# GURU KASHI UNIVERSITY

**Pharm.D**
**(Doctor of Pharmacy)**
**Session: 2024-25**
**Department of Pharmacy**

**Graduate Attributes of the Programme: -**

| **Type of learning outcomes** | **The Learning Outcomes Descriptors** |
|---|---|
| Graduates should be able to demonstrate the acquisition of: | |
| Learning outcomes that are specific to disciplinary/interdisciplinary areas of learning | Develop theoretical and practical knowledge to suitably serve the pharmaceutical industry or to pursue higher education. |
| | Inculcate professional competence regarding pharmaceutical product development cycle as well as clinical pharmacy services as a part of the health care team. |
| | Be imparted active and effective communication skills, team management skills and other managerial level attributes. |
| | Be acquainted about their role and responsibilities regarding environmental and social upliftment and ethical conduct in profession and society. |
| | Be mentored for development of inquisitive aptitude and learning attitude to ensure suitability in the professional working scenario. |
| Generic learning outcomes | Ability to apply principles and knowledge of Anatomy, Physiology, pathophysiology, microbiology, pharmacology, food and nutraceuticals and cosmetics for good health of the society. |
| | Ability to apply the knowledge of inorganic chemistry, biochemistry, medicinal chemistry, natural and herbal products and pharmacognostical principles for discovery and development of new drugs. |
| | Understand the principles of biotechnology, biopharmaceutics, pharmaceutical engineering, and develop methodology for research work. |

**Programme Learning outcomes:** An Undergraduate Certificate is awarded to students who have demonstrated the achievement of the outcomes located at level 5.5:

| **Element of the Descriptor** | **Programme learning outcomes relating to Undergraduate Certificate** |
|---|---|
| The graduates should be able to demonstrate the acquisition of: | |
| 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 |
| 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. |
| 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. |
| Modern tool usage | Learn, select, and apply appropriate methods and procedures, resources, and modern pharmacy-related computing tools with an understanding of the limitations. |
| 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 wellbeing. |
| 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). |
| Pharmaceutical Ethics | Honour 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. |
| 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 |
| 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. |
| 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. |
| 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. |
| Credit requirements | 96 |
| Entry requirements | Candidate shall have passed 10+2 examination conducted by the respective state/central government authorities recognized as equivalent to10+2 examination by the Association of the Indian Universities (AIU) with English as one of the subjects and Physics, Chemistry, Mathematics/ Biology as optional subjects individually. However the students possessing 10+2 qualification from non-formal and non-class rooms based schooling such as National Institute of Open schooling, open school systems of states etc. shall not be eligible for admission to B. Pharmacy course.<br>Any other qualification approved by the Pharmacy council of India as equivalent to any of the above examinations. |

## Course Structure of the Program

| 1st Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Course Code** | **Course Title** | **Type of Course** | **L** | **T** | **P** | **Credit** | **Int** | **Ext** | **Total** |
| BDP101T | Human Anatomy and Physiology | Core | 3 | 1 | 0 | 4 | 30 | 70 | 100 |
| BDP102T | Pharmaceutics | Core | 2 | 1 | 0 | 3 | 30 | 70 | 100 |
| BDP103T | Medicinal Biochemistry | Core | 3 | 1 | 0 | 4 | 30 | 70 | 100 |
| BDP104T | Pharmaceutical Organic Chemistry | Core | 3 | 1 | 0 | 4 | 30 | 70 | 100 |
| BDP105T | Pharmaceutical Inorganic Chemistry | Core | 2 | 1 | 0 | 3 | 30 | 70 | 100 |
| BDP106 RBT / BDP 106RMT | Remedial Mathematics# / Biology$ | Deficient Course | 3 | 1 | 0 | 4 | 30 | 70 | 100 |
| BDP107P | Human Anatomy and Physiology | Technical | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| BDP108P | Pharmaceutics | Technical | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| BDP109P | Medicinal Biochemistry | Technical | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| BDP110P | Pharmaceutical Organic Chemistry | Technical | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| BDP111P | Pharmaceutical Inorganic Chemistry | Technical | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| BDP112P | Remedial Biology$ | Deficient Course | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| | **Total** | | 16 | 06 | 18 | 34 | 360 | 840 | 1200 |

#Applicable ONLY for the students who have studied Mathematics /Physics /Chemistry at HSC and appearing for Remedial Biology (RB) course.

$Applicable ONLY for the students who have studied Physics /Chemistry /Botany/Zoology at HSC and appearing for Remedial Mathematics (RM) course.

| 2nd Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Course Code** | **Course Title** | **Type of Course** | **L** | **T** | **P** | **Credit** | **Int** | **Ext** | **Total** |
| BDP201T | Pathophysiology | Core | 3 | 1 | 0 | 4 | 30 | 70 | 100 |
| BDP203T | Pharmaceutical Microbiology | Core | 3 | 1 | 0 | 4 | 30 | 70 | 100 |
| BDP204T | Pharmacognosy & Phytopharmaceuticals | Core | 3 | 1 | 0 | 4 | 30 | 70 | 100 |
| BDP205T | Pharmacology-I | Core | 3 | 1 | 0 | 4 | 30 | 70 | 100 |
| BDP206T | Community Pharmacy | Core | 2 | 1 | 0 | 3 | 30 | 70 | 100 |
| BDP207T | Pharmaco-therapeutics-I | Core | 3 | 1 | 0 | 4 | 30 | 70 | 100 |
| BDP208P | Pharmaceutical Microbiology | Technical | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| BDP209P | Pharmacognosy & Phytopharmaceuticals | Technical | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| BDP210P | Pharmaco therapeutics-I | Technical | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| | **Total** | | **17** | **6** | **9** | **29** | 270 | 630 | 900 |

*Non-University Examination (NUE)

| 3rd Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Course Code** | **Course Title** | **Type of Course** | **L** | **T** | **P** | **Credit** | **Int** | **Ext** | **Total** |
| BDP301T | Pharmacology-II | Core | 3 | 1 | 0 | 4 | 30 | 70 | 100 |
| BDP302T | Pharmaceutical Analysis | Core | 3 | 1 | 0 | 4 | 30 | 70 | 100 |
| BDP303T | Pharmacotherapeutics -II | Core | 3 | 1 | 0 | 4 | 30 | 70 | 100 |
| BDP304T | Pharmaceutical Jurisprudence | Core | 2 | 0 | 0 | 2 | 30 | 70 | 100 |
| BDP305T | Medicinal Chemistry | Core | 3 | 1 | 0 | 4 | 30 | 70 | 100 |
| BDP306T | Pharmaceutical Formulations | Core | 2 | 1 | 0 | 3 | 30 | 70 | 100 |
| BDP307P | Pharmacology-II | Technical | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| BDP308P | Pharmaceutical Analysis | Technical | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| BDP309P | Pharmacotherapeutics -II | Technical | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| BDP310P | Medicinal Chemistry | Technical | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| BDP311P | Pharmaceutical Formulations | Technical | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| | **Total** | | **16** | **5** | **15** | **29** | 330 | 770 | 1100 |

| 4th Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Course Code** | **Course Title** | **Type of Course** | | | | | | | |
| | | | **L** | **T** | **P** | **Credit** | **Int** | **Ext** | **Total** |
| BDP401T | Pharmacotherapeutics -III | Core | 3 | 1 | 0 | 4 | 30 | 70 | 100 |
| BDP402T | Hospital Pharmacy | Core | 2 | 1 | 0 | 3 | 30 | 70 | 100 |
| BDP403T | Clinical Pharmacy | Core | 3 | 1 | 0 | 4 | 30 | 70 | 100 |
| BDP404T | Biostatistics & Research Methodology | Core | 2 | 1 | 0 | 3 | 30 | 70 | 100 |
| BDP405T | Biopharmaceutics & Pharmacokinetics | Core | 3 | 1 | 0 | 4 | 30 | 70 | 100 |
| BDP406T | Clinical Toxicology | Core | 2 | 1 | 0 | 3 | 30 | 70 | 100 |
| BDP407P | Pharmacotherapeutics -III | Technical | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| BDP408P | Hospital Pharmacy | Technical | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| BDP409P | Clinical Pharmacy | Technical | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| BDP410P | Biopharmaceutics & Pharmacokinetics | Technical | 0 | 0 | 3 | 2 | 30 | 70 | 100 |
| | **Total** | | **15** | **6** | **12** | **29** | 300 | 700 | 1000 |

| 5th Year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Course Code** | **Course Title** | **Type of Course** | | | | | | | |
| | | | **L** | **T** | **P** | **Credi** | **Int** | **Ext** | **Total** |
| BDP501T | Clinical Research | Core | 3 | 1 | 0 | 4 | 30 | 70 | 100 |
| BDP502T | Pharmacoepidemiology and Pharmacoeconomics | Core | 3 | 1 | 0 | 4 | 30 | 70 | 100 |
| BDP503T | Clinical Pharmacokinetics & Pharmacotherapeutic Drug Monitoring | core | 2 | 1 | 0 | 3 | 30 | 70 | 100 |
| BDP504P | Clerkship * | Technical | 0 | 1 | 0 | 1 | 30 | 70 | 100 |
| BDP505P | Project work (Six Months) | Technical | 0 | 0 | 20 | 10 | - | 100 | 100 |
| | **Total** | | **8** | **4** | **20** | **22** | 120 | 380 | 500 |
| | Grand Total | | | | | **96** | | | 4700 |

| | |
|---|---|
| Total Number of Course | 48 |
| Number of Theory Course | 28 |
| Number of Practical Course | 20 |
| **Total Number of Credits** | **96** |