laboratories for PG Studies and Research
- Collaboration with Research Institutions like: Plovdiv University, Bulgaria, B. V. Patel, PERD Centre, Ahmedabad, Cadila Pharmaceutical Research Centre & Intas Pharmaceuticals Ltd., Piramal Pharmaceutical Development Services (P) Ltd., Ahmedabad, CII, Ayurlab Herbal Pvt, Ltd. Vadodara & Beiersdorf (Nivea) Germany, Brillare Sciences, Ahmedabad, Finecure, Ahmedabad, CPC, Ahmedabad and Evonik, India.

- Excellent hostel for PG & PhD students on the campus
- Highly Qualified Faculty having PhD and research experience with various awards, patents & publications in reputed journals
- M.Pharm students and research guides have received national recognition for Best Thesis in PharmaInnova Award Competitions supported by DST and Troikaa Pharmaceuticals Ltd.
- Advisory Committee comprising eminent personalities of Academia and Industries
- Stipend to the Meritorious GPAT and Non-GPAT Students as per Nirma University norms
- Regular visits to the industries, CROs and R&D centers and a strong industry-academy interaction and regular visiting faculty from industries
- Constant mentoring to the students by the faculty on a one to one basis on career guidance for personal development, identification of aptitudes and motivation in right direction
- Grooming and training of students with development of communication skills and extensive guidance for GPAT, TOEFL, GRE etc.
- Use of plagiarism policy for thesis checking and report is attached with thesis
- Dedicated Industry Institute Interaction cell, for training and grooming of students for effective transition from campus to company

The approach to learning

The institute makes use of an appropriate mix of pedagogical tools to train students to handle professional responsibilities. These include lectures by an appropriate mix of in-house and visiting faculty, expert lectures, discussions, seminars, project assignments, and visits to industries. The laboratory practical related to the theory course are included in the syllabus to acquaint the students with practical knowledge. Continuous Evaluation and counselling are important parts of the academic programme.

- Rigorous Coaching with Continuous Evaluation
- Credit Based Semester System with weightage of different components of study
- Learning through Classroom Teaching, Practical Work, Industry Visits and Project Work
- Academic Rigor and Innovative Pedagogical Tools
- Faculty Guidance and Mentoring System with Faculty as Counsellors to students
- Continuous Enhancement of Communication Skills
- Continuous Up-gradation of State -of -the- Art Knowledge and Skills
- Active participation of students in creative Co-curricular Activities.
- Portion of syllabus is covered by Industrial Expert in each course
- Quality policy for various aspects like curriculum design and development, teaching-learning and evaluation, teacher quality, infrastructure and learning resources and student

support, research, consultancy and extension activities and monitoring and review of quality.

- IT Policy for using the IT resources, whether personally or of University owned, which access, transmit or store various types of related information
- Idea lab for carrying research on new idea by the students

ACADEMIC INFRASTRUCTURE/FACILITIES

The Campus

The Institute of Pharmacy is situated on the sprawling 125 acre green campus of Nirma University. It has all the modern facilities like Sophisticated Instruments, State of the art labs, excellent computing & IT infrastructure including latest software, rich library, canteen, playgrounds, indoor games and gymnasium. The campus provides an ambience that motivates the students to grow. The Institute building has modern amenities, with enough space and replenished with modernity and grandeur. The post graduate laboratories are independently developed for MPharm and PhD students. In addition the campus has sports facilities and the overall ambience is distinguishable by its serenity, which is conducive for intellectual pursuits.

Sophisticated Instruments

The Institute is having two separate sophisticated instrument laboratories equipped with modern instruments. Modern instruments are the most essential part of all research activities which facilitate interdisciplinary research. The instruments available at the institute are:

- Fourier Transform Infrared Spectrometer
- Fluorescence Spectrometer
- Supercritical Fluid Chromatograph / Extractor
- UV-Visible Spectrophotometer
- UV-Visible/NIR Spectrophotometer
- High Performance Liquid Chromatographs (with binary & quaternary pumps, UV, PDA & RI detectors)
- Gas Chromatograph
- High Performance Thin Layer Chromatograph
- Differential Scanning Calorimeter
- Dispersive Raman Spectrometer

Besides these, the Institute also has other high end instruments like high pressure homogenizer, particle size analyzer, zeta potential analyser, lyophiliser, high speed homogeniser, stereotaxic apparatus, microdialysis system, hematoanalyser, semi-automated biochemical analyzer, ELISA, PCR and gel documentation system.

Machine Room

The machine room is equipped with Rotary Tablet Machine, Fluidized Bed Drier cum Coater, Digital TensioMeter, Texture Analyzer, Mini Spray Dryer, Freeze dryer, Automated Dissolution Apparatus, projection microscope, vacuum drier, ultrasonicator etc. The laboratory provides facilities to carry out extensive research and consultancy for pharmaceutical industries.

Drug Discovery Lab

The Institute has a separate Drug Discovery Laboratory equipped with necessary computational facilities. It possesses seven workstations (computers) with latest configurations. It also possesses molecular modeling software. The students are trained on the software for docking, pharmacophore modelling and QSAR studies etc.

Animal House

The Institute has state-of-the-art animal house facility registered by the CPCSEA, Government of India. It provides pre-clinical testing in conformity with national and international regulatory guidelines (Schedule Y and OECD). The animal house facilitates the availability of healthy and homogeneous animals for research. Pre-clinical studies related to efficacy, safety and toxicological evaluation of a new chemical entity, formulation and nutraceuticals can be carried out. An incinerator is also available at the animal house for ethical disposal of the sacrificed animals.

Nirma Herbal Wealth

Plants have been used for the treatment of various ailments since ancient times. India has earned a lot of fame for its indigenous knowledge of Ayurvedic and herbal drugs. Traditional medicines are gaining popularity nowadays because of very fewer side effects. To give emphasis on the importance of herbal drugs, a medicinal plants garden, covering a total area of 3356.5 sq. meters has been developed at the University campus. More than 150 species of various medicinal plants have been planted. Some of the important plant species are *Enicostemma littorale*, *Commiphora mukul*, *Gmelina arborea*, *Cymbopogon citratus*, *Vetiveria zizanoids*, *Plumbago zeylenica*. The medicinal plants garden provides a strong impetus for herbal drug research and training.

Class Rooms

The classrooms are spacious, ventilated and equipped with multimedia and audiovisual equipment to facilitate effective learning. The classrooms are designed to provide maximum interaction between the faculty and students.

I.T Infrastructure

The computer facility at the Institute of Pharmacy includes two laboratories equipped with 48 computers for the students. The computers are equipped with fiber optic cables and 512 Mbps leased line internet connectivity. The campus is also equipped with Wi-Fi network facility. An integrated MIS system for the student's attendance and academic record is available.

DEPARTMENTS & FACULTIES

Department of Pharmaceutical Chemistry

The Department of Pharmaceutical Chemistry is an integral part of pharmacy education involving several aspects of new drug discovery and development in collaboration with other disciplines of pharmacy. As a part of undergraduate teaching and learning, various subjects included are Pharmaceutical Inorganic Chemistry, Biochemistry, Pharmaceutical Organic Chemistry, Medicinal Chemistry, and Computer Aided Drug Design. Extensive use of modern audio-visual teaching aids and molecular models make the lessons interesting and student-centric. The department has collaborations with various research organizations, industries and basic science departments where students can participate in interdisciplinary research projects relevant to core areas. The research projects help students to get deep insights in the research area and help to develop expertise. The students are also encouraged for various other activities like personality, communication and soft skills development; scientific writing; workshops for improvement in presentation and documentation skills, etc. Alumni members of the department are placed at various places like R&D, CRO and academic institutions, etc. Many past students are also pursuing their doctoral studies in reputed universities across the globe.

Prof Manjunath Ghate

Prof Manjunath Ghate is the Dean and Director of the Institute of Pharmacy, Nirma University, Ahmedabad, India. He obtained his PhD degree from Karnatak University, Dharwad, India. After obtaining a PhD in 2003, he worked for his Postdoctoral Research in National Dong Hwa University, Hualien, Taiwan; and Changwon National University, Changwon, South Korea (2003-06). He worked as a Research Professor at Changwon National University, Changwon, South Korea (2005-06). During his academic career, he undertook four projects from the Departments of Science and Technology; SERB- DST, Indo Bulgarian Collaborative project; GUJCOST and DST-FIST. He was a Visiting Professor, Southwest University, Chingqing, China (May 2018). His primary domains of expertise are the fields of design, synthesis of new molecules for Cancer, Tuberculosis and Diabetes. Among his academic recognition are: The prestigious 'Best MPharm Thesis award' by Rajanjibhai Foundation twice in 2010 and then again in 2018; and the IPER's Best Principal of the Year 2018 by the Association of Pharmacy Teachers of India 2018. He has participated in several conferences in India, China and Bulgaria upon invitation. He has to his credit, several published papers in peer-reviewed international journals; and conference presentations in Germany, South Korea, China, Canada and the United States of America. He has a total of 22 years of teaching and research experience.

Dr Hardik Bhatt

Dr Hardik Bhatt is working as Associate Professor and Head in Dept of Pharmaceutical Chemistry and has more than 16 years of teaching & research experiences. He is also looking after the Centre for Advanced Instrumentation (CAI) facility at Nirma University. He completed his PhD from Nirma University in 2009. Dr Bhatt is a recipient of Gold Medal for standing First in MPharm in Pharmaceutical Chemistry at Gujarat University in 2004. His areas of research interest are drug design, molecular modelling, synthesis of NCEs and their evaluation as potent therapeutic agents in areas of Cancer, HIV, Tuberculosis, etc. He is also working in the area of analytical method development. He has published more than 30 research and review articles in reputed international and national journals and authored 4 books including three editions of “Practicals in Organic and Medicinal Chemistry” and first edition of “Practicals in Pharmaceutical Analysis I”. Dr Bhatt has working experience in various major and minor research projects sponsored by GSBTM, GUJCOST and Nirma University. He had presented research papers at various international and national conferences including 245 ACS Annual Meeting and Exposition, Louisiana, USA; 2009 AAPS Annual Meeting and Exposition, Los Angeles, USA; ISCB Conferences; National Conference at IIT-G; Indian Pharmaceutical Congress (IPC) and at state level paper presentation competitions sponsored by GUJCOST. Dr Bhatt has received various travel grants from DST, ICMR, CSIR, etc. Research papers presented or co-authored by him won several prizes at various conferences. Overall he has more than 80 presentations to his credit. He has reviewed international research grants as well as many articles. Dr Bhatt is recognised PG and PhD guide of Nirma University. He has been actively involved in various capacities in organising national and international conferences/workshops. Dr Bhatt is member of Royal Society of Chemistry (MRSC), American Chemical Society, Indian Pharmaceutical Association, Indian Society for Chemists and Biologists, Association for Pharmacy Teachers of India & Indian Society for Technical Education.

Dr Jignasa Savjani

Dr Jignasa K. Savjani is working as an assistant professor at Institute of Pharmacy, Nirma University, from June 2007. She obtained her Ph. D from Nirma University in the year 2011. She has 15 years of academic and 11 years of research experience. She published research and review articles in internationally reputed journals. She received financial assistance from CSIR, ACS, and DST to present research work during international conferences at the USA. She delivered various guest lectures on topics related to Pharmaceutical chemistry. She received a research grant from GUJCOST for conducting a minor research project. In the recent year, she focused on the Computational drug design and synthesis of heterocyclic compounds, improvement of physicochemical parameters of poorly soluble drugs through cocrystallization approach. She filed two patents from which One was granted by the government of India on 3rd April 2019.

Dr Vivek Vyas

Dr Vivek Vyas is working as Assistant Professor in Department of Pharmaceutical Chemistry, Institute of Pharmacy, Nirma University, Ahmedabad. He has more than 13.5 years of teaching and research experiences. He is a recognized PhD guide at Nirma University. He teaches various courses like Biochemistry, Medicinal Chemistry, Computer-Aided Drug Design,, etc at UG and PG level. He has published more than 45 research and review articles in National and International journals of repute. He is a reviewer of the international and national journals like JMC, RSC, ACS, BMCL, CADD, SAQE, MCR, AJC, IJC B etc. He has completed minor research project granted from GUJCOST, Gandhinagar, Gujarat. He had presented research papers at various national and international conferences and seminars. Overall he has 27 presentations to his credit. His areas of research are Computer Aided Drug Design (CADD), Molecular Modeling, QSAR, Pharmacophore Mapping and Synthesis of novel heterocyclic ring systems as Anticancer and Antimalarial agents. Dr Vyas is a member of American Chemical Society, Indian Pharmaceutical Association, Indian Society for Chemists and Biologists, Association for Pharmacy Teachers of India & Indian Society for Technical Education.

Dr Bhumika Patel

Dr Bhumika D Patel is working as an Assistant Professor in the Department of Pharmaceutical Chemistry. She has 12 years of teaching experience. She is a recognized PhD guide at Nirma University. She teaches various courses like Medicinal Chemistry, Organic Chemistry, Computer-Aided Drug Design, Biochemistry, etc at UG and PG level. At present, she is a coordinator of UG Research Council and students' projects at the Institute. Her area of research includes the rational design and synthesis of different heterocyclic compounds under various therapeutic classes like diabetes, cancer, HIV, etc. She has a sound knowledge of drug designing software like Sybyl, Discovery Studio, Gold, Schrodinger, etc. She has 16 international publications in reputed journals and 22 presentations in her credit. Recently, she presented a research poster at 257th ACS Annual Meeting and Exposition held at Orlando, Florida, USA during March-April 2019 for which she received full travel assistance from SERB, Department of Science and Technology, Government of India. Currently, she is working on a Minor research project on design and synthesis of novel PARP1 inhibitors funded by Nirma University. She received Best Assistant Professor Award 2018-19 for the Overall Performance in Teaching, Co-Curricular Activities and Research from Nirma University. She completed one minor research project of GUJCOST and two MRPs of Nirma University. She has guided 16 PG students as a research guide/co-guide. She is a life member of professional bodies like APTI, IPA, ISCB (Indian Society of Chemists and Biologists), RSSDI (Research Society for the Study of Diabetes in India) ISTE (Indian Society for Technical Education), etc.

Ms. Palak Parikh

Ms Palak Parikh is working as an assistant professor in the Department of Pharmaceutical Chemistry. She has more than 8 years of teaching experience. She is the recipient of the gold medal for standing first in MPharm in Pharmaceutical Chemistry Branch, Gujarat Technological University. She has attended various state, national and international level seminars, symposiums and conferences and has 15 presentations to her credit. She has published 9 papers in national and international journals. Currently, she is pursuing PhD under Prof Manjunath Ghate, Director, Institute of Pharmacy, Nirma University. Her areas of research are Drug Design, QSAR Modelling and Synthesis of novel heterocycles as Anticancer Agents. She is a life member of ISTE (Indian Society for Technical Education), ISCB (Indian Society of Chemists and Biologists) and APTI (Association of Pharmaceutical Teachers of India).

Department of Pharmaceutics

Pharmaceutics, a multidisciplinary science is associated with the development, production, and characterization of dosage forms/drug delivery as well as the disposition and action of drugs in the body. Department of Pharmaceutics offers courses at undergraduate, postgraduate and doctoral levels. Students are trained towards the basic concepts to the latest developments in pharmaceutics and pharmaceutical technology as per the need of society. The department works towards promoting a strong multidisciplinary, team-based approach to drug delivery, embracing a variety of activities in the broad area of drug formulation and delivery. The faculty members and students at the department contribute to research through funded projects, industrial projects, consultancy, etc. to formulate novel formulations.

Prof Tejal Mehta

Dr Tejal is presently working as Professor and Head in Department of Pharmaceutics, Nirma University, Ahmedabad. She has done her PhD from Sardar Patel University, Vallabh Vidyanagar and BPharm and MPharm in "Pharmaceutics & Pharmaceutical Technology" from Gujarat University, Ahmedabad. She has 21 years of teaching and 16 years of research experience. Her area of research is Dissolution enhancement of sparingly soluble drugs and formulation development of conventional and novel drug delivery systems using concepts of QbD-DoE. She has published more than 70 research papers in journals of national and international repute. She has also presented several papers in national and international conferences. She has authored a chapter in a multi-authored book on Novel Drug Delivery Systems. She has received Best Paper Award 2004 from Association of Pharmaceutical Teacher's of India for publishing paper in Indian Journal of Pharmaceutical Education. She also received R V Patel Best MPharm thesis award in the Guide category. She has also authored the book "Practical Manual of Pharmaceutical Engineering" and "Practical Manual of Pharmaceutical Dosage Forms". She has filed 3 patents related to her research. She has successfully completed GUJCOST sponsored minor research project related to formulation development. She has delivered lectures in various staff development programs. She is a recognised PG and PhD Guide of Nirma University. She is a reviewer of national and international journal in the research area of Pharmaceutics and Drug Delivery. She is a life member of APTI, IPGA, and Society of Pharmacovigilance of India.

Dr Mayur Patel

Dr Mayur Patel has 14 years of teaching experience. He has more than 35 International and National Publications with total impact factor of more than 100, total citations more than 1100 and 'h' index of 16. He is a recipient of major research project from Nirma University worth Rs. 28,92,400/-. He is also recipient of minor research project of worth Rs. 4,00,000/- from Gujarat Council on Science and Technology (GUJCOST). He is reviewer for many high impact factors

journals of publishers like PLOS One, Elsevier, Informa Healthcare Ltd., American Chemical Society (ACS), to name a few. Dr. Patel has received the Prestigious "Young Pharmacy Teacher of the Year Award - 2019" from "Association of Pharmaceutical Teachers of India (APTI)". He received second prize in EUDRAGIT® Award 2016 for publishing highly innovative paper at National Level. He has also written 02 book chapters in books published by International Publication House namely Encyclopedia of Pharmaceutical Science and Technology, Informa Healthcare Inc. UK and Lipid Nanocarriers for Drug Targeting, Elsevier B.V. He was felicitated Six times for "Outstanding Performance" for the year 2011, 2012, 2013, 2014, 2016, 2018 and 2019 during foundation day at Nirma University. He is a recognized PG and Ph.D. guide at Nirma University.

Dr Shital Butani

Dr Shital Butani has more than 16 years of research and teaching experience. She has received a Major project entitled "Exploring non-equilibrium atmospheric plasma for effective sterilization including biological safety aspects" from the Board of Research in Nuclear Sciences (BRNS), Department of Atomic Energy, Government of India.", a minor project from Gujcost entitled "Development of self-emulsifying drug delivery system of the poorly water soluble antihypertensive drug", a travel grant from DST to attend the conference in Lisbon, Portugal. She is guiding four PhD students (including students having WOS A and CSIR fellowship). Dr Butani has received "Project Excellent" award during her tenure at Zydus Cadila Healthcare Ltd., Ahmedabad. She was a volleyball player in the junior level team of Gujarat and played national competition at Tripura. She has published many papers in reputed national and international journals. She is recognized PhD guide and a member in ISTE, APTI, IPGA etc bodies.

Dr Jigar Shah

Dr Jigar Shah has 15 years of teaching and 8 months of industrial experience. He is author and co-author of around 65 research and review papers presented at International and National conferences including International conferences at Washington DC, USA (2011), and at Vancouver, Canada (2016), with travel grants received from Indian Govt. Agencies like SERB, DST, and ICMR respectively. He received the "Best Presentation Award" at an International conference in Canada. He published 36 research and review papers in high impact factor Journals. He has written two book chapters, one on "Physicochemical characterization dependent toxicity of nanoparticles" in the book published by CRC Press, USA and second on "Delivery of biomolecules to the central nervous system using polysaccharide nanocomposite" in the book published by Taylor and Francis group. He had successfully completed the research project sponsored by GUJCOST and received various research grants from Nirma University. He is a recognized PhD, PG Guide at Nirma University. His area of interest is Novel drug delivery

systems. He is an academic editor and reviewer of the various reputed International Journals of Elsevier, Springer, Bentham Science and Wiley. He is recipient of GOLD MEDAL in M. Pharam. programme in the year 2004 and 2005. He has received many awards and prizes for best research papers in the paper presentation category. He is felicitated a number of times for “Outstanding Performance” as a faculty and researcher for the years 2012, 2014 and 2017 during foundation day at Nirma University. He is a member of various international and national pharmacy societies like AAPS, CRS, IPA, APTI, ISTE, IPGA, SPER, and IHPA.

Dr Dhaivat Parikh

Dr Dhaivat Parikh has more than 14 years of teaching and research experience. He is a recipient of Best Assistant Professor of Institute for Innovation in Teaching Methodologies for the year 2015 by Nirma University. He is actively involved in Consultancy and Testing at Department. His major area of interest is Novel Drug Delivery Systems (specifically to Gastro-Retentive Drug Delivery Systems, Formulations for Oral Cavity, Medicated Chewing Gum, Cosmeceuticals, etc). Currently, his major role at the institute is Admission Coordinator and the Vice President of IPNUAA (Alumni Association). He has Seven International publications to his credit including two articles in Expert Opinion on Drug Delivery (having a high impact factor above 4). He has also been awarded "Outstanding Faculty Award" for his significant contribution to the development of the University website. He has presented his Research work by an Oral presentation at International conference PharmaTech-2012 held at Kuala Lumpur, Malaysia; as well as presented research poster at International Conference - APSGB's PharmSci 2014 held at University of Hertfordshire, UK. He is a life member of many Professional bodies like APTI, IPA, ISTE, ISCB, CRS-IC, IPGA, IHPA, APA, SDPS, ABAP, APP, IACP etc. He is rendering his professional services to many leading Universities of Gujarat.

Dr Mohit Shah

Dr Mohit Shah has around 10 years of research and industrial experience. He has completed MPharm and PhD from Institute of Pharmacy, Nirma University. He is actively involved in teaching various subjects related to pharmaceuticals at UG and PG level and research in the filed of solubility enhancement. He is proficient at analyzing and interpreting patent literature and technical data, preparing a patent landscape and performing Non-infringement and FTO Analysis. He has 3 patent applications and 4 International Publications to his credit. He has been an author and co-author of 5 papers/posters presented at state and national level seminars and conferences. He is a recipient of Best Student award for M Pharm program. He has attended 18 International and National level conferences and workshops. His area of interest is Novel Drug Delivery Systems.

Dr Vidhi Shah

Dr Vidhi Shah has completed MPharm from L M college of pharmacy and PhD from Shah Schulman center for surface science and nanotechnology, Dharmsinh Desai University. She has 14 publications in reputed journals like Langmuir, Journal of Molecular Liquids and Material Science and Engineering C to her credit. She was selected for 68th Nobel Laureat meet at Lindau, Germany. She presented her research work as oral presentation at SIS-2018, Okhlahoma, USA. She was awarded the best Poster award at SIS-2016 in China. She has also been to France for European School on Nanoscience and Nanotechnologies. She has worked at the University of Bristol, UK under Newton Bhabha fellowship program. She has presented 11 papers at national and international conferences. He has attended eight International and National level conferences and workshops. Her area of interest is colloidal drug delivery systems, stimuli responsive gels, nanoparticle synthesis, and soft nanocarriers.

Department of Pharmacology

Pharmacology is a unique and dynamic branch of pharmacy, since it involves the understanding of how a drug deals with the human body and how the human body responds to the drug. The department offers undergraduate courses like Anatomy and Physiology, Pharmacology, Pathophysiology and Clinical Pharmacy and Pharmacotherapeutics. The post-graduate programme in Pharmacology focuses on research-oriented courses like Cellular and Molecular Pharmacology, Clinical Research and Pharmacovigilance, etc. The department has collaborations with research institutes, industries and other basic science departments where students can participate in interdisciplinary research projects that are relevant to pharmacology. The research projects facilitate a critical examination of pharmacological approaches and analyses/techniques used in research and produce a comprehensive dissertation and present their findings. The students are motivated for overall development, including- personality development, scientific writing, data interpretation, presentation, documentation, good laboratory practices, communication, and soft skills. Alumni members of the department are placed in research and development, medical writing, CRO's and reputed academic institutions. The department has received several consultancy projects from various government agencies and pharmaceutical industries. Research scholarships for PhD programmes are awarded on a competitive basis and are supported by University schemes.

Prof Jigna Shah

Dr Jigna Shah is currently working as a Professor and Head at Department of Pharmacology at Institute of Pharmacy, Nirma University, Ahmedabad. She is actively involved in oncology and neurodegenerative disorders research. Her area of research interest is oncology, neuropharmacology, metabolic disorders, Clinical research, and Pharmacovigilance. Currently, she is working on the externally funded research project from GSBTM in the area of neuropharmacology as well as Nirma University funded major research project in the area of oncology. She has successfully completed three externally funded research projects from AICTE and GUJCOST. She has also completed a few consultancy assignments in the area of toxicity studies, oncology neuropharmacology, gastroenterology, and wound healing also. She has guided several postgraduate students and presently guiding 6 PhD students. She has published more than 45 research papers in reputed journals. She was awarded Gold medal for securing highest marks in the final year BPharm in Pharmacology subject at L. M. College of Pharmacy, Ahmedabad. She has also won awards for the best paper presentation at various national and international conferences. She is a life member of professional organizations like Association of Pharmacy Teachers of India, Indian Pharmaceutical Association, Indian Pharmacological Society, Indian Society for Technical Education and Indian Society of Pharmacovigilance.

Dr Shital Panchal

Dr Shital Panchal has more than 16 years of teaching and research experience. She has published more than 60 articles in reputed journals and 2 books. Current areas of research are pre-clinical studies, kinetic studies, toxicity studies GI, neurological disorders and epidemiology. She has received major and minor research projects from Government funding agencies like GUJCOST, ICMR and Nirma University. She has performed consultancy works for pharmaceutical companies like Intas biopharmaceuticals, Troikaa Pharmaceuticals, Pharmanza Herbal Pvt Ltd, etc.

Dr Snehal Patel

Dr. Snehal S Patel, has 18.5 years of teaching, industrial and research experience. She has carried out many consultancy projects for pharmaceutical companies, institutes, hospitals, and allied industries. She has received major research projects from SERB under the Fast Track Scheme for Young Scientists and minor research projects from GUJCOST and Research Society for Study for Diabetes In India. She is currently working as a co-investigator in two major research projects from the Ministry of AYUSH and from the Ministry of Atomic energy. She is also a co-investigator in five interdisciplinary minor research projects supported by GUJCOST. She has published 70 research and review articles, 2 book chapters, and 2 books in international and national journals and publication houses of repute with total impact factor more than 71, 'h' index 14, and 1024 citations. She has worked as a Research Scientist at of Sun Pharmaceutical Advanced Research Centre and as a Senior Research Fellow at Center for Advanced Cardiovascular and Diabetic Research at LMCP under AICTE. She has presented more than 26 papers at national and international conferences. She has also worked as a reviewer for many journals with high impact factors.

Dr Bhoomika Patel

Dr Bhoomika M. Patel is working as Assistant Professor in Department of Pharmacology. With more than 14 years of experience in teaching, she is actively involved in research too. She has received two minor research projects from Gujarat Council On Science and Technology (GUJCOST) and major research project from Science Engineering and Research Board (SERB). In all, she has handled 06 research projects as investigator/co-investigator. She has published 56 full length papers in national and international journals with total impact factor more than 109, 'h' index 19 and total citations above 1600. She has also authored 05 books and 08 book chapters. Recently she has been invited an editorial board member of Journal "Scientific Reports", published by Nature. She is reviewer for many journals with high impact factor of publishers like Elsevier, Springer, Bentham, Sage etc. She has attended and presented papers at various national and international level conferences including the one at Japan, Sweden and Singapore for which she has received travel grants from the AICTE, DST, CSIR, Nirma University. After completion of

post-graduation, she has received 15 awards related to research, including Best research guide for national level “PharmInnova award”, Naranjan Dhalla Best Oral Presentation Award and Achari Prize. During her student life, she has a distinction of being the first rank holder (Gold medalist) for six consecutive years of BPharm and MPharm at Gujarat University. She got highest marks in final year BPharm among all universities of India for which she was awarded Prof M. L. Khorana Medal of Indian Pharmaceutical Association (IPA). In addition, she was the national winner in the elocution competition at Indian Pharmaceutical Congress (IPC). In all, she is a recipient of more than thirty three awards/prizes. She is a life member of several professional bodies including IPA, APTI, IPS, IPGA, IHPA, SOPI, ISTE. She is a recognized PG and PhD guide at Nirma University. Her areas of interest are metabolic abnormalities in cancer, cachexia and cardiovascular diseases.

Dr Bhagwati Saxena

Dr Bhagawati Saxena is working as an Assistant Professor in the Department of Pharmacology. She has around 11 years of research and teaching experience. She has completed MS (Pharm) from National Institute of Pharmaceutical Education and Research (NIPER), Mohali and PhD from Indian Institute of Technology (Banaras Hindu University). She has received UGC-Junior Research Fellowship and CSIR-Senior Research Fellowship for carrying out her PhD research work. She has worked in the National Institute of Pharmaceutical Education and Research, Ahmedabad for two years as an Assistant Professor. She has International Publications in journals like Journal of Molecular Neuroscience, Pharmacological Reports, Chemico-Biological Interaction, Stress, Fitoterapia etc. to her credit. She has attended various seminars, workshops and presented papers at various national and international level conferences including the one at AAPS Annual Meeting and Exposition, New Orleans, USA and Singapore Pharmacy Congress for which she has received full travel assistance from the Department of Biotechnology, Government of India. She has received the Best Poster award at the conference of Recent Advances in Pharmaceutical Sciences (RAPS) at IIT(BHU). She has guided 10 PG students as a research guide/co-guide. She is a life member of professional bodies like the Association of Pharmaceutical Teachers of India (APTI) and Indian Pharmacological Society (IPS).

Department of Pharmaceutical Analysis

Department of Pharmaceutical Analysis deals with the analysis of the raw materials as well as finished pharmaceutical formulations which are very important for the evaluation of quality, safety, and efficacy of pharmaceutical products.

At the undergraduate level, the department is involved in imparting theoretical as well as practical knowledge of the subject that a student needs to acquire the current scenario of quality control and quality assurance of pharmaceutical substances as per the need of the Pharmaceutical Industry and regulatory requirement. The subject includes an introduction to pharmacopoeias (IP, BP, USP, and others) and different analytical methodology used in pharmacopoeias for the analysis of drug substances and Drug Products.

The department provides an exhaustive postgraduate programme focused on research and coursework relating to most recent advances in pharmaceutical and biomedical analysis, quality assurance as well as regulatory affairs. The students are motivated for overall development, including personality development, scientific writing, data interpretation, presentation, documentation, good laboratory practices, communication, and soft skills.

Full time PhD students of the department got research fellowship from CSIR, ICMR, DST, DST-INSPIRE and Nirma University. Faculty members of the department are actively involved in interdisciplinary research work and collaborated with scientists of various reputed research organisation, academic institute, and industry.

Prof Priti Mehta

Dr Priti Mehta, Professor of Pharmaceutical Analysis at Institute of Pharmacy, Nirma University, has more than 20 years of teaching, research and industrial experience. She started postgraduate programme of Pharmaceutical Regulatory Affairs at Institute. Her area of expertise encompasses stability studies of drugs, Impurity profiling, elucidation of degradation pathways of drugs, isolation and characterisation of active moiety from plant and marine seaweeds, bioequivalence and bioavailability studies, development of long acting formulations, effects of radiation exposure on medicines, development of radioprotectors, etc. She is pioneer in getting interdisciplinary research grants at Nirma University. Recently she received DST-DPRP project as principal coordinator to develop national facility for characterisation of biosimilars. Dr Mehta worked on many research projects from government funding agencies, like AYUSH, ISRO, BRNS, GUJCOST etc. She is mentor of Women Scientist under WOS-A scheme of DST. Under her guidance many student got research fellowship from CSIR, DST-INSPIRE, ICMR etc. Dr Mehta has published number of research papers and review articles in peer reviewed scientific journals. She has presented research papers in International conference at USA. Dr Mehta has delivered guest lectures at various Institutions during seminars, workshops and staff development programme. She has rendered professional services to leading universities in various capacities.

Her research students won scientific poster awards at national forums. She is a recipient of prestigious M L Khurana award for the best research paper in Pharmaceutical Analysis. She is also recipient of P D Sethi award and R V Patel Best thesis award in guide category. Recently, she was conferred prestigious APTI woman of the year 2018 award by Association of Pharmaceutical Teachers of India for her scientific and academic contribution.

Dr Charmy Kothari

Dr Charmy S. Kothari is working as Associate Professor in the Department of Pharmaceutical Analysis and has more than 16 years of teaching and research experience. Her research areas of interest are analytical and bioanalytical method development and validation, impurity profiling and stability studies as well as Isolation, identification and characterization of marker compounds from plants and formulations. Her research area also includes regulatory guidelines, registration procedures, evaluation and approval procedures of various regulatory agencies worldwide as well as Pharmacovigilance system. She has more than 40 research and review papers published in reputed Indian and International journals. One of her paper has been published in the prestigious Elsevier journal Trends in Analytical Chemistry (IF=8.442). She is a reviewer of several national & international journals in her research area of interest. She has presented a paper as well as various posters at international, national and state level conferences and received several awards for best oral and poster presentation. She is twice recipient of Dr P. D. Sethi memorial annual national award for research paper certificate for the year 2007 and 2017. She is actively involved in various capacities in organizing National and International Conferences/Workshops. She has also received financial assistance from GUJCOST for organizing workshop and National seminar. She is a life member of various organisations like RAPS, ACS, APTI, IPA & ISTE. She is a recognized Post Graduate and Ph. D. Guide at Institute of Pharmacy, Nirma University. Under her guidance, four PhD students were awarded ICMR-SRF research grant; while one PhD. student received prestigious CM fellowship-SHODH from Government of Gujarat for research work. She received research grants from government funding agencies like GUJCOST, ICMR. She also received DST-SERB International Travel Grant to attend International Conference AOAC at Toronto, Canada.

Dr Nrupesh Patel

Dr Nrupesh is currently working as an Assistant Professor at Nirma University since January 2008. He is a team member in the consultancy project sponsored by Velocity Pharma, Ahmedabad. He has completed two minor research projects sponsored by Nirma University. He has 14 years of teaching experience. Currently, he is working on the consultancy project on He has completed 2 minor research projects sponsored by Nirma University. He has presented various posters and papers at international and national level conferences and competitions like GUJCOST-2004, ISAS-2005, NCIP, RBF-ZRC conference, NIPICON, ICONICA-2020 etc. He has published 12

papers in reputed international and national journals. His areas of research are spectroscopic and chromatographic analytical method development and validation of analytical methods. He is a life member of professional bodies like ISTE, APTI & IPA.

Department of Pharmacognosy

The Department of Pharmacognosy is engaged in imparting basic and advanced aspects of different natural sources as pharmaceutical raw materials, traditional medicines, phytochemical screening, and scope of Indian medicinal plants in the allied sciences like food, nutraceuticals, and cosmetics. The department deals with the theoretical as well as practical knowledge of undergraduate courses related to pharmacognosy, phytochemistry, analytical pharmacognosy, the chemistry of natural products, herbal drug technology, and nutraceuticals. The department is offering consultancy services to the herbal drug industries, various research institutes, and cosmetic companies and successfully completed many consultancy projects. Several students are pursuing their PhD under the guidance of the able faculties in the department with research fellowships under the Government scheme of DBT, INSPIRE-DST and Women Scientist WOS-A.

Dr Niyati Acharya

Dr. Niyati has 18 years of experience in teaching and natural product research, published 37 research papers, 3 book chapters, 1 patent and presented more than 80 posters. She has completed research projects from DBT and GUJCOST of more than 50 lacs and doing many minor research and consultancy projects for the herbal drug industry and research centers. Being a recognized PG/Ph.D. guide, guided more than 25 M. Pharm & 12 M. Sc Cosmetic technology students, 3 PhD students have been awarded and 4 are pursuing Ph. D at Nirma University under her able guidance. She is a recipient of P.K. Debnath Memorial Award: SFE Young Ethnopharmacologist Award 2020 for Best Oral Presentation in the field of Ethnopharmacology and medicinal plant research, GABTP national woman scientist award 2019 at 29th APSI scientist meet and international conference on Drug discovery and development in Agrobiotechnology and Pharmaceutical sciences, Best research paper award at the International Symposium on Cancer research at GCRI in 2014 and Dr. P.D. Sethi's research paper award 2006. The research area of her interest includes phytopharmacology based investigations & characterization of biomarkers from medicinal plants for the management of neurodegenerative disorders like Alzheimer's disease, wounds, obesity, liver disorders. She has been working on development of novel and target-based delivery for natural bioactives across blood brain barrier and wounds. She is a life member of various professional bodies like American Society of Pharmacognosy, APTI, ISP, IPA, ISTE, Society of ethnopharmacology, Indian Academy of Neurosciences, IPGA and has been working as an editorial member and reviewer for many journals of Elsevier, Taylor and Francis and Willey.

Dr Nagja Tripathi

Dr Nagja Tripathi is working as an Assistant Professor in the Department of Pharmacognosy. She has about 17 years of experience which includes 13 years of teaching experience and 4 years of industrial experience. She has worked in Quality Assurance, Formulation Development and Quality Control departments of reputed pharmaceutical companies like Cipla and Sanofi Aventis. She has presented several scientific posters in various national & international conferences and published several papers in reputed journals. She has completed two minor research projects funded by Nirma University. She is a life member of various professional bodies like APTI (Association of Pharmaceutical Teachers of India), Society of Pharmacognosy and Indian Society of Technical Education (ISTE). Her research interest is phytopharmacological screening of herbal drugs, development of herbal formulations and their standardization.

Dr Dipal Gandhi

Dr Dipal Gandhi is working as an Assistant Professor in the Department of Pharmacognosy. She is having 11 years of academic experience and also worked as a senior research fellow with BV Patel PERD research center. Her area of interest is mainly in Phytochemical Investigation, standardization and quality control of herbal drugs, analytical method development of phytoconstituents and evaluation of their pharmacological activity. She has published many papers in national and international journals. She has attended many national and international level conferences, QIP, FDP, STTP and presented several posters in many national and International conferences. She is a life member of professional bodies like the Association of Pharmaceutical Teachers of India (APTI), Indian Pharmaceutical Association (IPA), Indian Society of Pharmacognosy (ISP), ISTE and Indian Society of Chemists and Biologists (ISCB).

MANAGEMENT & STAFF

University Management

Name	Designation
Dr Karsanbhai K. Patel	President, NU
Shri K. K. Patel	Vice President, NU
Dr Anup Singh	Director General, NU
Shri G. R. Nair	Executive Registrar, NU
Prof P. N. Tekwani	Dean, Faculty of Doctoral Studies and Research (FDSR), NU
Prof Alka Mahajan	Dean, Faculty of Technology Director, Institute of Technology
Prof Mallikarjun M	Dean, Faculty of Management Director, Institute of Management
Prof Manjunath Ghatge	Dean, Faculty of Pharmacy Director, Institute of Pharmacy
Prof Sarat Dalai	Dean, Faculty of Science Director, Institute of Science
Prof Purvi Pokhariyal	Dean, Faculty of Law Director, Institute of Law
Prof Utpal Sharma	Dean, Faculty of Architecture & Planning Director, Institute of Architecture & Planning
Prof Udai Paliwal	I/c Dean, Faculty of Commerce
Prof Sangita Shroff	Head, Department of Design
Shri Ashishbhai Desai	Hon. Head of the Dept. of Students' Activities
Prof Tejal Mehta	Deputy Director, Centre for Quality Assurance and Academic Development (CQAAD) cell, NU
Prof Santosh Vora	Deputy Director, Directorate of Research & Innovation (DRI), NU

University Officers

Name	Designation
Dr Nilesh M. Patel	Deputy Registrar, Examinations and PhD Section
Ms. Palak Shah	Chief Accounts Officer
Dr Ravindra Sen	Assistant Registrar, Academic Section
Dr Bhaveshkumar Parekh	Chief Coordinator, Student's Welfare Activities
Shri Alok Bhatnagar	Public Relation Officer

Non-Teaching Staff Members

Name	Designation
Mr. Dineshbhai Patel	Office Superintendent
Mr. Tushar Patel	Corporate Relation Manager
Mr. Virendra Goswami	I/c. Librarian, IP
Mr. N. Nityanandan	PA to Director
Mr. Has Mukh B. Rathod	Assistant
Ms. Pooja P. Panday	Assistant
Ms. Jigisha D. Patel	Assistant
Mr. Devendra Vaghela	Assistant
Ms. Jaya Dabhi	Library Assistant
Ms. Sima Ahire	Library Assistant
Mr. Rohit Patel	Laboratory Assistant
Mr. Mukesh Patel	Laboratory Assistant
Mr. Shailesh Patel	Laboratory Assistant
Mr. Shreyas Bhuvu	Laboratory Assistant
Mr. Jignesh Patel	Laboratory Assistant
Ms. Drashti Patel	Laboratory Assistant
Ms. Dharti Patel	Laboratory Assistant
Mr. Chetan Patel	Laboratory Assistant
Ms. Hiral Patel	Laboratory Assistant
Ms. Dharmi Shah	Computer Operator

INDUSTRY INSTITUTE INTERACTION CELL

Objective of Industry Institute Interaction (III) Cell is to constantly interact with industry so as to maintain healthy and mutually beneficial relations between industry and academia. III Cell works towards providing close links with pharmaceutical industries, contract research organizations and other state and national level R&D organizations so that it helps the institute in student placements / training / Curriculum improvement etc. It strives to find out the gap between the needs of the industry and the end product of the Institute. III Cell tries to facilitate and enhance quality of interaction between the institute stakeholders and Industry.

At Nirma university, each institute has its III cell, which is managed by dedicated Corporate Relations Manager. It is supported by faculty placement coordinators and student coordinators, working under the guidance of the Director and in association with respective heads of the departments. III Cell facilitates student visits to industries, industrial training, project, placement & campus interviews. Placement of students for industry training/projects during summer has been benefiting students to a great extent.

It trains and grooms the students so as to ensure that students can smoothly transit from Academics to industry. The students are oriented and trained towards placement related topics like writing better resumes, participating in group discussions, facing interview, Interview etiquette etc. With the efforts of III cell, the students of recent years pass out batches have been placed in companies like Torrent Research Centre, Novartis, Nestle, Sun Pharma, Sanofi India, Amneal Pharmaceuticals, Troikaa Pharma, Eris Lifesciences, Zydus Cadila, Piramal Healthcare, Intas Pharmaceuticals, ELC group, Lambda Therapeutics, APCER Lifesciences, Cadila Pharma, Johnson & Johnson, Rusan Pharma, Allen Career Institute, Finecure Pharmaceuticals, etc.

Industries Involvement in Course Curriculum Design

In various academic bodies, there is adequate representation of industry experts which makes the curriculum rich and relevant to industries. Participation of experts from pharmaceutical industry is regularly helping us in designing and updating the curriculum. Portion of syllabus is also covered by Industrial experts to enhance their knowledge.

Industrial Training for the undergraduate and postgraduate students

Training is an integral part of the study to prepare the students for the real world problems. The undergraduate and postgraduate students are supported for internship at various industries for 6 to 8 weeks under the supervision and guidance of respective industry personnel. The faculty carries out monitoring and evaluation regularly.

Placement cell

Placements play an important role in meeting the career aspirations of each student enrolled in the programme. In its endeavor to assist students in meeting his/her career goals, the Institute has a well-equipped and organized Placement Cell, which is in constant touch with the industry so as to create better placement opportunities for students.

Final Placement

The Institute helps each student in exploring placement opportunities by inviting various companies for campus recruitment of students who are in the final year of the programme and are likely to graduate at the end of the academic year.

The final placements, at the Institute, are a result of very systematic interaction with the industry and continuous career counseling of the students. Right from the beginning of the programme, students are continuously counseled with regard to his/her career aspirations and options, which in turn is vigorously followed up with the potential companies for participating in the placement programme of the Institute. This not only helps the students in getting their 'dream' jobs but also assists the visiting placement companies in identifying the 'right' candidate for their organization. However, the placement will be governed by Placement guidelines.

Planning for Placement

The placement activity is primarily managed by the Placement Committee headed by Director of the institute as Chairperson with the help of the Manager Corporate Relations and other committee members which includes faculties and students from various departments.

The Broad Activities Undertaken by the Placement Cell are:

- Formation of Students' Placement Committees for final placement and also for getting industrial training and industry linked project work for students.
- Preparation of Placement Brochure for final placement.
- Pre-placement visits (PPV) to the companies.
- Communication, networking and relationship building with the potential recruiters
- Invitation to potential recruiters to visit the Institute.
- Continuation of placement activities after the stipulated period, till all the students are placed.
- Grooming and training of the candidates for the placements so that their chances of selection increase.
- General follow-up, joining formalities and other administrative activities.

Institute Placement Committee

The placement related activities, at the Institute, are carried out by Placement committee – it comprises of faculties from various departments of the institute. Student representatives from various branches who are in their final year are also appointed as committee members. The committee is headed by Director of the Institute and Manager Corporate Relations acts as a member secretary. The placement committee is usually formed in the month of July.

Student Registration for Placement

The students who are in their final year and interested in availing placement support from institute, will have to register themselves for placement. Those who don't want any kind of placement support need not register themselves. Registration for placement is done by paying placement registration fees decided by the institute from time to time.

Placement Brochure

The Institute prepares a Placement Brochure, giving details of the students ready to be placed for the benefit of the students and potential recruiters. This brochure is subsequently shared with potential recruiters. The students registered for placement are included in this brochure.

Placement Eligibility

Students who fail to clear the academic exams & other formalities at the end of course, shall be removed from the placement process and hence will not be eligible for campus placement activities. Any major disciplinary actions will terminate the student from campus placement activities

Placement Process

Once an organization shows interest in recruitment from the Institute, the students are asked to register their interest for the job. An email informing about the job opening and its details will be shared with the student coordinators and placement committee. Placement cell will try to get as much details as possible about the job profile. The registration of interest is to be done by students from their official Nirma Gmail ID on the provided link, after going through the job profile. It is not compulsory. Only students who register for that particular job profile will be considered for the job opening and their names and CVs will be shared with the company. It will be responsibility of a student to keep his/her resumes updated with placement cell. Once the names of students are submitted, student is not allowed to withdraw from the selection process.

Sometimes companies come for Pre-Placement Talk / Group Discussion / Written Test and the short-listed students are interviewed at the campus or off the campus. Alternately, some companies

select students based on their CVs and may invite them for Group Discussions/Interviews at their offices.

Guidelines for Placements

The final placement is governed by certain guidelines, which are framed to facilitate the students to get maximum benefits:

These guidelines are revised from time to time. The guidelines being followed currently are:

1. If company is coming for a Pre-placement talk, attending of Pre-Placement talk is compulsory for all the students unless informed otherwise by the student in writing.
2. A student can only withdraw his/her name before the CVs are sent to the company.
3. Under no circumstances, the students will personally communicate with the companies (except those who opt for private placements). If a student breaches this code, he/she may be debarred from the final placement at the campus.
4. If the company shortlists/selects a student on the basis of his/her CV, the student has to go through the next steps of the selection process.
5. In case a student opts out after getting short-listed by the company, he/she will not be eligible for final placements through campus.
6. Students once finally selected by a company through campus placement shall not be considered for placement in future at the campus.
7. Students have to wear formal dress during the PPT, Group Discussions and Interviews.
8. The eligibility of a student, who can apply for the selection in a company, will be determined based only on the specifications/ job profiles offered by the company and as directed by the respective companies.
9. The Placement cell will try to bring and put forward as many details as possible for the job openings to the students. Students are not permitted to ask for location preferences or negotiate on salary, if it is already disclosed by the company.
10. The Institute will not interfere in the selection process of the visiting companies.
11. A student can appear for placement for any number of companies until he/she gets selected, and after selection shall not be eligible to appear for placement in any other company.
12. In case a student has appeared for more than one company before the declaration of the result, the student has the option to select the company of his choice from the results of the other companies for which he/she has already appeared on that particular day. This clause is applicable only if one is through of interview process (full selection process) of two or more companies simultaneously.
13. In case, if one has appeared just for written test process of company A, before appearing for its interview, and he /she has got selected in some other company, then he / she will not be allowed to appear for further selection process of company A.

14. The student who receives an offer letter from the company shall join the company as per terms of offer letter.
15. In a batch, when we reach a level of 75 % placement, for the students remaining to be placed, they will NOT HAVE the right to exercise their choice and sit for selective companies. He/she has to sit for all companies which they qualify for. However, students who submit their reservations (example: location, remuneration, industry/company, and profile) will not be forced / allowed to sit for those specific profiles, companies, location and remuneration.
16. Institute will try to place those students suitably who have specific industry / job preferences / location constraints, etc. In case, if these students remain unplaced after the completion of the programme, the Institute for all official records will consider them placed.
17. Students noticed to be underperforming deliberately will be put out of the placement process for the next 5 companies. (Under performance will be verified through the feedback from the company officials)
18. All communication related to placements / job openings will be done on the email Id registered with placement cell. It is student's individual responsibility to check the emails on regular basis.
19. It will be responsibility of a student to keep his/her resumes updated with placement cell. If any falsification of data or serious misrepresentation of information is found in the CV or registration details of candidate which may influence the chances of selection, he she will be immediately removed from the placement process.
20. It is obligatory for each student to abide by the rules/guidelines as stated above, failing which he/she shall be debarred from the placement process of the Institute. However in the interest of the Students / Institution and corporate relations the placement cell has the discretion to make changes in the above guidelines/rules. In case of any doubt or dispute, the decision of the Chairperson of the placement committee will be final. No coercion by any student (s) will be allowed at any level. The Chairperson's decision will be final and irrevocable.

PLACEMENT SUMMARY 2017 - 2020

	2017		2018		2019		2020*	
	Placed	Interested Students	Placed	Interested Students	Placed	Interested Students	Placed	Interested Students
M.Pharm – Pharmaceutical Chemistry	-	-	1	1	4	5	0	2
M.Pharm - Pharmaceutical Analysis	6	6	-	-	5	6	4	8
M.Pharm - Pharmaceutics	10	10	13	14	9	9	3	10
M.Pharm – Pharmacology	4	4	9	9	9	10	10	11
M.Pharm – Regulatory Affairs	12	12	13k	13	8	8	4	10
M.Pharm	33	33	43	44	35	38	21	41
B.Pharm	8	10	6	7	10	10	0	10
Grand Total	41	43	49	51	45	48	21	51
Ph.D Students Placed	-	-	3	3	-	-	1	-
% students placed out of students interested for placement *	95.34%		96.07%		93.75%		41.17%*	

* Placement process starts in December and goes on till September End of next year. The reported status for placement 2020 is as of 31st March 2020. Because of Corona lockdown many recruitment process by reputed companies have been kept on hold. Hence once lockdown opens we expect that still more placements may happen in 2020. These figures are provisional and represents status as of 31st March 2020. For any further information on Placement the student can get in touch with Manager Corporate Relations - Mr. Tushar Patel

GENERAL RULES & REGULATIONS

Attendance

Guidelines for Students

- The students are required to attend all the classes, Practical work, Tutorials conducted throughout the day.
- In every course, attendance will be taken by the course coordinator / faculty in-charge of the class. Mere attendance is not the objective but positive interaction and learning environment is a given expectation from the students.
- Attendance will be taken in the first 10 minutes of the class. Students have to be present in the class before the faculty enters. If students enter later then that they will not be granted attendance under any circumstances.
- Students are required to seek prior permission from the Director / HODs for remaining absent from any of the classes, Practical work, Tutorials by submitting leave application available with PA to Director. Absence without prior permission would be treated as indisciplined act and will be proceeded accordingly.
- In case of any emergency/ medical reasons, if students are not able to seek the prior permission, they are required to intimate to the Director the reasons for remaining absent through e-mail (director.ip@nirmauni.ac.in). In case of leaves due to medical reasons, an application along with medical certificate and test reports is to be submitted within three days after the student resume the Institute to Dr. Mayur Patel.
- As per the University regulations, students are required to attend 85% of the classes conducted in each course. However the Director of Institute may consider upto 65% attendance with valid reasons for absence and the appeal committee appointed is convinced with the reasons provided by appealing student for his/her absence. However, in no case any student should be permitted with less than 65% attendance even with valid reasons.
- First attendance review will be taken in the mid of the semester and Final attendance review will be taken at the end of the semester. Students having shortfall in the attendance, will be called in appeal committee. The Appeal Committee will hear the candidates and decide the case accordingly.
- Prior permission of the Director shall be obtained for availing of Duty Leave in the form of a leave application from the Director's office. For attending seminars / conferences / workshops / competitions / any other events outside the institute / any personal functions, a duty leave applications must be submitted with proofs normally prior 3 days to the commencement of the leave. The duty leave along with necessary documents is to be submitted to Ms. Poojaben (Student Section) within three days after the commencement of the event.

- Students has to take permission from the Faculty Coordinator of the respective event for publicity of the events.
- Attendance related to practicing for any type of event will not be considered.
- By looking at large number of participations from same students in various events outside the institute, it was decided that the participations will be restricted maximum three times outside the institute / university for the same students in the respective semester.
- Duty Leave will be credited to the attendance of the students at the time of final review.
- The Institute will not be responsible for the student losing any component of assessment on account of his leave.

Class Conduct

- The students are expected to be in the class room at least five minutes prior to the commencement of the class. Unpunctuality is not acceptable.
- Students are expected to come prepared to the class with the readings/ chapters and cases mentioned in the course outline for the session. The student may be asked to leave the class if he/she is not fully prepared for the session.
- Use of mobile phones is strictly prohibited in the class rooms, corridors and inside the blocks. Violation would imply confiscation of the mobile phone.
- Students are expected to behave in a responsible manner and abstain from chatting amongst themselves while the class is in progress.
- Activities like video shooting, photography, playing musical instruments and listening to radio and tape recorders are prohibited in the campus.
- Any indiscipline or misbehaviour in class would warrant disciplinary action against the student.

Learning Resources Centre (Library)

At Institute of Pharmacy, it is a belief to facilitate production and dissemination of knowledge, information, insights & intellect in all scientific communities. The Library plays a vital role in the collection, development and dissemination of scientific information and includes a wide range of volumes of different branches of Pharmaceutical Sciences and allied subjects and also provides extensive access to leading Indian and international research journals.

The Library at Institute of Pharmacy houses more than 9,277 volumes of books selectively chosen for reading and reference, 366 CDs, 1,835 Bound Volumes, 930 Project Reports (B.Pharm), 595 Research Project Reports (M.Pharm), 88 PhD Theses and subscribes about

21 printed national, 3 international periodicals, 15 magazines and 9 newspapers. Library is also providing Web access to 90 e- journals: Science Direct: Pharmacology, Toxicology and Pharmaceutical Sciences Module (89) and Pharmacological Review (1).

Online Resources

Science Direct, web-based interface to the full-text database of Elsevier Science journals one of the world's largest providers of scientific, technical and medical (STM) literature offers a rich electronic environment for research journals, bibliographic databases and reference works. We have unlimited and complete online access to 89 journals (*Pharmacology, Toxicology and Pharmaceutical Science*) of Elsevier Science available in the Science Direct database.

Resource: 89 journals published by Elsevier Science

Back-files: 1997 onwards

Simultaneous Access: Unlimited

Click here: <http://www.sciencedirect.com/>

Pharmacological Reviews showcases important review articles on topics of current interest. Topics covered are biochemical and cellular pharmacology, drug metabolism and disposition, renal pharmacology, neuropharmacology, behavioral pharmacology, clinical pharmacology, and toxicology.

Resources: 1 journal published ASPET

Back Files: 1997

Access: Unlimited

Click here: <http://pharmrev.aspetjournals.org/>

Automation

The Library and Resource centre is fully automated with Open Source, user-friendly library software KOHA that facilitates automated circulation (issue & return) of the books and location and availability information of the books stocked in the library. Online Public Access Catalogue (OPAC) is also available on the Internet for inquiring about the status of the resources. Bar-coding system is in use to computerize the bibliographic details of the resources.

Facilities and Services

The Library & Resource Centre offers the following facilities and services:

Facilities:

- Photocopying

- Online Public Access Catalog OPAC (Computerized Information Search)
- Internet browsing
- Book Bank
- Library Mobile Apps

Services

- Reading /Reference
- Circulation
- User Education Programmes
 - Library Orientation Programme
 - Information Literacy Programmes
- Current Awareness Service
 - New Arrival Lists of Books and Periodicals (Display on Notice Board as well as through Emails)
 - Newspaper Clipping
 - Current Content Alerts through RSS feeds
- Selective Dissemination of Information (on demand service)
- Examination Papers Depository on Google Drive
- Digital Library (Institutional Repository)
- Interlibrary Loan
- Remote login

Other Activities

- Screening TED Talks
- Book Review
- Celebration of National & International Days
- Literature Club (Gyan Samhita): - intends to bring out the literary talents of the students
- Training of Zotero & Mendeley (Reference Management Softwares) to IPNU Users

Learning Resource Centre Rules and Regulations-

Rules for Book Loan for Students

- Library Issue/Return counter will be opened from 11.00 a.m. to 6.00 p.m. only.
- Students are supposed to show their library usage by entering their roll number on the Check Counter whenever they come into the Library
- B. Pharm / MPharm Students can borrow three books at a time for the period of 10 days and Research Scholars can borrow five books for the period of one month on their Identity Card. Books will be renewed once only if there is no reservation for it.

- Library resources like Reference Books, Periodicals, Bound Volumes, Standards, CDs, and Audio/video Cassettes are to be referred within the library premises.
- Students can issue a reference book for overnight period (Overdue Charge Rs. 100/- per day per book) and two backdated issues of general magazine for two days (Overdue Charge per day Rs. 5/- per magazine).
- Before borrowing the book, he/she has to verify the physical condition of the books. If he/she finds the physical condition of the books bad, he/she must inform Librarian's immediately.
- It will be the sole responsibility of the borrower to preserve the book and return to the Library, however if any student loses/or misplaces the book, he has to report to the Librarian on the same day. He will have to clear his Library account either replacing the book or by paying the cost within a week. If he/she fails to do so, not only the cost of the book, but also overdue will be recovered from the student.
- Borrower will be responsible for any damage found while returning books.
- Students will have to return the borrowed books on time. The overdue charge is Rs.2/- per day.
- If any student's card is lost, he has to report to the Librarian immediately and operation of account will be in abeyance until he gets new.
- If students are going on Short-term industrial visit or project, they have to maintain the schedule of returning the books. This rule can be relaxed on the recommendation of the HOD for borrowing books for his project, when a student is deputed for a project for the entire semester out of Ahmedabad.
- If any student caught, stealing books or tearing pages will have to pay the entire cost of the books plus Rs.500/-. And Library Account will be suspended for two months in addition to the disciplinary action to be initiated.
- If any book lost by any student, not available in the market, he/she is required to pay three times of the original cost. The A/c has to be cleared within two weeks at least.
- If any student misplaces/loses any complimentary copy, the HOD will decide the amount to be paid by the student after consulting the subject expert.
- To maintain Discipline and Silence in the library is mandatory. If any student fails then he/she will be penalized / punished.
- If students disobey Library rules, Identity Card will be collected, reported to the Head of the Institution for initiating disciplinary action.

Rules for Book Reservation for Students

- Users can reserve books from their library account through the online library OPAC or reservation forms can be obtained from the Library Check Counter.
- For making a reservation through the online Library OPAC, click on the place hold icon.
- Only Issued (Checked Out) books can be reserved through your library account of Library Software.
- Users can reserve and cancel any title or book which is not available in the Library.
- Books can be collected within two days after their arrival into the library.
- If you do not collect books within said period, Reservation may be treated as cancelled.

Rules for Book Bank Facility

The Library Resource Center provides book bank facility to the students of the Institute of Pharmacy. The main purpose of this service is to help the needy meritorious students.

- The book bank facility will be given to the 10 % students of the total strength of each Semester. on the basis of the income of their parents and the ceiling of the same will be Rs.6.00 lakhs per annum.
- Depending upon the availability of the sets of books the priority will be given to the students on the merit of last examination.
- The students will not be eligible for Book Bank Facility, who fails in the Semester End Examination.
- 10% of the book value (set of textbooks) is to be taken as maintenance charges from all the categories of students, who are selected for the Book Bank Facility.
- All students who are availing the facility must ensure returning the entire set of books provided to them within two days of completion of their final examination in the concerned semester/Term.
- The overdue charge is Rs.2/- per day per book.
- If any student availing the facility loses the book / damages the book / disfigures the book, he / she shall replace the volume(s) with new books (Or pay the current cost of the book plus fine, if any, as may be directed by authority).
- The cost of this application form is Rs.10/-.

Library Suggestion

- You are welcome to give suggestions for the improvement of the library services and collection.
- You are free to give your valuable suggestions to us.
- Library Suggestion Register available at the Library check counter.

- You may see the status of your suggestion at the Library Notice Board / in the suggestion register.

Library Users are requested to strictly follow the below given points

- Silence should be maintained in the Library Premises.
- Mobile Phone is prohibited within the Library premises.
- Put Library books properly on its place/on the table.
- Handle the Library Materials gently.
- Not to spoil/ damage the Library Material.
- Not to bring their own Reading Material and Issued Books in the Library.
- Not to bring personal floppies/CDs/DVDs in the Library. Students can copy Library CDs and DVDs with the permission of Library Staff.
- Frequent defaulting of the above rules will lead to termination of Library Membership.
- Contact Library Staff anytime if they face any problem.
- Give Suggestions to Improve the Library Services.

Timings

Opening – Closing Hours:	08.45 am - 06.15 pm (Monday – Friday)
	08.45am – 4.45pm (1st, 3rd & 5th Saturday)
Issue/Return Counter:	11.00 am – 06.00 pm
	09.00am – 4.30pm (1st, 3rd & 5th Saturday)
Photocopying Service:	11.00 am - 01.00 pm

Please log on to <http://pharmscilibrary.nirmauni.ac.in/> to know more details about the Library.

In addition to the Institute of Pharmacy Library resources students and faculty could access the digital resources of the University from the same homepage.

Computer Laboratory Rules

General

- Misuse of Internet/Intranet mail service will invite strict disciplinary action.

For the usage of Computer Lab

- Students should make an entry in the log register.
- Students should not change properties/configuration of the client machines.
- Students should keep silence and observe discipline while working.
- Students should not leave rough papers on desks.
- Students should not eat or drink in the computer centre.
- Pen drive is prohibited in computer centre.

*** ACADEMIC REGULATIONS FOR UNDERGRADUATE DEGREE LEVEL (B. PHARM.) PROGRAMME UNDER FACULTY OF PHARMACY**

DEFINITIONS

PROGRAMME	--	B.Pharm. (Bachelor of Pharmacy)
COURSE	--	One of the constituent subject of the Programme
SEMESTER	--	Duration for studying the courses offered in odd or even term.
TERM	--	A portion of an academic year, normally coinciding with a semester. The words “Term” and “Semester” are generally used synonymously.
REGISTRATION	--	Procedure for registering the course in semester.
LETTER GRADE	--	A letter associated with a particular performance level of the student. A qualitative meaning and a numerical index are attached to each grade. O to D are Passing grades, F and Abs – Fail
CREDIT	--	A numerical figure associated with a course. On passing the course, the student earns this “credit”
GRANTING A TERM--		This expression is used to indicate whether the in-semester performance of the student is up to acceptable standards. GT – Term granted, NT – Term not granted
UNIVERSITY EXAMINATION COURSES (UE) –		The Semester End Examination of UE will be taken by University.
NON UNIVERSITY EXAMINATION COURSES (NUE) –		The Semester End Examination of NUE will be taken at Institute level only. The subject experts at Institute level shall conduct examinations and the marks/grades shall be submitted to the university.

DURATION FOR COMPLETION OF THE PROGRAMME --

The duration for the completion of the programme shall be fixed as double the actual duration of the programme and the students have to pass within the said period, otherwise they have to get fresh Registration.

* Published vide noti. No. NU-039 dated 28.05.2018, BoG mtg.-21.04.18, reso.-4(A)(i)

REGULAR APPROVAL -- If a student is unable to attend the institute or appear in an examination on account of unavoidable reasons like illness, accident or unforeseen circumstances, prior / prompt intimation and request to HOI/Director is necessary for seeking approval for the absence. The approval of HOI/Director so obtained will be referred as Regular Approval.

SHORT FORMS

Institute of Pharmacy	-- Institute
Director of Institute of Pharmacy	-- Director
Head of the Institute	-- HOI
Dean of the Faculty of Pharmacy	-- Dean
Head of concerned Department	-- HOD
Appeal Committee consisting of Director/HOI, Dean and Two Senior Faculty Members nominated by Director/HOI	-- Appeal Committee
Initial Registration	-- IR
Repeat Registration for studying all components of a theory course	-- RS
Re - examination Registration for SEE component of a theory course	-- RES
Repeat Registration for studying all components of a practical course	-- RL
Re - examination Registration for SEE component of a practical course	-- REL
Continuous Mode	-- CM
Laboratory/Project work	-- LPW
Semester End Examination	-- SEE
Supplementary Examination	-- SPE
R.Pharm.(UG).	-- R
University Examination Course	-- UE
Non-University Examination Course	-- NUE

R.PHARM.(UG).1. PROGRAMME

The Under Graduate Degree Programme in Pharmacy, leading to the degree of B. Pharm., is offered by Institute of Pharmacy. The Programme is full time of four years duration and is approved by Nirma University.

1.1 Duration of the programme

The course of study for B.Pharm shall extend over a period of eight semesters (four academic years) and six semesters (three academic years) for lateral entry students. The

curricula and syllabi for the programme shall be prescribed from time to time by Pharmacy Council of India, New Delhi.

1.2 Medium of instruction and examination shall be in English.

1.3 Working days in each semester

Each semester shall consist of not less than 100 working days. The odd semesters shall be conducted from the month of June/July to November/December and the even semesters shall be conducted from December/January to May/June in every calendar year.

R.PHARM.(UG).3. CATEGORIES OF COURSES

The following categories of courses are offered in the programme.

3.1 Credit Courses

These are compulsory courses, i.e., (i) University Examination Courses, and (ii) Non-University Examination Courses. They are included in the schedules of various semesters. Credits earned for these courses will be considered for evaluating the academic performance levels of the student.

3.2 Supplementary Courses

These are compulsory courses. They are not included in the schedules of the semesters, but are shown as additional courses, wherever applicable. No credits are assigned to these courses. The student shall have to pass a supplementary course(s) as per R.PHARM.(UG).15. Failure to satisfy this criterion at any stage will disqualify the student from registering in any higher semester. Such student can appeal to the Appeal Committee. The Committee may grant an extension upto one additional attempt in genuine cases.

3.3 Audit Courses

These are optional courses. No credits are assigned to them. They will be separately notified in each semester.

3.4 Elective Courses

These are credit courses. The student has to select from large number of courses. Credits earned for these courses will be considered for evaluating the academic performance levels of the student. They will be separately notified. The student shall have to pass a supplementary course(s) as per R.PHARM.(UG).15. Failure to satisfy this criterion at any stage will disqualify the student from registering in any higher semester. Such student can appeal to the Appeal Committee. The Committee may grant an extension upto one additional attempt in genuine cases.

Note: Hereafter, the Credit Courses will be referred to simply as “courses”. Supplementary and Audit courses will be specifically mentioned as such.

R.PHARM.(UG).4. COMPONENTS OF A COURSE

The academic schedule of the courses may consist of one or more of the following components with their respective scope as described:

4.1 Theory Courses

LECTURES (LECT) - Teaching learning processes conducted in real and virtual classrooms with various multimedia aids, etc.

TUTORIAL (TUT) - Supplementary to classroom teaching. It consists of one or more of the following teaching strategies. Each strategy will form a UNIT.

Self Study Exercises, Tests, Synopsis, Quizzes, Objective Questions, Viva, Case Study Analysis, Seminars, etc.

4.2 Practical Courses

LABORATORY / PROJECT WORK (LPW) -This component consists of one or more of the following practical exercises. Each set of practical exercises will form a UNIT. Laboratory Experiments and their reports, Viva, Synopsis, Industrial / Professional Training, Analysis, Design, Research Problems, etc.

4.3 Credit assignment

In Credit Based Semester System, certain quantum of academic work viz. theory classes, tutorial hours, practical classes, etc. are measured in terms of credits. On satisfactory completion of the courses, a candidate earns credits. The amount of credit associated with a course is dependent upon the number of hours of instruction per week in that course. Similarly, the credit associated with any of the other academic, co/extra-curricular activities is dependent upon the quantum of work expected to be put in for each of these activities per week.

4.3.1 Theory and Practical courses

Courses are broadly classified as Theory and Practical. Theory courses consist of lecture (L) and /or tutorial (T) hours, and Practical (P) courses consist of hours spent in the laboratory. Credits (C) for a course is dependent on the number of hours of instruction per week in that course, and is obtained by using a multiplier of one (1) for lecture and tutorial hours, and a multiplier of half (1/2) for practical (laboratory) hours. Thus, for example, a theory course having three lectures and one tutorial per week throughout the semester carries a credit of 4. Similarly, a practical having four laboratory hours per week throughout semester carries a credit of 2.

4.3.2 Minimum credit requirements

The minimum credit points required for award of a B. Pharm. degree is 208. These credits are divided into Theory courses, Tutorials, Practical, Practice School and Project over the duration of eight semesters. The credits are distributed semester-wise as shown as under:

Semester wise credits distribution:

Semester	Credit Points
I	27/29\$/30#
II	29
III	26
IV	28
V	26
VI	26
VII	24
VIII	22
Extracurricular/ Co-curricular activities	01*
Total credit points for the programme	209 / 211\$ / 212#

* The credit points assigned for extracurricular and or co-curricular activities shall be given by the Director/HOI of the colleges on the recommendation of the committee constituted by Director/HOI from time to time and the same shall be submitted to the University.

\$ Applicable ONLY for the students studied Physics / Chemistry / Botany / Zoology at HSC and appearing for Remedial Mathematics course.

Applicable ONLY for the students studied Mathematics / Physics / Chemistry at HSC and appearing for Remedial Biology course.

Courses generally progress in sequences, building competencies and their positioning indicates certain academic maturity on the part of the learners. Learners are expected to follow the semester-wise schedule of courses given in the syllabus.

The lateral entry students shall get 52 credit points transferred from their D. Pharm. programme. Such students shall take up additional remedial courses of ‘Communication Skills’ (Theory and Practical) and ‘Computer Applications in Pharmacy’ (Theory and Practical) equivalent to 3 and 4 credit points respectively, a total of 7 credit points, to attain 59 credit points of semester I and II.

4.4 Academic work

A regular record of attendance both in Theory and Practical shall be maintained by the teaching staff of respective courses.

4.5 Course of study

The course of study for B. Pharm shall include Semester Wise Theory & Practical as approved by Academic Council from time to time.

R.PHARM.(UG).5. EXAMINATIONS

For assessment of the course, each component corresponds to certain examination/s. These examinations are as follows.

THEORY COURSES	--	Semester End Examination - Theory Internal Assessment (includes continuous mode and sessional exams)
PRACTICAL COURSES	--	Semester End Examination – Practical Internal Assessment (includes continuous mode and sessional exams)

R.PHARM.(UG).6. PROGRAMME COMMITTEE, COURSE COORDINATOR & FACULTY ADVISOR

6.1 Programme Committee:

1. The B. Pharm. programme shall have a Programme Committee constituted by the Head of the institution in consultation with all the Heads of the departments.
2. The composition of the Program Committee shall be as follows:
A senior teacher shall be the Chairperson; One Teacher from each department handling B.Pharm courses; and four student representatives of the programme (one from each academic year), nominated by the Head of the Institution.
3. Duties of the Programme Committee:
 - i. Periodically reviewing the progress of the classes.

- ii. Discussing the problems concerning curriculum, syllabus and the conduct of classes.
- iii. Discussing with the course teachers on the nature and scope of assessment for the course and the same shall be announced to the students at the beginning of respective semesters.
- iv. Communicating its recommendation to the Head of the institution on academic matters.
- v. The Programme Committee shall meet at least thrice in a semester preferably in start & mid of semester and before the semester end exam.

6.2 The Dean will appoint faculty members for the following designations. The main functions of each designation are also mentioned.

COURSE COORDINATOR (to be appointed for each course) – to coordinate all matters related to the conduct and assessment of a course.

FACULTY ADVISOR (to be appointed for each semester) – to look after all matters, at the department level, regarding Registrations and Re-registrations of courses and also to provide guidance and counseling to students regarding these issues.

R.PHARM.(UG).7. TEACHING AND EXAMINATION SCHEME

The Academic Council shall approve the teaching and examination scheme, syllabus and all relevant academic matters including modifications, addition, deletion etc., on the recommendation of Faculty of Pharmacy.

R.PHARM.(UG).8. SEMESTER AND TERM

Normally courses will be offered semester-wise as given in the teaching scheme. However the Institute may offer certain course/s of a semester in both terms of an academic year in order to help students to pursue their study more expeditiously.

SUMMER SEMESTER refers to the academic session scheduled in the summer vacation for supplementary/remedial teaching and examinations. Normally, selected courses of only the first two semesters will be offered in the Summer Semester.

R.PHARM.(UG).9. REGISTRATION IN COURSES

- 9.1 There will be five categories of Registrations. All five categories will be collectively referred to simply as Registration. Individual categories will be referred to by their symbols.
- 9.2 All Registrations, wherever applicable, will be subject to availability of courses.
- 9.3 Registration will be done course-wise.

CATEGORIES OF REGISTRATION

The Five categories of Registration are:

IR - Initial Registration

RS - Repeat Registration for studying all components of a theory course

RES - Re-examination Registration for SEE component of a theory course

RL - Repeat Registration for studying all components of a practical course

REL - Re-examination Registration for SEE component of a practical course

9.4 Initial Registration (IR) -

In order to study a course for the first time, the student will register under the IR category. This will imply regular attendance for study of all components of that course and appearing at all examinations thereof.

IR registrations for courses of a semester are to be done for all courses of that Semester as shown in the Teaching Scheme; IR registration will not be permitted for lesser number of courses. The student who so registers (IR) for all courses of a semester will be considered as having been registered in that semester.

New entrants admitted to the programme on the basis of HSCE or equivalent will register (IR) for the first semester.

Diploma students admitted to the Degree programme will register (IR) for the semester as notified by Nirma University.

9.5 Repeat Registration for studying all components of a theory course (RS) -

The student whose Term is not granted, due to shortfall in attendance or disciplinary issues, for any registered theory course will repeat the study of all components of a theory course. The student will seek fresh registration for this purpose.

This category will imply regular attendance to study all components (i.e. LECT, as

applicable) and appearing at all examinations thereof.

9.6 Re-examination Registration for SEE component of a theory course (RES)-

This registration is necessary for appearing again in a SEE component of a Theory course. It will not involve regular teaching for studying that course.

9.7 Repeat Registration for studying all components of a practical course (RL)-

The student whose Term is not granted, due to shortfall in attendance or disciplinary issues, for any registered practical course will repeat the study of all components of a practical course. The student will seek fresh registration for this purpose.

This category will imply regular attendance to study all components (i.e. Practical, as applicable) and appearing at all examinations thereof.

9.8 Re-examination Registration for SEE component of a practical course (REL)-

This registration is necessary for appearing again in a SEE component of a Practical course. It will not involve regular teaching for studying that course.

9.9 Approval of Registration

Every student must apply in the prescribed form for registrations, as applicable. The decision on the student's request will be based on the availability of courses and applicable Regulations. The Director/HOI will issue appropriate orders for processing the application, including scrutiny, verification and final orders.

9.10 Simultaneous Registration and Re-registration

- (a) All re-registrations as applicable must be done before any registration.
- (b) Partial registration in the scheduled courses of a semester is not permitted.
- (c) A student will be permitted to register for higher semester after meeting requirements as per R.PHARM.(UG).15.

- (d) All students admitted through lateral entry will be required to pass courses as prescribed in Annexure-1. On passing these courses, they will be deemed to have earned credits of all credit courses of Semester I and II. However, these credits will not be considered for calculating their performance indices.

R.PHARM.(UG).10 GRADING OF PERFORMANCES

10.1 Letter grades and grade points allocations:

Based on the performances, each student shall be awarded a final letter grade at the end of the semester for each course. The letter grades and their corresponding grade points are given as under:

Letter grades and grade points equivalent to percentage of marks and performances:

Percentage of marks Obtained	Letter Grade	Grade Point	Performance
90.00 – 100	O	10	Outstanding
80.00 – 89.99	A	9	Excellent
70.00 – 79.99	B	8	Good
60.00 – 69.99	C	7	Fair
50.00 – 59.99	D	6	Average
Less than 50	F	0	Fail
Absent	Abs	0	Fail

R.PHARM.(UG).11. SCOPE OF EXAMINATIONS AND ASSESSMENT

The scope of the examinations and the method of assessment will be as follows:

11.1 In **internal** mark-based assessment, the overall percentage marks, if fractional, will be rounded off to the next higher integer value.

11.2 Internal Assessment (IR, RS and RL registration)

All exercises in Internal Assessment will be continuously assessed during the semester and given marks.

Oral examination may be included in the assessment at all possible stages.

The total marks of all units of Internal Assessment will be aggregated based on their *inter se* weights to give the overall percentage of marks in the Internal Assessment examination.

11.3 The assessment will be carried out based on the schemes for Internal Assessments and semester end examinations semester wise as approved by Academic Council, from time to time.

11.4 Semester-End Examination (SEE)

The expression “Semester End Examination” refers to the written examination of a respective Theory course taken at the end of a semester. This will cover the entire theory syllabus of particular course.

The expression “Semester End Examination” refers to the final practical examination of a respective Practical course taken at the end of a semester. This will cover the entire practical syllabus of particular course.

For courses with Non-University Examination, examinations shall be conducted by the subject experts at college level and the marks/grades shall be submitted to the university.

11.5 Supplementary Examination (SPE)

(RES and REL registration, grade F or Abs in a course)

The Institute may decide to hold Supplementary Examination after SEE for the students who have obtained grade F or Abs in SEE. Such students will have to seek RES or REL registration.

11.6 Schedule of SEE and SPE

SEEs of all courses of the programme, as per the teaching scheme, will be held at the end of both terms.

The term end Supplementary Examinations (SPE), if held, will be for only those courses that are offered in the semesters of that term.

11.7 Absence in any examination will be treated as absent (Abs) and no marks will be given.

R.PHARM.(UG).12. GRANTING OF TERM

12.1 The Term will be granted course-wise.

12.2 Compliance of attendance

The granting of Term for all the students (IR) will depend on the compliance of maintaining minimum 85% attendance in all components of the course (as applicable). Regular approval for remaining absent up to 15% is necessary.

Note: In the case of long duration training or project work, where final examination is not

possible before the Term ends, a certificate by the course coordinator that the student's progress is satisfactory will be acceptable.

12.3 The student who has not completed the minimum requirement of attendance may appeal to the Appeal Committee giving full reasons for his/her default. The decision of the Appeal Committee in all such cases will be final.

R.PHARM.(UG).13. GRADES IN EXAMINATIONS

Letter grades and grade points in each course equivalent to percentage of marks obtained:

Percentage of marks Obtained	Letter Grade	Grade Point
90.00 – 100	O	10
80.00 – 89.99	A	9
70.00 – 79.99	B	8
60.00 – 69.99	C	7
50.00 – 59.99	D	6
Less than 50	F	0
Absent	Abs	0

R.PHARM.(UG).14. INTERPRETATION OF GRADES

The interpretation of Grade and Grade point of individual course with its performance are as follows:

Letter grade 'O' and grade point – 10 is equivalent to Outstanding performances.

Letter grade 'A' and grade point – 9 is equivalent to Excellent performances.

Letter grade 'B' and grade point – 8 is equivalent to Good performances.

Letter grade 'C' and grade point – 7 is equivalent to Fair performances.
Letter grade 'D' and grade point – 6 is equivalent to Average performances.
Letter grade 'F' and grade point – 0 is equivalent to Fail performances.
Letter grade 'Abs' and grade point – 0 is equivalent to Fail performances.

R.PHARM.(UG).15. PASSING STANDARDS

15.1 A student shall be declared PASS and eligible for getting grade in a course of B.Pharm. Programme if he/she secures at least 50% marks in that particular course including Internal Assessment. For example, to be declared as PASS and to get grade, the student has to secure a minimum of 50 marks for the total of 100 including continuous mode of assessment and semester end theory examination and has to secure a minimum of 25 marks for the total 50 including Internal Assessment and semester end practical examination.

15.2 Carry forward of marks and Improvement of Internal Assessment

In case a student fails to secure the minimum 50% in any Theory or Practical course, then he/she shall reappear for the semester end examination of that course. However his/her marks of the Internal Assessment shall be carried over and he/she shall be entitled for grade obtained by him/her on passing.

^A However, the Dean, Faculty of Pharmacy be authorized to decide to allow improvement for Internal Assessment to the student on his/her request depending upon the situation.

15.3 Academic Progression:

No student shall be admitted to any examination unless he/she fulfills the norms given in R.PHARM.(UG).12. Academic progression rules are applicable as follows:

A student shall be eligible to carry forward all the courses of I, II and III semesters till the IV semester examinations. However, he/she shall not be eligible to attend the courses of V semester until all the courses of I and II semesters are successfully completed.

A student shall be eligible to carry forward all the courses of III, IV and V semesters till the VI semester examinations. However, he/she shall not be eligible to attend the courses of VII semester until all the courses of I, II, III and IV semesters are successfully completed.

A student shall be eligible to carry forward all the courses of V, VI and VII semesters till the VIII semester examinations. However, he/she shall not be eligible to get the course completion certificate until all the courses of I, II, III, IV, V and VI semesters are successfully completed.

A student shall be eligible to get his/her CGPA upon successful completion of the courses of I to VIII semesters within the stipulated time period as per the norms specified in R.PHARM.(UG).17.

A lateral entry student shall be eligible to carry forward all the courses of III, IV and V semesters till the VI semester examinations. However, he/she shall not be eligible to attend the courses of VII semester until all the courses of III and IV semesters are successfully completed.

A lateral entry student shall be eligible to carry forward all the courses of V, VI and VII semesters till the VIII semester examinations. However, he/she shall not be eligible to get the course completion certificate until all the courses of III, IV, V and VI semesters are successfully completed.

A lateral entry student shall be eligible to get his/her CGPA upon successful completion of the courses of III to VIII semesters within the stipulated time period as per the norms specified in R.PHARM.(UG).17.

Any student who has given more than 4 chances for successful completion of I / III semester courses and more than 3 chances for successful completion of II / IV semester courses shall be permitted to attend V / VII semester classes ONLY during the subsequent academic year as the case may be. In simpler terms there shall NOT be any ODD BATCH for any semester.

Note: Grade Abs should be considered as failed and treated as one head for deciding academic progression. Such rules are also applicable for those students who fail to register for examination(s) of any course in any semester.

R.PHARM.(UG).16. PERFORMANCE LEVELS

16.1 Indices

The performance level of the student in credit courses at different stages of his/her study

is given by the following indices. All index values will be rounded off to the second place of decimal.

SGPA -- Semester Grade Point Average

PGPA -- Progressive Grade Point Average

CGPA -- Cumulative Grade Point Average

SGPA - This grade point average is calculated when the student passes all the courses of the semester and it refers to the progress of the student in a semester.

PGPA - This grade point average is calculated at the end of any semester upto the stage under consideration and it refers to the progress of the student.

CGPA - This grade point average refers to the entire programme. It is calculated when the student passes the programme. The method of calculation is the same as for SGPA or PGPA but the summation is for the courses of all semesters of the programme.

16.2 Class and percentage:

The class shall be awarded on the basis of CGPA as follows:

First Class with Distinction = CGPA of 7.50 and above

First Class = CGPA of 6.50 to 7.49

Second Class = CGPA of 6 to 6.49

In case an equivalence between CGPA values and Class / % marks is desired, the same can be obtained as given below:

$$\text{Percentage marks (\%)} = (\text{CGPA} - 0.5) * 10$$

R.PHARM.(UG).17. CANCELLATION OF ADMISSION

The admission of following categories of students is liable to be cancelled:

- (i) Failure to earn credits of all courses of any semesters as per R.PHARM.(UG).15. However, the duration to earn credits shall be fixed as double the actual duration of the programme.

- (ii) Failure to earn requisite credits and CGPA of min. 6 to pass the programme within a stipulated period (after admission to the programme).

The student, whose admission is so cancelled under category (i), can appeal to the Appeal Committee. The Committee may grant an extension upto the one additional semester for deserving cases, provided the student gives a viable assurance to make up the shortfall within that period.

Notwithstanding anything contained above, the President may consider the cases of such students falling under category (i), if the student has cleared all the courses and have earned the requisite number of credits except one course, on an appeal filed. The President will consider such appeal on the recommendation of the appeal committee prescribed under the regulations for the purpose and after considering the genuineness of the case may give one additional attempt to the student concerned to clear the remaining course.

R.PHARM.(UG).18. EXAMINERS

All continuous assessments will be carried out by the faculty concerned. All other assessments / examinations will be carried out by a panel of at least two examiners. The extent of associating external experts with the examination, selection and appointment of all examiners will be decided by the Dean in consultation with a committee appointed for this purpose.

R.PHARM.(UG).19. SUMMER SEMESTER COURSES AND EXAMINATIONS

Dean is authorized to decide to offer summer semester courses and examinations.

R.PHARM.(UG).20. SUPPLEMENTARY COURSES

This category includes courses in General Development, Language and Communication skills, Entrepreneurship etc. It also includes NCC, NSS etc.

The teaching schemes for these courses will be shown separately. Components of the courses will in general be the same as for credit courses, except in courses like NCC, NSS, etc.

Except in the case of NCC or NSS training, the Regulations for registrations, granting of terms, examinations, assessment, grading and passing will be the same as those for the credit courses. However no Gracing will be allowed.

The students will have to pass these course/s as per R.PHARM.(UG).15. Cases of students who do not still pass this course/s will be referred to the Appeal Committee. Its decision in such cases will be final. The institute will issue separate instructions for NCC or NSS training.

The Transcript will contain an appropriate reference to these courses. Since no credits are allotted to them, they will not affect Performance Indices.

R.PHARM.(UG).21. AUDIT COURSES

Courses in this category will cover areas of Technology, Language skills, Management, Humanities etc. Mostly they may be limited to class room teaching and related assignments but if necessary, they may include laboratory work also.

These courses are optional and there will be no examination for them.

In each semester, the Institute will notify the audit courses likely to be offered along with their teaching schemes. Students who desire to study any of the notified course/s can decide their choice in consultation with the Advisor. The Institute will decide the courses to be actually offered after ascertaining the choice of the students. Normally a course will be offered if at least 8 students opt for its registration.

Registration will be done course wise. A student will be allowed to register for only one Audit course per semester. The Advisor will recommend the registration to HOD, only if in his opinion, the academic record of the student is satisfactory.

HOD will forward the proposal with his remarks to the Director for final orders.

The student will be deemed to have completed the course satisfactorily if he shows good conduct and behavior, maintains minimum 85% attendance and submits all assignments diligently and regularly.

However, the student who has not completed the minimum requirement of attendance may appeal to the Appeal Committee giving full reasons for his default. The decision of the Appeal Committee in all such cases will be final.

On satisfactory completion of the course, a suitable mention will be made in the Transcript of the student.

The structure of these courses will be decided by the Dean of the Faculty.

DISCLAIMER:

Though full care is taken to prepare this regulation, yet, in case of doubt, it is advisable to refer the concerned notification(s) published from time to time.

Section - II