Sanjay Ghodawat University Kolhapur

School of Pharmaceutical Sciences

B. Pharm Program

Curriculum Structure (R26) as per

NEP 2020

Semester: I-VIII

With effect from: 2026-2027

Program Structure for B. Pharmacy: First Year B. Pharm (R26) Semester I: Teaching Scheme

Course Code	Course Name	Teaching Scheme (Hrs/week)		Credits Assigned		
		Theory	Practical	Theory	Practical	Total credits
BP101T	Basics of Python Programming for Pharmaceutical Sciences (Theory)	2	-	2	-	2
BP102T	General Pharmacy (Theory)	3	-	3	-	3
BP103T	Healthcare Psychology and Communication Skills (Theory)	1	-	1	-	1
BP104T	Human Anatomy, Physiology and Pathophysiology I (Theory)	4	-	4	-	4
BP105T	Introduction to Pharmacognosy (Theory)	3	-	3	-	3
BP106T	Pharmaceutical Inorganic and Analytical Chemistry (Theory)	3	-	3	-	3
BP107P	General Pharmacy (Practical)	-	3	-	1	1
BP108P	Healthcare Psychology and Communication Skills (Practical)	-	2	-	1	1
BP109P	Human Anatomy, Physiology and Pathophysiology I (Practical)	-	3	-	1	1
BP110P	Introduction to Pharmacognosy (Practical)	-	3	-	1	1
BP111P	Pharmaceutical Inorganic and Analytical Chemistry (Practical)	-	3	-	1	1
Total		**16**	**14**	**16**	**5**	**21**

Program Structure for B. Pharm Semester I: Evaluation Scheme

Course Code	Course Name	Internal Marks			SEE	POE	Total Marks
		Sess. Exam	CA	Total			
BP101T	Basics of Python Programming for Pharmaceutical Sciences (Theory)	10	10	20	30	-	50
BP102T	General Pharmacy (Theory)	15	15	30	45	-	75
BP103T	Healthcare Psychology and Communication Skills (Theory)	10	10	20	30	-	50
BP104T	Human Anatomy, Physiology and Pathophysiology I (Theory)	20	20	40	60	-	100
BP105T	Introduction to Pharmacognosy (Theory)	15	15	30	45	-	75
BP106T	Pharmaceutical Inorganic and Analytical Chemistry (Theory)	15	15	30	45	-	75
BP107P	General Pharmacy (Practical)	10	10	20	-	30	50
BP108P	Healthcare Psychology and Communication Skills (Practical)	10	10	20	-	30	50
BP109P	Human Anatomy, Physiology and Pathophysiology I (Practical)	10	10	20	-	30	50
BP110P	Introduction to Pharmacognosy (Practical)	10	10	20	-	30	50
BP111P	Pharmaceutical Inorganic and Analytical Chemistry (Practical)	10	10	20	-	30	50
						Total	**675**

Program Structure for B. Pharm Semester II: Teaching Scheme

Course Code	Course Name	Teaching Scheme (Hrs/week)		Credits Assigned		
		Theory	Practical	Theory	Practical	Total credits
BP201T	Applied Biostatistics and Data Analytics for Pharmaceutical Sciences (Theory)	2	-	2	-	2
BP202T	Biochemistry (Theory)	3	-	3	-	3
BP203T	Human Anatomy, Physiology and Pathophysiology II (Theory)	4	-	4	-	4
BP204T	Pharmaceutical Organic Chemistry (Theory)	4	-	4	-	4
BP205T	Pharmacognosy and Phytochemistry (Theory)	4	-	4	-	4
BP206T	Physical Pharmaceutics (Theory)	3	-	3	-	3
BP207P	Biochemistry (Practical)	-	3	-	1	1
BP208P	Human Anatomy, Physiology and Pathophysiology II (Practical)	-	3	-	1	1
BP209P	Pharmaceutical Organic Chemistry (Practical)	-	3	-	1	1
BP210P	Pharmacognosy and Phytochemistry (Practical)	-	3	-	1	1
BP211P	Physical Pharmaceutics (Practical)	-	3	-	1	1
BP212P SEC*	BP212P SEC1 - Communication Skills BP212P SEC2 - Mental Well-Being, Stress & Conflict Management BP212P SEC3 - Fundamentals of Computer Operations	-	2	-	1	1
BP213P CCA	Co-curricular Activity					Audit Course
Total		**20**	**17**	**20**	**06**	**26**

Co-curricular Activity Note: It shall be compulsory for the pharmacy institution to adopt a village or a ward in the panchayath/ municipal corporation and engage in community service activities. The community services shall include (but not limited to) prescription survey, awareness of rational drug use, patient counselling services or activities as per the prescribed course content.

Program Structure for B. Pharm Semester II: Evaluation Scheme

Course Code	Course Name	Internal Marks			SEE	POE	Total Marks
		Sess. Exam	CA	Total			
BP201T	Applied Biostatistics and Data Analytics for Pharmaceutical Sciences (Theory)	10	10	20	30	-	50
BP202T	Biochemistry (Theory)	15	15	30	45	-	75
BP203T	Human Anatomy, Physiology and Pathophysiology II (Theory)	20	20	40	60	-	100
BP204T	Pharmaceutical Organic Chemistry (Theory)	20	20	40	60	-	100
BP205T	Pharmacognosy and Phytochemistry (Theory)	20	20	40	60	-	100
BP206T	Physical Pharmaceutics (Theory)	15	15	30	45	-	75
BP207P	Biochemistry (Practical)	10	10	20	-	30	50
BP208P	Human Anatomy, Physiology and Pathophysiology II (Practical)	10	10	20	-	30	50
BP209P	Pharmaceutical Organic Chemistry (Practical)	10	10	20	-	30	50
BP210P	Pharmacognosy and Phytochemistry (Practical)	10	10	20	-	30	50
BP211P	Physical Pharmaceutics (Practical)	10	10	20	-	30	50
BP212P SEC	SEC – Elective I (Practical)	10	10	20	-	30	50
						Total	**800**

Program Structure for B. Pharm Semester III: Teaching Scheme

Course Code	Course Name	Teaching Scheme (Hrs/week)		Credits Assigned		
		Theory	Practical	Theory	Practical	Total credits
BP301T	Introduction to Machine Learning in Pharmaceutical Sciences (Theory)	2	-	2	-	2
BP302T	Environmental Science (Theory)	1	-	1	-	1
BP303T	Ethics and Universal Human Values (Theory)	1	-	1	-	1
BP304T	General Pharmacology (Theory)	3	-	3	-	3
BP305T	Heterocyclic Compounds and Stereochemistry (Theory)	3	-	3	-	3
BP306T	Pharmaceutical Dosage Forms I (Theory)	3	-	3	-	3
BP307T	Pharmaceutical Engineering (Theory)	3	-	3	-	3
BP308T	Pharmaceutical Microbiology (Theory)	3	-	3	-	3
BP309P	General Pharmacology (Practical)	-	4	-	2	2
BP310P	Heterocyclic Compounds and Stereochemistry (Practical)	-	4	-	2	2
BP311P	Pharmaceutical Dosage Forms I (Practical)	-	3	-	1	1
BP312P AEC	BP312PAEC1 – Nutraceuticals and Functional Foods	-	2	-	1	1
	BP312PAEC2 – Food Analysis					
	BP312PAEC3 – Yoga and Life Sciences					
Total		**19**	**13**	**19**	**6**	**25**

Program Structure for B. Pharm Semester III: Evaluation Scheme

Course Code	Course Name	Internal Marks			SEE	POE	Total Marks
		Sess. Exam	CA	Total			
BP301T	Introduction to Machine Learning in Pharmaceutical Sciences (Theory)	10	10	20	30	-	50
BP302T	Environmental Science (Theory)	10	10	20	30	-	50
BP303T	Ethics and Universal Human Values (Theory)	10	10	20	30	-	50
BP304T	General Pharmacology (Theory)	15	15	30	45	-	75
BP305T	Heterocyclic Compounds and Stereochemistry (Theory)	15	15	30	45	-	75
BP306T	Pharmaceutical Dosage Forms I (Theory)	15	15	30	45	-	75
BP307T	Pharmaceutical Engineering (Theory)	15	15	30	45	-	75
BP308T	Pharmaceutical Microbiology (Theory)	15	15	30	45	-	75
BP309P	General Pharmacology (Practical)	10	10	20	-	30	50
BP310P	Heterocyclic Compounds and Stereochemistry (Practical)	10	10	20	-	30	50
BP311P	Pharmaceutical Dosage Forms I (Practical)	10	10	20	-	30	50
BP312P	AEC – Elective 2 (Practical)	10	10	20	-	30	50
						Total	**725**

Program Structure for B. Pharm Semester IV: Teaching Scheme

Course Code	Course Name	Teaching Scheme (Hrs/week)		Credits Assigned		
		Theory	Practical	Theory	Practical	Total credits
BP401T	Herbal Drug Technology (Theory)	3	-	3	-	3
BP402T	Medicinal Chemistry (Theory)	3	-	3	-	3
BP403T	Pharmaceutical Biotechnology (Theory)	3	-	3	-	3
BP404T	Social Pharmacy and Public Health (Theory)	2	-	2	-	2
BP405T	Systemic Pharmacology I (Theory)	3	-	3	-	3
BP406P	Herbal Drug Technology (Practical)	-	3	-	1	1
BP407P	Medicinal Chemistry (Practical)	-	3	-	1	1
BP408P	Pharmaceutical Biotechnology (Practical)	-	3	-	1	1
BP409P	Social Pharmacy and Public Health (Practical)	-	2	-	1	1
BP410P	Systemic Pharmacology I (Practical)	-	3	-	1	1
BP411I	Internship (Mandatory)	-	8	-	4	4
Total		**14**	**14**	**14**	**9**	**23**

Program Structure for B. Pharm Semester IV: Evaluation Scheme

Course Code	Course Name	Internal Marks			SEE	POE	Total Marks
		Sess. Exam	CA	Total			
BP401T	Herbal Drug Technology (Theory)	15	15	30	45	-	75
BP402T	Medicinal Chemistry (Theory)	15	15	30	45	-	75
BP403T	Pharmaceutical Biotechnology (Theory)	15	15	30	45	-	75
BP404T	Social Pharmacy & Public Health (Theory)	10	10	20	30	-	50
BP405T	Systemic Pharmacology I (Theory)	15	15	30	45	-	75
BP406P	Herbal Drug Technology (Practical)	10	10	20	-	30	50
BP407P	Medicinal Chemistry (Practical)	10	10	20	-	30	50
BP408P	Pharmaceutical Biotechnology (Practical)	10	10	20	-	30	50
BP409P	Social Pharmacy and Public Health	10	10	20	-	30	50
BP410P	Systemic Pharmacology I (Practical)	10	10	20	-	30	50
BP411I	Internship (Mandatory)	-	-	-	-	100	100
						Total	**700**

***Internship note:** Every candidate shall be required to complete a minimum of 120 hours of practical training (before 4th Semester), spread over a period of two semesters, in a Pharmaceutical/ Cosmetics/ Medical Devices/ Food Industry, or in a Hospital/Community Pharmacy, or any other relevant field as per the prescribed course content. He/she has to submit two internship reports which will be evaluated separately. Certificate and Report submission: 75 Marks Presentation and Discussion: 25 Marks Total: 100 Marks.

Lateral Entry Option: Student completed D. Pharmacy can join direct second year of B. Pharmacy Program.

Program Structure for B. Pharm Semester V: Teaching Scheme

Course Code	Course Name	Teaching Scheme (Hrs/week)		Credits Assigned		
		Theory	Practical	Theory	Practical	Total credits
BP501T	Biomedicinal Chemistry (Theory)	3	-	3	-	3
BP502T	Industrial Pharmacognosy (Theory)	3	-	3	-	3
BP503T	Innovation and Startup Ecosystem (Theory)	2	-	2	-	2
BP504T	Pharmaceutical Dosage Form II (Theory)	2	-	2	-	2
BP505T	Pharmaceutical Quality Assurance (Theory)	3	-	3	-	3
BP506T	Systemic Pharmacology II (Theory)	3	-	3	-	3
BP507P	Biomedicinal Chemistry (Practical)	-	4	-	2	2
BP508P	Industrial Pharmacognosy (Practical)	-	3	-	1	1
BP509P	Pharmaceutical Dosage Form II (Practical)	-	3	-	1	1
BP510P	Systemic Pharmacology II (Practical)	-	4	-	2	2
Total		**16**	**14**	**16**	**6**	**22**

Program Structure for B. Pharm Semester V: Evaluation Scheme

Course Code	Course Name	Internal Marks			SEE	POE	Total Marks
		Sess. Exam	CA	Total			
BP501T	Biomedicinal Chemistry (Theory)	15	15	30	45	-	75
BP502T	Industrial Pharmacognosy (Theory)	15	15	30	45	-	75
BP503T	Innovation and Startup Ecosystem (Theory)	10	10	20	30	-	50
BP504T	Pharmaceutical Dosage Form II (Theory)	10	10	20	30	-	50
BP505T	Pharmaceutical Quality Assurance (Theory)	15	15	30	45	-	75
BP506T	Systemic Pharmacology II (Theory)	15	15	30	45	-	75
BP507P	Biomedicinal Chemistry (Practical)	10	10	20	-	30	50
BP508P	Industrial Pharmacognosy (Practical)	10	10	20	-	30	50
BP509P	Pharmaceutical Dosage Form II (Practical)	10	10	20	-	30	50
BP510P	Systemic Pharmacology II (Practical)	10	10	20	-	30	50
						Total	**600**

Program Structure for B. Pharm Semester VI: Teaching Scheme

Course Code	Course Name	Teaching Scheme (Hrs/week)		Credits Assigned		
		Theory	Practical	Theory	Practical	Total credits
BP601T	Advanced Pharmacognosy (Theory)	3	-	3	-	3
BP602T	Biopharmaceutics and Pharmacokinetics (Theory)	3	-	3	-	3
BP603T	Intellectual Property Rights (Theory)	2	-	2	-	2
BP604T	AI applications in Pharmaceutical Sciences (Theory)	2	-	2	-	2
BP605T	Pharmaceutical Analysis (Theory)	3	-	3	-	3
BP606T	Pharmaceutical Jurisprudence (Theory)	3	-	3	-	3
BP607T AEC	BP607TAEC1-Green Chemistry	1	-	1	-	1
	BP607TAEC2- Materiovigilance and Hemovigilance					
	BP607TAEC3- Scientific Writing					
	BP607TAEC4- Drug Store and Business Management					
	BP607TAEC5- Career Building in Cultivation of Medicinal Plants					
	BP607TAEC6- Active Pharmaceutical Ingredients & Excipient Sciences					
BP608P	Biopharmaceutics and Pharmacokinetics (Practical)	-	3	-	-	1
BP609P	Pharmaceutical Analysis (Practical)	-	4	-	-	2
BP610P SEC	BP610PSEC1- Computer-Aided Drug Design	-	2	-	-	1
	BP610PSEC2- Analytical Method Development and Validation					
	BP610PSEC3- Principles of Preclinical Studies					
BP611P VAC	BP611PVAC1- Professional Skills	-	2	-	-	1
	BP611PVAC2- Process Analytical Technology (PAT) & QbD in Formulation Science.					
BP612I	Internship (Mandatory)	-	8	-	4	4
Total		**17**	**19**	**17**	**4**	**26**

Program Structure for B. Pharm Semester VI: Evaluation Scheme

Course Code	Course Name	Internal Marks			SEE	POE	Total Marks
		Sess. Exam	CA	Total			
BP601T	Advanced Pharmacognosy (Theory)	15	15	30	45	-	75
BP602T	Biopharmaceutics and Pharmac okinetics (Theory)	15	15	30	45	-	75
BP603T	Intellectual Property Rights (Theory)	10	10	20	30	-	50
BP604T	AI applications in Pharmaceutical Sciences (Theory)	10	10	20	30	-	50
BP605T	Pharmaceutical Analysis (Theory)	15	15	30	45	-	75
BP606T	Pharmaceutical Jurisprudence (Theory)	15	15	30	45	-	75
BP607T ACE	AEC – Elective 3 (Theory)	10	10	20	30	-	50
BP608P	Biopharmaceutics and Pharmacokinetics (Practical)	10	10	20	-	30	50
BP609P	Pharmaceutical Analysis (Practical)	10	10	20	-	30	50
BP610P SEC	SEC – Elective 4 (Practical)	10	10	20	-	30	50
BP611P VAC	VAC – Elective 5 (Practical)	10	10	20	-	30	50
BP612I	Internship (Mandatory)	4	-	-	-	-	100
						Total	**750**

***Internship note:**

Every candidate shall be required to complete a minimum of 120 hours of practical training (before 6th Semester), spread over a period of two semesters, in a Pharmaceutical/ Cosmetics/ Medical Devices/ Food Industry, or in a Hospital/Community Pharmacy, or any other relevant field as per the prescribed course content. He/she has to submit two internship reports which will be evaluated separately. Certificate and Report submission: 75 Marks Presentation and Discussion: 25 Marks Total: 100 Marks.

Program Structure for B. Pharm Semester VII: Teaching Scheme

Course Code	Course Name	Teaching Scheme (Hrs/week)		Credits Assigned		
		Theory	Practical	Theory	Practical	Total credits
BP701T	Biostatistics and Research Methodology (Theory)	3	-	3	-	3
BP702T	Cosmetics and Cosmeceuticals (Theory)	2	-	2	-	2
BP703T	AI in Clinical Applications (Theory)	2	-	2	-	2
BP704T	Modern Analytical Techniques (Theory)	3	-	3	-	3
BP705T	Pharmacovigilance (Theory)	3	-	3	-	3
BP706T	Pharmacy Practice (Theory)	3	-	3	-	3
BP707T	Regulatory Affairs (Theory)	2	-	2	-	2
BP708T AEC	BP708TAEC1: Current Good Manufacturing Practices (cGMP)	1	-	1	-	1
	BP708TAEC2: Pharmaceutical Automation					
	BP708TAEC3: Modern Techniques in Cellular Biology					
	BP708TAEC4: Medical Devices					
	BP708TAEC5: Transformation of Food Waste into Medicinal Products					
	BP708TAEC6: Biosimilars, Vaccines & Macromolecules					
BP709P	Modern Analytical Techniques (Practical)	-	3	-	1	1
BP710RP	Research Project - Phase I	-	-	-	6	6
Total		**19**	**3**	**19**	**7**	**26**

Program Structure for B. Pharm Semester VII: Evaluation Scheme

Course Code	Course Name	Internal Marks			SEE	POE	Total Marks
		Sess. Exam	CA	Total			
BP701T	Biostatistics and Research Methodology (Theory)	15	15	30	45	-	75
BP702T	Cosmetics and Cosmeceuticals (Theory)	10	10	20	30	-	50
BP703T	AI in Clinical Applications (Theory)	10	10	20	30	-	50
BP704T	Modern Analytical Techniques (Theory)	15	15	30	45	-	75
BP705T	Pharmacovigilance (Theory)	15	15	30	45	-	75
BP706T	Pharmacy Practice (Theory)	15	15	30	45	-	75
BP707T	Regulatory Affairs (Theory)	10	10	20	30	-	50
BP708T	AEC – Elective 6 (Theory)	10	10	20	30	-	50
BP709P	Modern Analytical Techniques (Practical)	10	10	20	-	30	50
BP710RP	Research Project - Phase I	-	-	-	-	150	150
						Total	**700**

Research Project Note:

All students shall undertake a project under the supervision of a teacher and submit a report, preferably with the involvement of an external mentor from Industry, Hospital, NABL or CDSCO-approved labs, or an Allied/Interdisciplinary field. The project shall be carried out in groups not exceeding three members. The project report must be submitted in triplicate as a typed and bound copy of not less than 25 pages. Internal and external examiners appointed by the University shall evaluate the project during the practical examinations of the respective semester(s), and students shall be evaluated in groups. Additionally, students are permitted the option to pursue a continuous research theme initiated in the seventh semester and extending through the eighth semester. Under this provision, the specific project milestones achieved by the conclusion of the seventh semester shall undergo formal evaluation by the appointed examiners during that semester's final examination.

Program Structure for B. Pharm Semester VIII: Teaching Scheme

Course Code	Course Name	Teaching Scheme (Hrs/week)		Credits Assigned		
		Theory	Practical	Theory	Practical	Total credits
BP801T	Ethical Considerations and Translational Applications of AI in Pharmacy (Theory)	2	-	2	-	2
BP802T	Clinical Pharmacotherapeutics (Theory)	2	-	2	-	2
BP803T	Industrial Pharmacy and Facility Design (Theory)	3	-	3	-	3
BP804T	Pharmaceutical Management (Theory)	2	-	2	-	2
BP805T	Sterile Dosage Forms and Novel Drug Delivery System (Theory)	3	-	3	-	3
BP806T AEC	BP806TAEC1: Pharmaceutical Packaging	2	-	2	-	2
	BP806TAEC2: Supply Chain Management					
	BP806TAEC3: Industrial Safety and Waste Management					
	BP806TAEC4: Traditional Healing Practices of India					
	BP806TAEC5: Futuristic Pharma through AR/VR: Pharma 4.0					
	BP806TAEC6: Herbal Cosmetics for Industry Perspective					
BP807P	BP806TAEC1: Pharmaceutical Marketing Skills (Practical)	-	2	-	1	1
BP808P	Sterile Dosage Forms and Novel Drug Delivery System (Practical)	-	4	-	2	2
BP809P VAC	BP809PVAC1: Cleaning Validation	-	2	-	1	1
	BP809PVAC2: Basic Training in Aseptic Handling Techniques					
	BP809PVAC3: Impurity Profiling					
BP810RP	Research Project - Phase II	-	-	-	6	6
Total		**14**	**8**	**14**	**10**	**24**

Program Structure for B. Pharm Semester VIII: Evaluation Scheme

Course Code	Course Name	Internal Marks			SEE	POE	Total Marks
		Sess. Exam	CA	Total			
BP801T	Ethical Considerations and Translational Applications of AI in Pharmacy (Theory)	10	10	20	30	-	50
BP802T	Clinical Pharmacotherapeutics (Theory)	10	10	20	30	-	50
BP803T	Industrial Pharmacy and Facility Design (Theory)	15	15	30	45	-	75
BP804T	Pharmaceutical Management (Theory)	10	10	20	30	-	50
BP805T	Sterile Dosage Forms and Novel Drug Delivery System (Theory)	15	15	30	45	-	75
BP806T AEC	AEC – Elective 7 (Theory)	10	10	20	30	-	50
BP807P	BP806TAEC1: Pharmaceutical Marketing Skills (Practical)	10	10	20	-	30	50
BP808P	Sterile Dosage Forms and Novel Drug Delivery System (Practical)	10	10	20	-	30	50
BP809P VAC	VAC – Elective 8 (Practical)	10	10	20	-	30	50
BP810RP	Research Project - Phase II	-	-	-	-	150	150
						Total	**650**

Research Project Note:

All students shall undertake a project under the supervision of a teacher and submit a report, preferably with the involvement of an external mentor from Industry, Hospital, NABL or CDSCO-approved labs, or an Allied/Interdisciplinary field. The project shall be carried out in groups not exceeding three members. The project report must be submitted in triplicate as a typed and bound copy of no less than 25 pages. Internal and external examiners appointed by the University shall evaluate the project during the practical examinations of the respective semester(s), and students shall be evaluated in groups. Additionally, students are permitted the option to pursue a continuous research theme initiated in the seventh semester and extending through the eighth semester. Under this provision, the specific project milestones achieved by the conclusion of the seventh semester shall undergo formal evaluation by the appointed examiners during that semester's final examination.