

# Technocrats Institute of Technology-Pharmacy

Pharmacy



# Part A : Institutional Information

## 1 Name and Address of the Institution

Technocrats Institute of Technology-Pharmacy,  
IN FRONT OF HATHAIKHEDA DAM, POST PIPLANI, P.B. NO-24, BHEL 462021

## 2 Name and Address of Affiliating University

## 3 Year of establishment of the Institution:

2002

## 4 Type of the Institution:

- |   |   |
|---|---|
| <input type="radio"/> University        | <input checked="" type="radio"/> Affiliated     |
| <input type="radio"/> Deemed University | <input type="radio"/> Any other(Please Specify) |
| <input type="radio"/> Autonomous        |   |

## 5 Ownership Status:

- |   |  |
|---|--|
| <input type="radio"/> Central Government        | <input type="checkbox"/> Trust                     |
| <input type="radio"/> State Government          | <input checked="" type="checkbox"/> Society        |
| <input type="radio"/> Grant In Aided            | <input type="checkbox"/> Section 25 Company        |
| <input checked="" type="radio"/> Self financing | <input type="checkbox"/> Any Other(Please Specify) |

## 6 Other Academic Institutions of the Trust/Society/etc., if any

Name of Institutions	Year of Establishment	Programs of Study	Location
Technocrats Institute of Technology	2000	Bachelor of Engineering, M.Tech	Anand Nagar, BHEL Bhopal MP-462021
Technocrats Institute of Technology (EXCELLENCE)	2007	Bachelor of Engineering, M.Tech	Anand Nagar, BHEL Bhopal MP-462021
Technocrats Institute of Technology – MBA	2003	MBA	Anand Nagar, BHEL Bhopal MP-462021
TIT College of Pharmacy	2004	B.Pharm, M.Pharm	Anand Nagar near Hathai Kehda Dam Bhopal MP

## 7 Details of all the programs being offered by the Institution under consideration:

Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program for Duration
B.Pharm	UG	2002	2002	60	Yes	100	Applying first time	--	--	Yes	4
M.Pharm (Pharmaceutics)	PG	2007	2007	10	Yes	15	Eligible but not applied	--	--	No	2
M.Pharm (Pharmaceutical Chemistry)	PG	2008	2008	15	No	15	Eligible but not applied	--	--	No	2
M.Pharm (Pharmacology)	PG	2010	2010	15	No	15	Eligible but not applied	--	--	No	2
D.Pharm	Diploma	2019	2019	60	No	60	Eligible but not applied	--	--	No	2

**8 Programs to be considered for Accreditation vide this application:**

S No	Level	Discipline	Program
1	Under Graduate	Pharmacy	Pharmacy

**9 Total number of employees**

**A. Regular\* Employees (Faculty and Staff):**

Items	2023-24		2022-23		2021-22	
	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Pharmacy (Male)	27	27	25	25	25	25
Faculty in Pharmacy (Female)	11	11	14	14	12	12
Faculty in Science & Humanities (Male)	1	1	2	2	2	2
Faculty in Science & Humanities (Female)	0	0	0	0	0	0
Non-teaching staff (Male)	15	15	14	14	14	14
Non-teaching staff (Female)	09	09	08	08	08	08

**B. Contractual\* Employees (Faculty and Staff):**

Items	2023-24		2022-23		2021-22	
	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Pharmacy (Male)	0	0	0	0	0	0
Faculty in Pharmacy (Female)	0	0	0	0	0	0
Faculty in Science & Humanities (Male)	0	0	0	0	0	0
Faculty in Science & Humanities (Female)	0	0	0	0	0	0
Non-teaching staff (Male)	0	0	0	0	0	0
Non-teaching staff (Female)	0	0	0	0	0	0

**10 Total number of Pharmacy students:**



UG	<input checked="" type="checkbox"/> Shift1	<input type="checkbox"/> Shift2
PG	<input checked="" type="checkbox"/> Shift1	<input type="checkbox"/> Shift2
Diploma	<input checked="" type="checkbox"/> Shift1	<input type="checkbox"/> Shift2

#### UG Shift-1

Total number of Pharmacy students	2023-24	2022-23	2021-22
Total No. of Boys	89	100	90
Total No. of Girls	14	15	12
<b>Total</b>	<b>103</b>	<b>115</b>	<b>102</b>

#### PG Shift-1

Total number of Pharmacy students	2023-24	2022-23	2021-22
Total No. of Boys	34	35	25
Total No. of Girls	11	11	20
<b>Total</b>	<b>45</b>	<b>46</b>	<b>45</b>

#### Diploma Shift-1

Total number of Pharmacy students	2023-24	2022-23	2021-22
Total No. of Boys	48	49	49
Total No. of Girls	12	12	11
<b>Total</b>	<b>60</b>	<b>61</b>	<b>60</b>

#### 11 Vision of the Institution:

### Vision of the Institute

To grow as an institute of Excellence for Pharmacy Education and Research and to serve the humanity by sowing the seeds of intellectual, cultural, ethical, and humane sensitivities in the students to develop a scientific temper, and to promote professional and technological expertise.

#### 12 Mission of the Institution:

### Mission of the Institution

**M 1:** To inculcate ethical, moral, cultural and professional values in students

**M 2:** To provide state of art infrastructure facilities to the staff and students so as to enable them to learn latest technological advancements

**M 3 :** State of art learning of professionalism by the faculty and students

**M 4 :** To produce well learned, devoted and proficient pharmacists

**M 5 :** To make the students competent to meet the professional challenges of future

**M 6 :** To develop entrepreneurship qualities and abilities in the students

#### 13 Contact Information of the Head of the Institution and NBA coordinator, if designated:

Head of the Institution	
Name	Dr. Balkrishna Dubey
Designation	Principal
Mobile No.	9424416966
Email ID	balkrishna.dubey@gmail.com

☒ **NBA Coordinator, If Designated**

Name	Dr. Deepak Basedia
Designation	Professor
Mobile No.	8839723408
Email ID	deepakbasedia@gmail.com

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## PART B: Criteria Summary

Criteria No.	Criteria	Total Marks	Institute Marks
1	VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES	50	50.00
2	PROGRAM CURRICULUM AND TEACHING - LEARNING PROCESSES	150	150.00
3	COURSE OUTCOMES (COS) AND PROGRAM OUTCOMES (POS)	100	100.00
4	STUDENTS' PERFORMANCE	180	131.15
5	FACULTY INFORMATION AND CONTRIBUTIONS	175	144.86
6	FACILITIES	120	120.00
7	CONTINUOUS IMPROVEMENT	75	72.44
8	STUDENT SUPPORT SYSTEMS	50	50.00
9	GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES	100	100.00
	<b>Total</b>	<b>1000</b>	<b>918</b>

## Part B

### 1 VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES (50)

Total Marks 50.00

#### 1.1 State the mission & vision (5)

Total Marks 5.00

Institute Marks : 5.00

Vision of the institute	<h3>Vision of the Institute</h3> <p>To grow as an institute of Excellence for Pharmacy Education and Research and to serve the humanity by sowing the seeds of intellectual, cultural, ethical, and humane sensitivities in the students to develop a scientific temper, and to promote professional and technological expertise.</p>					
Mission of the institute	<h3>Mission of the Institution</h3> <p><b>M 1:</b> To inculcate ethical, moral, cultural and professional values in students</p> <p><b>M 2:</b> To provide state of art infrastructure facilities to the staff and students so as to enable them to learn latest technological advancements</p> <p><b>M 3 :</b> State of art learning of professionalism by the faculty and students</p> <p><b>M 4 :</b> To produce well learned, devoted and proficient pharmacists</p> <p><b>M 5 :</b> To make the students competent to meet the professional challenges of future</p> <p><b>M 6 :</b> To develop entrepreneurship qualities and abilities in the students</p>					
Vision of the Department	<p>Pharmacy institution is running as an single unit, not distinguished in separate departments</p>					
Mission of the Department	<table border="1"> <thead> <tr> <th data-bbox="225 1003 587 1048">Mission No.</th> <th data-bbox="587 1003 1278 1048">Mission Statements</th> </tr> </thead> <tbody> <tr> <td data-bbox="225 1048 587 1173">M1</td> <td data-bbox="587 1048 1278 1173">Pharmacy institution is running as an single unit, not distinguished in separate departments</td> </tr> </tbody> </table>		Mission No.	Mission Statements	M1	Pharmacy institution is running as an single unit, not distinguished in separate departments
Mission No.	Mission Statements					
M1	Pharmacy institution is running as an single unit, not distinguished in separate departments					

#### 1.2 State the Program Educational Objectives (PEOs) (5)

Total Marks 5.00

Institute Marks : 5.00

PEO No.	Program Educational Objectives Statements
PEO1	To inculcate quality pharmacy education and training through innovative Teaching Learning Process
PEO2	To promote professionalism, team spirit, social and ethical commitment with effective interpersonal communication skills to boost leadership role assisting improvement in healthcare sector.
PEO3	To enhance Industry-Institute-Interaction for industry oriented education and research, which will overcome healthcare problems of the society.
PEO4	To adapt and implement best practices in the profession by enrichment of knowledge and skills in research and critical thinking
PEO5	To generate potential knowledge pools with interpersonal and collaborative skills to identify, assess and formulate problems and execute the solution in closely related pharmaceutical industries and to nurture striving desire in students for higher education and career growth.

#### 1.3 Indicate where the Vision, Mission and PEOs are published and disseminated among stakeholders (15)

Total Marks 15.00

All efforts are made to assure that vision, mission and PEO'S of the college are conveyed effectively to all stakeholders specially, Internal stakeholders and External stakeholders.

**The Vision, Mission and PEOs are published at the common passage**

- Entrance of the Institute
- College website : <http://titpharmacy.net>
- Practical Record Books
- Notice boards
- In institute premises through Flexes and Posters
- Institution Prospectus, College magazine and other Information Brochures
- Laboratories notice boards.

**In addition to that the dissemination of the Vision, Mission and PEOs are done in the following process.**

1. **Faculty and staff:** The Vision, Mission and PEOs are circulated to all teaching and non teaching staff members.
2. **Students:** Information about the Vision, Mission and PEOs is executed by publishing in Prospectus, displaying on notice boards and communicated to the students by faculty. They are also intimated at the time of joining the institution as a part of induction programme.
3. **Parents:** Parents are informed during induction programme organized at the joining of their ward and in the college and also explained during parent teacher meetings.
4. **Alumni:** Alumni members are encouraged to follow the Vision, Mission and PEOs during alumni meeting and ideas are taken for the any further improvements as per the outside world or job requirements.
5. **Industry/Academic experts /Employers:** The Vision, Mission and PEOs are communicated to the employers, academic and Industry experts.
6. **Professional Bodies:** While organizing events under professional bodies, the events, brochures are designed to contain the institutes Vision, Mission and PEOs which are sent to the professional bodies.

1.4 State the process for defining the Vision & Mission and PEOs of the program (10)

Total Marks 10.00



### a. Process for defining the Vision & Mission

The institute decided the Vision and Mission through a consultative process involving all the stakeholders of the institute, such as Management, Parents, Students, Alumni, Faculty and Employer as shown in flow diagrams below. In establishing and refining the Vision and Mission of the institute, the following steps were followed:

- Step 1:** Old Vision and Mission of the Technocrats Institute of Technology- Pharmacy were taken as an origin.
- Step2:** Views were taken from various stakeholders of the Institution such as Faculty, Management, Advisors, Students, Parents, Alumni and employer of the students as well as Programme Coordinator.
- Step 3:** IAC (Institutional Advisory Committee) analyzes and reviews to check the feasibility, compatibility & consistency with the Vision and Mission of the Institute and submits to the Director for approval.
- Step4:** The Director publishes the Vision and Mission after taking approval from BOG

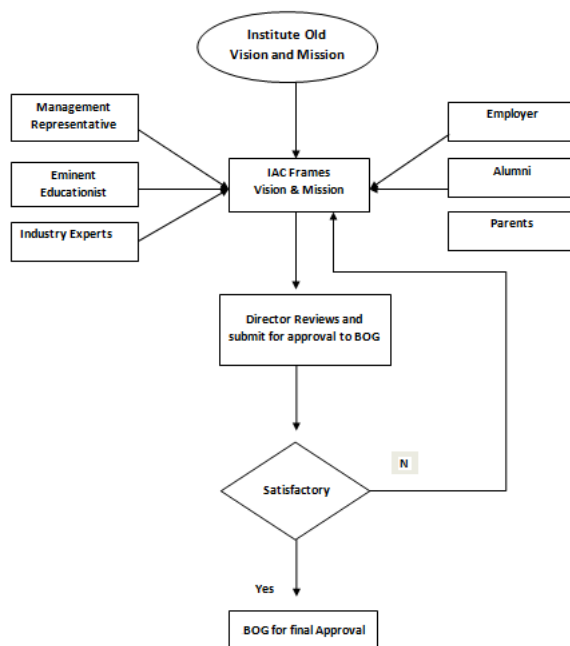


Figure 1.1: Process for defining Vision and Mission of the Institute

### b. Process for defining Program Educational Objectives (PEOs) of the Program:

The Programme Educational Objectives (PEOs) are the broad statements of the objectives for which any specific programme run. These objectives should help in achieving the vision of the Institute. The students completing the programme are expected to lead a successful professional life by contributing in their progressive development. The Program Educational Objectives are established through a consultation process and brain storming sessions involving the stakeholders such as management, students, faculty, alumni, employer/ industry representatives and parents / guardians of students. The PEOs are established through the following process:

- Step1:** Vision and Mission of the Institute are taken into consideration.
- Step2:** Program Coordinator organizes meetings with stakeholders and collects their views.
- Step3:** Program Coordinator summarizes the collected views and finalizes the draft of PEOs and forwards the same to Institutional Advisory Committee.
- Step4:** Institute advisory committee reviews and finalizes PEOs and submits it to Director.
- Step5:** The Director of the institute publishes the PEOs after taking approval from BOG.

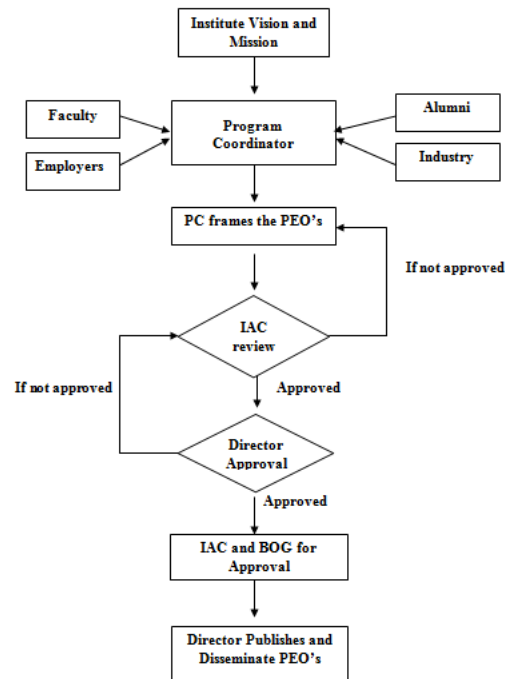


Figure 1.2 Process for establishing PEOs

1.5 Establish consistency of PEOs with Mission of the Institute (15)

Total Marks 15.00





The Program Educational Objectives (PEOs) were established after a diligent and sincere brainstorming by the Academic Advisory board by keeping mind the views and ideas gathered from the stakeholders and thus they are in perfect alignment with our Mission Statements so as to produce theoretically and practically competent pharmacists with research motivation, continuous learning capabilities, Excellent Morales & high ethical standards.

#### Justification:

**PEO1** is the Basic Objective of the whole Program and is the crux of all the mission components. It is justified through Academic Excellence in Theory, Practical and Tutorial sessions, Mini projects, Good University results, Product development, Placements, Expert lectures, Seminars, industry-institute interactions, Social Activities and Professional performances.

**PEO2** is justified by the Professional performance of our Students and Alumni who are working at various institutions and in various capacities and setting examples of utmost ethical and professional approach towards day to day activities.

**PEO3** is justified, as the key component to success of professional is management of activities and professional as well as personal life.

**PEO4:** is justified as implement best practices in the profession by enrichment of knowledge and skills in research and critical thinking.

**PEO5:** is justified, as Graduates will have an ability of handling modern tools to design solutions for complex core problems in the field of Pharmaceutical Science by providing best teaching and learning environment through practical and laboratory research.

### – PEOs matrix” with justification and rationale of the mapping)

PEO Statements	M1	M2	M3	M4	M5	M6
<b>PEO1:</b> To inculcate quality pharmacy education and training through innovative Teaching Learning Process	3	2	2	2	3	2
<b>PEO2:</b> To promote professionalism, team spirit, social and ethical commitment with effective interpersonal communication skills to boost leadership role assisting improvement in healthcare sector	3	3	2	2	2	3
<b>PEO3:</b> To enhance Industry-Institute-Interaction for industry oriented education and research, which will overcome healthcare problems of the society.	2	3	2	2	2	3
<b>PEO4:</b> To adapt and implement best practices in the profession by enrichment of knowledge and skills in research and critical thinking	3	2	2	2	3	2
<b>PEO 5:</b> To generate potential knowledge pools with interpersonal and collaborative skills to identify, assess and formulate problems and execute the solution in closely related pharmaceutical industries and to nurture striving desire in students for higher education and career	2	3	3	2	2	3

#### Justify the academic factors involved in achievement of the PEO's

Table: Justifications of Mapping of PEOs with Mission

PEOs	M1	M2	M3	M4	M5	M6
	3	2	2	2	3	2
<b>PEO1</b>	Provide strong correlation with PEO1 as academic excellence is the objective with effective teaching learning process through the use of modern teaching aids, remedial & extra classes, extra lab hours, tutorial sessions, organization of Pharma related activities to develop professionals.	Moderate support to achieve PEO1, as the objective is to develop the ability among students to understand the concepts of pharmaceutical sciences which can be accomplished health care system and counseling for prophylaxis and prevention of diseases .	Moderately Correlates with PEO1 through the participation of students in the management of various university activities and other tech fests.  The versatility and advanced skills of Pharmacy graduates are becoming increasingly valuable by crafting smarter solutions for safer, more efficient and impactful outcomes to contribute in different sectors of Pharmacy and related industries as per their needs.	Moderately Correlates with PEO1 Graduates apply their knowledge and technical competence in the field of pharmaceutical sciences along with the applications of broad field of Pharmaceutical.  Students are benefited by acquiring opted placement opportunities in manufacturing, marketing, chemists, medical coding industries or empowering knowledge to do higher education or an entrepreneur.	Strongly consistent with Mission 5 because multidisciplinary interaction like industry exposure, co-curricular and extracurricular activities help students to become technically and ethically sound professionals	Leadership qualities and team spirit are required to become successful entrepreneur.

PEO2	3	3	2	2	2	3
	Graduates will have an ability of handling modern tools to design solutions for complex core problems in the field of Pharmaceutical Science by providing best teaching and learning environment through practical and laboratory research	Awareness is created among the students about the alternatives and various trends in the technology during classroom teaching, which brings about inquisitiveness in the students.	Graduates will have an ability of handling modern tools to design solutions in their core area for the need of Public domain and Social empowerment techniques by preparing the students with strong knowledge, attitude, and ethics to contribute a responsible role in the society	Graduates will have knowledge in core pharmaceutical science and technologies to get benefits in their career in MNCs or to become an entrepreneur by motivating the students in the aspects of professional ethics and leadership quality to serve the society	PEO-3 is Moderately provide Incorporating innovative teaching methodologies for the generic subjects and Peer learning methodologies and participation in journal club	Provide strong correlation with PEO3 Leadership qualities and team spirit are required to become successful entrepreneur
PEO3	2	3	2	2	2	3
	Provide Moderate correlation with PEO4 as effective teaching learning process through the use of modern innovative instrument and research lab	PEO4 is strongly consistent because provided state of the art infrastructure facilities like innovative laboratory and modern instrument	PEO4 is Moderately consistent because provided state of the art learning by various industry visit of student and conduct interaction session with industrialist	Graduates will have Moderate knowledge in pharmaceutical fundamental to get benefits in their career in Industry	Multidisciplinary interaction like industry exposure, help students to become technically and ethically sound professionals.	Leadership qualities and team spirit are required to become successful entrepreneur
PEO4	3	2	2	2	3	2
	Provide strong correlation with PEO5 as objective with effective teaching learning process through providing best teaching environment	PEO5 is Moderately consistent because provided state of the art infrastructure facilities like research laboratory	PEO5 is Moderately consistent because provided state of the art learning by skilled and experienced faculty	Graduates will have knowledge in pharmaceutical fundamental to get benefits in their career in research and development	Multidisciplinary interaction like industry exposure, co-curricular and extracurricular activities help students to become technically and ethically sound professionals.	Exposure to new tools and technologies enhance technical knowledge, problem solving abilities which graduates can apply to propose Pharmacy Experimental solutions in their higher studies and research.
PEO5	2	3	3	2	2	3
	Provide Moderate correlation with PEO6 as objective with effective teaching learning process through use of modern teaching aids and Pharma related activities to develop professionals	PEO6 is strongly consistent because provided state of the art infrastructure facilities like research laboratory, modern instrument	PEO6 is strongly consistent because provided state of the art learning through Producing graduates with ability of handling societal issues related to healthcare issues	Provide Moderate correlation with PEO6 as objective with Develop Self-learning strategies, Leadership Skills & Research Concepts and Hands on training through workshops, practical session and industrial training	curricular, co-curricular and extracurricular activities help students to become technically and ethically sound professionals	Cross-learning between disciplines enables graduates to carve their own path through Critical thinking, diversify interests and opportunities that will help in their higher studies and research.

PEO Statements	M1
To inculcate quality pharmacy education and training through innovative Teaching Learning Process	3
To promote professionalism, team spirit, social and ethical commitment with effective interpersonal communication skills to boost leadership role assisting improvement in healthcare sector.	3
To enhance Industry-Institute-Interaction for industry oriented education and research, which will overcome healthcare problems of the society.	2
To adapt and implement best practices in the profession by enrichment of knowledge and skills in research and critical thinking	3
To generate potential knowledge pools with interpersonal and collaborative skills to identify, assess and formulate problems and execute the solution in closely related pharmaceutical industries and to nurture striving desire in students for higher education and career growth.	2





1. The curriculum of undergraduate course in pharmacy is prescribed by the Pharmacy Council of India, New Delhi and adapted by the affiliating University, Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal. It is a four years degree Program where each year is divided in to two semesters.
2. The curriculum is framed by the duly appointed Ad-Hoc committee in Pharmacy by the University under the Faculty of Pharmacy comprising of senior academicians and industrial experts in the field.
3. Syllabus specifies number of lectures and practical in each course.
4. The Teaching & Examination Scheme specifies the duration and marks of both Internal and External Theory and Practical examination.
5. As per the curriculum:
  - The internal exam constitutes continuous internal assessment comprising of periodic test and continuous evaluation.
  - The external exam constitutes end semester examination comprising of theory and practical conducted by the university.
6. As per the curriculum, the percentage of marks for Semester and Internal examination is 75% and 25% respectively.
7. Course outcome attainments are calculated after completion of the end semester examination.
8. Program outcome attainments are calculated after completion of all the course outcome attainments of each semester.
9. The Internal Exams are conducted on Question papers prepared by subject teachers where as Final Exams are conducted by the University

The syllabus contents are delivered with the aid of effective audio-visual and multimedia methods and interactive teaching. In addition, to generate interest and enthusiasm among students, innovative teaching and learning techniques are followed in both theory lectures and practical sessions. These include making of charts and models, giving assignments or projects to students based on their area of interest and organizing quizzes and activities during theory and practical. Also, weaker students are given additional support by arranging remedial classes and tutorials for them and by personally getting the Old University question papers and Model Papers of the concerned subjects solved from them.

**Table-I: Course of study for semester I**

Course code	Name of the course	No. of hrs	Tutorial	Credit points
BP101T	Human Anatomy and Physiology I– Theory	3	1	4
BP102T	Pharmaceutical Analysis I – Theory	3	1	4
BP103T	Pharmaceutics I – Theory	3	1	4
BP104T	Pharmaceutical Inorganic Chemistry – Theory	3	1	4
BP105T	Communication skills – Theory *	2	-	2
BP106RBT BP106RMT	Remedial Biology/ Remedial Mathematics – Theory*	2	-	2
BP107P	Human Anatomy and Physiology – Practical	4	-	2
BP108P	Pharmaceutical Analysis I – Practical	4	-	2
BP109P	Pharmaceutics I – Practical	4	-	2
BP110P	Pharmaceutical Inorganic Chemistry – Practical	4	-	2
BP111P	Communication skills – Practical*	2	-	1
BP112RBP	Remedial Biology – Practical*	2	-	1
<b>Total</b>		<b>32/34\$/36#</b>	<b>4</b>	<b>27/29\$/30#</b>

**#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.**

**\* Non University Examination (NUE)**

**Table-II: Course of study for semester II**

Course Code	Name of the course	No. of hours	Tutorial	Credit Point
BP201T	Human Anatomy and Physiology II – Theory	3	1	4
BP202T	Pharmaceutical Organic Chemistry I – Theory	3	1	4
BP203T	Biochemistry – Theory	3	1	4
BP204T	Pathophysiology – Theory	3	1	4
BP205T	Computer Applications in Pharmacy – Theory*	3	-	3
BP206T	Environmental sciences – Theory *	3	-	3
BP207P	Human Anatomy and Physiology II –Practical	4	-	2

BP208P	Pharmaceutical Organic Chemistry I– Practical	4	-	2
BP209P	Biochemistry – Practical	4	-	2
BP210P	Computer Applications in Pharmacy – Practical*	2	-	1
<b>Total</b>		<b>32</b>	<b>4</b>	<b>29</b>

\*Non University Examination (NUE)

**Table-III: Course of study for semester III**

Course Code	Name of the course	No. of hours	Tutorial	Credit Points
BP301T	Pharmaceutical Organic Chemistry II – Theory	3	1	4
BP302T	Physical Pharmaceutics I – Theory	3	1	4
BP303T	Pharmaceutical Microbiology – Theory	3	1	4
BP304T	Pharmaceutical Engineering – Theory	3	1	4
BP305P	Pharmaceutical Organic Chemistry II – Practical	4	-	2
BP306P	Physical Pharmaceutics I – Practical	4	-	2
BP307P	Pharmaceutical Microbiology – Practical	4	-	2
BP 308P	Pharmaceutical Engineering –Practical	4	-	2
<b>Total</b>		<b>28</b>	<b>4</b>	<b>24</b>

**Table-IV: Course of study for semester IV**

Course Code	Name of the course	No. of hours	Tutorial	Credit Points
BP401T	Pharmaceutical Organic Chemistry III– Theory	3	1	4
BP402T	Medicinal Chemistry I – Theory	3	1	4
BP403T	Physical Pharmaceutics II – Theory	3	1	4
BP404T	Pharmacology I – Theory	3	1	4
BP405T	Pharmacognosy and Phytochemistry I– Theory	3	1	4
BP406P	Medicinal Chemistry I – Practical	4	-	2
BP407P	Physical Pharmaceutics II – Practical	4		2
BP408P	Pharmacology I – Practical	4	-	2
BP409P	Pharmacognosy and Phytochemistry I – Practical	4	-	2
<b>Total</b>		<b>31</b>	<b>5</b>	<b>28</b>

**Table-V: Course of study for semester V**

Course Code	Name of the course	No. of hours	Tutorial	Credit Points
BP501T	Medicinal Chemistry II – Theory	3	1	4
BP502T	Industrial Pharmacy I– Theory	3	1	4
BP503T	Pharmacology II – Theory	3	1	4
BP504T	Pharmacognosy and Phytochemistry II– Theory	3	1	4
BP505T	Pharmaceutical Jurisprudence – Theory	3	1	4
BP506P	Industrial Pharmacy I – Practical	4	-	2
BP507P	Pharmacology II – Practical	4	-	2
BP508P	Pharmacognosy and Phytochemistry II – Practical	4	-	2
<b>Total</b>		<b>27</b>	<b>5</b>	<b>26</b>

**Table-VI: Course of study for semester VI**

Course Code	Name of the course	No. of hours	Tutorial	Credit Points
BP601T	Medicinal Chemistry III – Theory	3	1	4
BP602T	Pharmacology III – Theory	3	1	4
BP603T	Herbal Drug Technology – Theory	3	1	4
BP604T	Biopharmaceutics and Pharmacokinetics – Theory	3	1	4
BP605T	Pharmaceutical Biotechnology – Theory	3	1	4
BP606T	Quality Assurance –Theory	3	1	4

BP607P	Medicinal chemistry III – Practical	4	-	2
BP608P	Pharmacology III – Practical	4	-	2
BP609P	Herbal Drug Technology – Practical	4	-	2
<b>Total</b>		<b>30</b>	<b>6</b>	<b>30</b>

**Table-VII: Course of study for semester VII**

Course Code	Name of the course	No. of hours	Tutorial	Credit Points
BP701T	Instrumental Methods of Analysis – Theory	3	1	4
BP702T	Industrial Pharmacy II – Theory	3	1	4
BP703T	Pharmacy Practice – Theory	3	1	4
BP704T	Novel Drug Delivery System – Theory	3	1	4
BP705P	Instrumental Methods of Analysis –Practical	4	-	2
BP706PS	Practice School*	12	-	6
<b>Total</b>		<b>28</b>	<b>5</b>	<b>24</b>

**\* Non University Examination (NUE)**

**Table-VIII: Course of study for semester VIII**

Course Code	Name of the course	No. of hours	Tutorial	Credit points
BP801T	Biostatistics and Research Methodology	3	1	4
BP802T	Social and Preventive Pharmacy	3	1	4
BP803ET	Pharma Marketing Management	3 + 3 = 6	1 + 1 = 2	4 + 4 = 8
BP804ET	Pharmaceutical Regulatory Science			
BP805ET	Pharmacovigilance			
BP806ET	Quality Control and Standardization of Herbals			
BP807ET	Computer Aided Drug Design			
BP808ET	Cell and Molecular Biology			
BP809ET	Cosmetic Science			
BP810ET	Experimental Pharmacology			
BP811ET	Advanced Instrumentation Techniques			
BP812ET	Dietary Supplements and Nutraceuticals			
BP813PW	Project Work	12	-	6
<b>Total</b>		<b>24</b>	<b>4</b>	<b>22</b>

#### Semester wise schemes for internal assessments and end semester examinations

##### Semester I

Course code	Name of the course	Intern al Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
BP101T	Human Anatomy and Physiology I– Theory	10	15	1 Hr	25	75	3 Hrs	100
BP102T	Pharmaceutical Analysis I – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP103T	Pharmaceutics I – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP104T	Pharmaceutical Inorganic Chemistry – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP105T	Communication skills – Theory *	5	10	1 Hr	15	35	1.5 Hrs	50
BP106RBT BP106RMT	Remedial Biology/ Mathematics – Theory*	5	10	1 Hr	15	35	1.5 Hrs	50
BP107P	Human Anatomy and Physiology – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP108P	Pharmaceutical Analysis I – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP109P	Pharmaceutics I – Practical	5	10	4 Hrs	15	35	4 Hrs	50



BP110P	Pharmaceutical Inorganic Chemistry – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP111P	Communication skills – Practical*	5	5	2 Hrs	10	15	2 Hrs	25
BP112RBP	Remedial Biology – Practical*	5	5	2 Hrs	10	15	2 Hrs	25
<b>Total</b>		70/75\$/80#	115/125\$/130#	23/24\$/26#Hrs	185/200\$/210#	490/525\$/540#	31.5/33\$/35#Hrs	675/725\$/750#

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

**\$Applicable ONLY for the students studied Physics / Chemistry / Botany / Zoology at HSC and appearing for Remedial Mathematics (RM) course. Non University Examination (NUE)**

#### Semester II

Course code	Name of the course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
BP201T	Human Anatomy and Physiology II – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP202T	Pharmaceutical Organic Chemistry I – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP203T	Biochemistry – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP204T	Pathophysiology – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP205T	Computer Applications in Pharmacy – Theory*	10	15	1 Hr	25	50	2 Hrs	75
BP206T	Environmental sciences – Theory*	10	15	1 Hr	25	50	2 Hrs	75
BP207P	Human Anatomy and Physiology IIPractical	5	10	4 Hrs	15	35	4 Hrs	50
BP208P	Pharmaceutical Organic Chemistry I Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP209P	Biochemistry – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP210P	Computer Applications in Pharmacy Practical*	5	5	2 Hrs	10	15	2 Hrs	25
Total		80	125	20 Hrs	205	520	30 Hrs	725

- The subject experts at college level shall conduct examinations

#### Semester III

Course code	Name of the course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
BP301T	Pharmaceutical Organic Chemistry II – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP302T	Physical Pharmaceutics I –Theory	10	15	1 Hr	25	75	3 Hrs	100
BP303T	Pharmaceutical Microbiology – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP304T	Pharmaceutical Engineering – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP305P	Pharmaceutical Organic Chemistry II – Practical	5	10	4 Hr	15	35	4 Hrs	50
BP306P	Physical Pharmaceutics I – Practical	5	10	4 Hr	15	35	4 Hrs	50
BP307P	Pharmaceutical Microbiology – Practical	5	10	4 Hr	15	35	4 Hrs	50
BP308P	Pharmaceutical Engineering – Practical	5	10	4 Hr	15	35	4 Hrs	50
Total		60	100	20	160	440	28Hrs	600

#### Semester IV

Course code	Name of the course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
BP401T	Pharmaceutical Organic Chemistry III– Theory	10	15	1 Hr	25	75	3 Hrs	100
BP402T	Medicinal Chemistry I – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP403T	Physical Pharmaceutics II – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP404T	Pharmacology I – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP405T	Pharmacognosy I – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP406P	Medicinal Chemistry I – Practical	5	10	4 Hr	15	35	4 Hrs	50
BP407P	Physical Pharmaceutics II – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP408P	Pharmacology I – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP409P	Pharmacognosy I – Practical	5	10	4 Hrs	15	35	4 Hrs	50
Total		70	115	21 Hrs	185	515	31 Hrs	700

#### Semester V

Course code	Name of the course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
BP501T	Medicinal Chemistry II – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP502T	Industrial Pharmacy I– Theory	10	15	1 Hr	25	75	3 Hrs	100
BP503T	Pharmacology II – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP504T	Pharmacognosy II – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP505T	Pharmaceutical Jurisprudence– Theory	10	15	1 Hr	25	75	3 Hrs	100
BP506P	Industrial Pharmacy I– Practical	5	10	4 Hr	15	35	4 Hrs	50
BP507P	Pharmacology II – Practical	5	10	4 Hr	15	35	4 Hrs	50
BP508P	Pharmacognosy II – Practical	5	10	4 Hr	15	35	4 Hrs	50
Total		65	105	17 Hr	170	480	27 Hrs	650

#### Semester VI

Course code	Name of the course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
BP601T	Medicinal Chemistry III – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP602T	Pharmacology III – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP603T	Herbal Drug Technology – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP604T	Biopharmaceutics and Pharmacokinetics – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP605T	Pharmaceutical Biotechnology– Theory	10	15	1 Hr	25	75	3 Hrs	100
BP606T	Quality Assurance– Theory	10	15	1 Hr	25	75	3 Hrs	100
BP607P	Medicinal chemistry III – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP608P	Pharmacology III – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP609P	Herbal Drug Technology – Practical	5	10	4 Hrs	15	35	4 Hrs	50
Total		75	120	18 Hrs	195	555	30 Hrs	750

#### Semester VII

Course code	Name of the course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				

BP701T	Instrumental Methods of Analysis – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP702T	Industrial Pharmacy – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP703T	Pharmacy Practice – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP704T	Novel Drug Delivery System – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP705 P	Instrumental Methods of Analysis – Practical	5	10	4 Hrs	15	35	4 Hrs	50
BP706 PS	Practice School*	25	-	-	25	125	5 Hrs	150
Total		70	70	8Hrs	140	460	21 Hrs	600

The subject experts at college level shall conduct examinations

#### Semester VIII

Course code	Name of the course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
BP801T	Biostatistics and Research Methodology – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP802T	Social and Preventive Pharmacy – Theory	10	15	1 Hr	25	75	3 Hrs	100
BP803ET	Pharmaceutical Marketing – Theory	10 + 10 = 20	15 + 15 = 30	1 + 1 = 2 Hrs	25 + 25 = 50	75 + 75 = 150	3 + 3 = 6 Hrs	100 + 100 = 200
BP804ET	Pharmaceutical Regulatory Science – Theory							
BP805ET	Pharmacovigilance – Theory							
BP806ET	Quality Control and Standardization of Herbals – Theory							
BP807ET	Computer Aided Drug Design –Theory							
BP808ET	Cell and Molecular Biology – Theory							
BP809ET	Cosmetic Science – Theory							
BP810ET	Experimental Pharmacology –Theory							
BP811ET	Advanced Instrumentation Techniques – Theory							
BP812PW	Project Work	-	-	-	-	150	4 Hrs	150
Total		40	60	4 Hrs	100	450	16 Hrs	550

#### Core Pharmacy Courses against Program Outcomes

##### Semester-I

##### Human Anatomy and Physiology-I (BP101T):

Human Anatomy and physiology course is designed to impart basic knowledge required to understand the various disciplines of pharmacy which include anatomical features and physiological functioning of systems and organs of human body. The students acquire knowledge about the generating and transmitting nerve impulses. The course design provides significant understanding about the cardio-vascular system and blood physiology including thrombosis and embolism. The course ensures the ability to assimilate the concepts of cardio-vascular system and blood physiology. It also describes the anatomical features and functioning of Skeletal System and Peripheral Nervous System. It also helps in understanding both homeostatic mechanisms.

##### Pharmaceutical Analysis–I (BP102T):

Pharmaceutical analysis course is focus on basic understandings of calibration, accuracy, error, usually impact the result of any testing/analysis. Adequate contents are provided regarding principles and methodology involved in the various volumetric analyses based on titrations such as acid-base, oxidation and reduction reactions, iodometry, complexometric, precipitation, non-aqueous titration, etc. It provides insight to students to understand different types of error, their sources, acquire knowledge about principles and practice of gravimetric analysis. Further methodology of the preparation of solution of different strengths is discussed.

##### Pharmaceutics (BP103T):

This course provides insights on prescription including professional way of handling the prescription. The course deals with pharmaceutical calculations used for dose calculation to manufacturing of different types of dosage forms. It also explains the history of the profession of pharmacy, discuss method of preparation of different dosage forms. Different types of pharmaceutical incompatibilities and method of evaluation and identifications.

##### Pharmaceutical Inorganic Chemistry (BP104T):

Pharmaceutical inorganic chemistry course is focus to provide knowledge about different types of Inorganic compounds used as Pharmaceuticals. The course provides the information on different quality control tests in limiting traces of impurities present in pharmaceuticals through limit tests. The complete understanding is illustrated about chemical reaction mechanisms involved in the preparation of pharmaceutical inorganic compounds. A significant amount of knowledge is provided regarding the uses and sources of different pharmaceutically active inorganic compounds. The course is also deal with the basic knowledge about Radiopharmaceuticals and their uses in diagnosis/treatment.

#### **Communication Skills (BP105T):**

In Communication skill theory course provides communication (verbal and non-verbal), and presentations. The details regarding the variation in the different form of English (spoken English Vs written English; formal/informal English (one way/two way) are included. The communicative English course enables students to acquire the knowledge about greetings, polite expressions, agreements and disagreements. The students develop their skills in the use of thesaurus, vocabulary development, construct of letters, responses, memos, circulars and notices. The training to develop skill in the preparation of scientific/technical report is another important aspect.

#### **Remedial Mathematics (BP106RMT):**

This course provides adequate training contents to the students (hands on experience) about various mathematical principles. The course gives insight on the execution of logarithms, trigonometry and differential calculus. Focus to illustrate the differential coefficient rules, differentiation of a sum, product and quotient of functions, differentiation from first principles, differentiation of implicit, geometrical, composite and inverse functions. The course also concentrates on the basic mathematical principles that are commonly used in biological testing such as integers, linear and non-linear graphs; 2D coordinates geometry, equation of line and circle.

#### **Remedial Biology (BP106RBT):**

Biology theory course concentrates on the morphology, histology, plant modifications, plant taxonomy and plant physiology. Plants belonging to the apocynaceae, solanaceae, umbelliferae, leguminosae, scrophulariaceae and rubiaceae families are included. The course provides adequate knowledge to the students regarding the mitosis and meiosis processes. Significant insight to the modifications in the roots, stems, barks, seeds, woods, leaf, flower and fruits are included.

#### **Human Anatomy and Physiology-I Lab (BP107P):**

Anatomy, physiology and health education laboratory course provides significant insights about histological features of the human tissues through permanent slides. It gives adequate knowledge to the students to identify the models and specimen of the human skeletal system and organs. Focus is made to acquire the knowledge on mechanisms and methodology involved in the determination of human blood group, hemoglobin content, bleeding time and clotting time. The practice to gain knowledge on mechanisms and methodology involved in the measurement of blood pressure, vital capacity and erythrocyte sedimentation rate (ESR) are provided.

#### **Pharmaceutical Analysis – I Lab (BP108P):**

Pharmaceutical analysis laboratory course focus on the principle and procedures of different limit tests. It gives exposure to students on standardized protocols and procedures for the assay of pharmaceutical API. Adequate exercises are provided regarding standardization of solutions of different strengths. Knowledge about the principles and methodology involved in the various volumetric analyses such as acid-base titration, oxidation-reduction titrations, iodometry, complexometric, precipitation and non-aqueous titration is imparted. It helps students to acquire knowledge about principles and practice of electro analytical methods.

#### **Pharmaceutics- I Lab (BP109P):**

The course is designed to provide exposure to the students towards principle and procedures involved in the manufacturing of different dosage forms including solid, liquid and semisolid. The course is also deals with the labeling and handling of the prescription with respect to dosage form. The students get exposure and training on dispensing of solution, syrup and other monophasic as well biphasic liquid dosage forms.

#### **Pharmaceutical Inorganic Chemistry Lab (BP110P):**

Pharmaceutical inorganic chemistry laboratory course focus to help the students to appreciate the concept of quality control tests in limiting traces of impurities present in pharmaceuticals through limit tests. The complete understanding is illustrated about chemical reaction mechanisms involved in the preparation of pharmaceutical inorganic compounds. The course further designed to provide exposure towards different assays and standardization processes of drugs of inorganic origin.

#### **Communication Skills Lab (BP111P):**

In this course the students are given exposure towards different styles of both writing and verbal mode of communications in English. The students are provided with the exposure of clinically oriented services to the customer/patients. The course also deliver the basic contents associated with writing of reports, technical data, presentation of reports in public as well as a confidential ones.

#### **Remedial Biology Lab (BP112P):**

Biology laboratory course is designed to provide students adequate knowledge on the plant morphology and microscopical characteristics. The students gain the significant knowledge about the physiology of important organs of human body through the models. The students also provided the exposure towards testing procedures to detect blood related preliminary parameters.

#### **Semester-II**

#### **Human Anatomy & Physiology-II (BP201T):**

This course is designed to provide information on gross morphology, anatomy and physiology of various organs/tissue systems. The course gives insight on function and mechanism of different signal/feedback mechanisms associated the release or functioning of different anatomical structures. The course gives information on different biochemical and physiologically active composition of blood and their significance and role in disease and diagnosis.

#### **Pharmaceutical Organic Chemistry-I (BP202T):**

Pharmaceutical organic chemistry theory course provides knowledge on classification and nomenclature systems of the organic compounds with special reference to medicinal use. The course also provides insight on structure, nomenclature, physical and chemical properties of organic compounds along with their pharmaceutical applications. The subjects further discuss reaction mechanisms and orientation of principle reactions involved in the synthesis of organic compounds.

#### **Bio-Chemistry (BP203T):**

Biochemistry theory course is concerned with the types of biomolecules and their roles in different biochemical processes in the human cell. The course delivers the knowledge towards biochemical pathways involved in the production and utilization of biomolecules in human body. The kinetics and clinical applications of enzymes, isozymes and coenzymes are also focused. Biosynthesis of RNA and DNA, DNA repair mechanism and recombinant DNA processes are part of the course. Qualitative and quantitative analysis of blood components, urine components and their clinical significance are included.

#### **Pathophysiology (BP204T):**

The course is designed and focused on different pathological conditions of human. It provides the knowledge on causes, and body's response on different diseases. The course demonstrates mechanism of both communicable and non-communicable diseases. It also deals with approaches towards rationale and effective and safe medication delivery to the patients.

**Computer Applications in Pharmacy (BP205T):**

The students acquire significant insights about the memory chips, principles of operating systems. The appropriate measures to ensure students' knowledge about the operators, expressions, data input, output, control statements, library functions and arrays. The course introduces students to MS-word, MS-excel MS-power point and MS-access. Focus is given to provide information about the World Wide Web (www), hyper text manuscript language (html) and e-mail. The course deliver the basic information about scope of computer applications in Pharmacy and different computer applications and softwares used in Pharmacy to maintain records/demonstration of clinical process used in the diagnosis or the understanding of diseases.

**Environmental Sciences (BP206T):**

Environmental studies theory course describes the scope and importance of environmental studies, indicators for sustainable development and concepts of biodiversity and ecosystem diversity. It concentrates on environmental pollution, relevance of biotechnology and nanotechnology in sustainable development, solid and hazardous waste management, green house gas effects: climate change, global warming, ozone layer and ground water depletion. The course provides knowledge and significance of natural and renewable source of energy against non renewable source.

**Human Anatomy & Physiology Lab-II (BP207P):**

The lab of Human Anatomy and Physiology provides content on diagnosis of different parameters of normal blood, it includes Haemoglobin, ESR, WBC, RBs, blood groups etc. The course describes the anatomy of various organs/systems through different models, it includes skeletal system, male and female reproductive system. The course also allowed students to perform various experiments on collection of blood samples from Human and measurement of BP, blood sugar, etc.

**Pharmaceutical Organic Chemistry- I Lab (BP208P):**

The course is designed and listed with experimentation on different identification tests used to identify organic compounds and elements along with their principles. The experiments are designed in order to provide basics on the stereochemistry of the organic compounds with the help of models. The course is also provide with exposure to different identification tests of metals and elements.

**Biochemistry Lab (BP209P):**

In this course the experimentation on different biochemical parameters of blood and urine are designed and principle and procedures of the same are provided to the students. The course also provided the exposure on methods of preparation of standard buffer solutions. The courses also give exposure and practical training to the students to perform enzyme based diagnosis of biochemical parameters.

**Computer Applications in Pharmacy Lab (BP210P):**

In this course the students are provided with experimentation and exposure on both theoretical concept and applicability of the basics of computers. It includes insight on bioinformatics, utilization of computers as a tool to be used to maintain data base of clinical studies. The experiments are also designed to provide basics on different softwares those are applicable in the field of pharmaceutical sciences.

**Semester-III****Pharmaceutical Organic Chemistry-II (BP301T):**

The course is designed to give the description on stereochemistry of organic compounds. The content also shares the concept involved in the synthesis of Heterocyclic and other medicinally important organic compounds. The course further focuses on mechanism and orientation of organic reactions involved in synthesis and analysis of pharmaceuticals.

**Physical Pharmaceutics-I (BP302T):**

Physical pharmaceutics theory course focuses on the concepts of states of matter and solubility phenomenon. Where it gives proper understanding on phase equilibria, thermodynamics and colligative properties of solutions, pH and pharmaceutical buffers. The course provides principles involved in the formulations of different dosage forms. The concept of complexation and polymorphism and its role in formulation development is also considered.

**Pharmaceutical Microbiology (BP303T):**

Pharmaceutical microbiology theory course involves the exposure of students with microbiology techniques and microbes. The course ensures students to understand the biochemical reactions to identify organisms and staining techniques. The concepts of disinfections and sterilization techniques are included. The special emphasis is given to the principles and applications of immunogenetics, serology, bacterial toxins (exotoxins and endotoxins) and toxoids. The students are also getting exposure to cell culture techniques including different isolation, cultivation and identification of microbes.

**Pharmaceutical Engineering (BP304T):**

Pharmaceutical engineering-I theory course involves the topic on the construction of instruments, corrosion, unit operations and unit processes. The concepts of fluid flow and heat transfer (conduction, convection, radiation) are included. Humidification, dehumidification and air conditioning along with their applications in pharmacy are highlighted. The principles, applications and limitations of filtration and centrifugation are included. The subject further deals with fluid matrix including different types of flow of fluid and procedure involved in mixing.

**Pharmaceutical Organic Chemistry-II Lab (BP305P):**

The course deals with different experimentations including laboratory synthesis of organic compounds, concept of stereo modeling, and estimation of elements in organic compounds samples. The students also exposed to several basic reactions used in organic chemistry.

**Physical Pharmaceutics-I Lab (BP306P):**

The component of the course includes different experiments on solubility including factors affecting solubility. The principle and application based experiments on complexation process, calibration of instruments and glasswares. The course also contains the in hand training on determination of physico-chemical properties and their effect on dosage form design.

**Pharmaceutical Microbiology Lab (BP307P):**

The course contains experiments on identification of different types of microbes; their morphological characteristics. The course also provides the exposure to students regarding different principle and procedures involved in the sterilization process. The students also get exposure towards different identifications tests for infectious diseases.

**Pharmaceutical Engineering Lab (BP308P):**

The course contains different experimentations on different instrumentation used in the pharmaceutical industries. The course also contains the procedure and principle involved in filtration, mixing, size reduction, etc and their application in pharmaceutical industry.

## Semester IV

### Pharmaceutical Organic Chemistry-III (BP401T):

The course is in continuation with previous semester and deals with students exposure towards stereo chemistry of different organic compounds. The course also includes nomenclature, classification and synthesis of hetero-cyclic compounds along with its mechanism of action. The students will get theoretical exposure and content on significance of stereochemistry in medicine/pharmaceuticals.

### Medicinal Chemistry-I (BP402T):

The course is designed to provide the knowledge to the students about medicinal structure and pharmacology of chemical substances. The SAR of different drugs are described, which will help the students to establish drug design or drug discovery concept. The course also contains information on synthesis of medicinal products. The course also provides contents on adverse effects, metabolic pathways, adverse effects followed by the consumption of the medicines.

### Physical Pharmaceutics-II (BP403T):

The course deals with the basic properties of additives and API and their effects on dosage forms. The course deals with the theoretical components on different factors affecting during formulation of emulsions and suspensions. The technical concept of surface tension, dispersion, chemical kinetics, expiry date calculations are also discussed in the course. The principles of rheology, interfacial tensions and their impact on formulations preparation is also part of the syllabus.

### Pharmacology-I (BP404T):

The course is designed to deliver pharmacological perspectives of different drugs including both pharmacodynamics and pharmacokinetic profiles of drugs used in different disease conditions. The course also provides the insight on receptors and systems involved in the therapeutic or other unwanted actions of the drugs in the body. The course deals with the contents on prevention and treatment of different diseases and also gives the insight on the action of the drug to produce the desired action in the body.

### Pharmacognosy and Phytochemistry-I (BP405T):

The course focus on the systematic description, classification, cultivation, collection, storage and therapeutic uses of crude drugs beside its History and scope. The course imparts the knowledge regarding the influence of exogenous and endogenous factors in the variability of drug constituents. Biosynthetic techniques, metabolic pathways, precursor-product sequence, competitive feeding and sequential analysis are also focused.

### Medicinal Chemistry-I Lab (BP406P):

The course content provides exposure to students towards different synthesis exercises to prepare medicinal products. The testing procedure to confirm the completion of the process and different evaluation techniques. It provides adequate training to students to design and synthesis organic intermediates and the understanding regarding the principle and methodology involved in the synthesis of various medicinal compounds of diverse chemical categories. This course also deals with the purification and characterization of the synthesized compounds.

### Physical Pharmaceutics-II Lab (BP407P):

The course offers training to the students to determine different physical properties those affects the formulation development of different dosage forms. The course also deals with preparation of different kind of solutions and evaluation of the effect of different additives in the manufacturing of dosage forms.

### Pharmacology-I Lab (BP408P):

The course provides the basic and experimental training on different models of diseases. The software and simulation based experiments are also provided under the course so that students will understand the role of technology in pharmacology.

### Pharmacognosy and Phytochemistry-I Lab (BP409P):

The course provides the insight on different methods of evaluations of crude drugs. The course also gives exposure to students regarding both qualitative and quantitative examinations used to find out the quality of raw drugs.

## Semester V

### Medicinal Chemistry-II (BP501T):

The course describes the correlation and basic concept between chemical and its pharmacological activities. The course deals with metabolic pathways and adverse effects of the drugs beside its therapeutic activities. The utilization of SAR to design new drugs/drug discovery is also focused area of this subject. The analysis method of different medicinal products are also described herein this course.

### Industrial Pharmacy-I (BP502T):

The course describes different types of dosage forms from conventional to Novel Drug Delivery system, including its manufacturing process. Role of different evaluation techniques, their principles and procedures involved in the quality control of dosage forms.

### Pharmacology-II (BP503T):

The Pharmacology-II course is designed to deliver the basic knowledge on pharmacology and its correlation with other medical sciences. The course also deals with different drugs and their Mechanism of action in several disease conditions.

### Pharmacognosy and Phytochemistry-II (BP504T):

The course describes the composition, chemistry and commercial applications of phytochemicals. It includes the detailed description of different biosynthetic pathways used for secondary metabolite productions. The course also focuses on different separation, isolation and spectral techniques to be used as a tool for standardization as well characterization of secondary metabolites of medicinal plants.

### Pharmaceutical Jurisprudence (BP505T):

Pharmaceutical Jurisprudence course deals with pharmaceutical legislation policies, ethics, Acts and their amendments in India. It provides comprehensive knowledge about the pharmacy Act 1948, consumer protection Act 1986, Narcotic and psychotropic substances Act 1985, Drugs and cosmetics Act 1940 and drugs and cosmetic rules 1945. Medicinal and toilet preparations Act 1955, drugs and magic remedies) act 1954, prevention of food adulteration Act 1954, the factories Act 1948 and the amendment also covered. The legal aspects of the manufacture, sale, distribution, import and export of drugs are included in schedules. Specific labeling and packing requirements are covered for all categories of drugs & cosmetics.

### Industrial Pharmacy-I Lab (BP506P):

The course contains the information on different dosage forms and their formulation process. Physiochemical properties of various dosage forms. The course also offers training on different identification tests and analysis method that ensure the ability enhancement of students to evaluate different dosage forms.

**Pharmacology-II Lab (BP507P):**

The course provides the content of training on physiological systems of different organs through simulated experiments. The content also sufficiently provide the information on working of different drugs on different organs through bioassay models using softwares.

**Pharmacognosy and Phytochemistry- II Lab (BP508P):**

The course ensures the practical training of the students on different analytical methods used to identify quality and adulteration of the drug/herb samples. The course also deals with the training on different extraction procedure used to obtain therapeutically active phytochemicals.

**Semester-VI****Medicinal Chemistry-III (BP601T):**

The course is designed to provide information and knowledge to students regarding modern software and tools used in the field of drug discovery. The courses also describe the relationship between structure and therapeutic potential of drugs. The students get exposure of different chemicals of therapeutic potentials from natural as well synthetic process. The component of the course also helps student to understand the principles of different style of classification of medicinal drugs on the basis of their mechanism, structure along with therapeutic activities.

**Pharmacology-III (BP602T):**

The course deals with study and insight on different parameters those affects the pharmacological activity of any drug substances. It describes the fate of drugs in the body including ADME at cellular and sub cellular levels. The course also contains the information about different kind of poison and their treatment. Further information and knowledge on the prevention and treatment of different diseases are the part of this course.

**Herbal Drug Technology (BP603T):**

The course is designed to identify and discuss on different scopes and requirements of herbal drug industries. The course also describe different guidelines for the evaluation of herbal drugs, herbal cosmetic, natural additives. The course provides GMP guidelines to ensure the quality products development by the industry.

**Biopharmaceutics and Pharmacokinetics (BP604T):**

The course describes the basic concepts of ADME, it also includes the description of compartment models and their utility to understand the concept of release profile and ADME. The course deals with the calculation based computing of bioavailability and bioequivalence of drugs. The course provides the contents on calculation those have connection with pharmacokinetic parameters.

**Quality Assurance (BP605T):**

The course is designed to give information and knowledge on different documentation based systems used by the industries to assure every single product manufactured/service provided by them. In this course different guidelines provided by various agencies those regulates the production and sale in respective countries. The course also provides the content on quality certification programs, tools and documentation in the industries.

**Pharmaceutical Biotechnology (BP606T):**

The course provides the content on different diagnostic procedures of diseases based on microbial/enzymatic assays. The course mainly deals with the immunity principle and preparation of biological products including recombinant and fermentation based technology. The course also provides insight on scientific applications of biotechnology in the field of genetic engineering.

**Medicinal chemistry- III Lab (BP607P):**

The course is designed to provide basic knowledge and exposure towards drug discovery and drug designing. It illustrates effect of various physic-chemical parameters in drug designing. It also cover theory and procedures to be used while operating modern tools for the synthesis of drugs in the lab.

**Pharmacology III Lab (BP608P):**

The course offers the content on practical training of students towards different routes of drug administration, blood withdrawal techniques, dose calculation for animal studies. Different guidelines to carry out animal studies and associated ethical issues during animal handling are deals by the course.

**Herbal Drug Technology Lab (BP609P):**

In this course student get practical exposure on different analytical techniques used to identify or check the quality of raw drugs and formulation as well. The course also provides content on testing protocols to determine traces of solvents like aldehyde, phenolics and alcohols.

**Semester-VII****Instrumental Methods of Analysis (BP701T):**

The course provides knowledge about the various instrumentations involve in the separation and identification techniques of raw material to finished goods/drugs. The separation techniques include paper, thin-layer (TLC) and column chromatography. The students also determine related principles of drug solutions through colorimeter, UV-spectrophotometer, etc.

**Industrial Pharmacy-II (BP702T):**

The course provides the content on laws and acts that regulates pharmaceutical industries. The course also gives insight on responsibilities of professionals who are willing to work on regulatory and quality management systems of the pharmaceutical industries.

**Pharmacy Practice (BP703T):**

The course is designed to make student aware of role and responsibilities of the pharmacist in hospital management and patient care system. The student is also get information on Adverse drug reactions and interactions. Beside this, monitoring of patients with the help of different techniques and records are also considered as a core area of the course.

**Novel Drug Delivery System (BP704T):**

The course contains the information and knowledge about NDDS, its classifications, development approaches and different techniques used in NDDS. The course also discuss about different polymers usually prefer to formulate NDDS. The course gives insight on different process and methods of evaluation of NDDS along with its application as a drug carrier and their application as a bioavailability enhancers.

**Instrumental Methods of Analysis Lab (BP705P):**

The course is designed to develop the analytical skills of the students. The course is focus on modern instrumentations and developments in the field of analysis. The course provides hands on training and practical exposure related to several modern separation techniques. The course also provides exposure on uses of modern instrumentation in the routine analysis of pharmaceutical products.

#### **Project Work (BP706PW):**

The course is designed to provide practical training and exposure to the real time challenges and issues facing by industry or hospital or other related field. Student is allowed to work independently under the guidance of senior faculties and supervisor of Industry/hospital.

### **Semester-VIII**

#### **Biostatistics and Research Methodology (BP801T):**

This course is designed to provide basic information on statistics and methods of data collection, different steps of research. Different styles and methods of result presentation through graphs, table and bar diagram. The courses also contain information on different softwares and methods can be used to present results in effective manner.

#### **Social and Preventive Pharmacy (BP802T):**

The course provides the insight on different health issues and how to handle them. The course describes different policies in India and around the globe to address health issues. The course also focuses on the awareness program run by government under National Health Program category. The role of pharmacists in the implementation of health related programs are other area of this course.

#### **Quality Control and standardization of Herbals (BP806ET):**

The course deals with the guidelines of quality control and method of evaluation of herbs. The course describes the principle and procedures of analytical techniques used to standardize herbal drugs. The course also contains the information on documentations required to file new drug applications or registration of drugs.

#### **Dietary Supplements and Nutraceuticals (BP812ET):**

The course deals with the sources and role of herbs and minerals as a supplement. The content related to production, quality control and legal issues with the use or recommendation of Dietary supplements and Nutraceuticals. The course also highlights the applications of Dietary supplements and Nutraceuticals in the management of life style disorders/diseases.

#### **Practice School (BP813PS):**

The course is designed to give practical exposure and information about different regulatory and real time exposure with problems encountered during regulatory filing, green audit and many more.

#### **Compliance of the curriculum for attainment of POs**

The syllabus contents are delivered with the aid of effective audio-visual and multimedia elements and interactive teaching. In addition, to generate interest and enthusiasm among students, innovative teaching and learning techniques are followed in both theory lectures and practical sessions. These include making of charts and models, giving assignments/projects to students based on their area of interest and organizing competitions during practical. Also weaker students are given additional support by arranging remedial classes for them and by personally getting the University question papers of the concerned subjects solved from them.

Course attainments and programme attainments are calculated after completion of all the courses of each semester.

The contents of each theory subject are well defined and the experiments are specified for each laboratory component. The university included an important component such as an assignment, projects and seminars etc. Innovative teaching and learning techniques are followed in both theory and practical. It includes chart preparation, giving assignments, projects and seminar. Weaker students are given additional support by taking remedial classes and tests papers are solved from them. Each faculty determined the level of their courses studying the elements of POs (Programme outcome).

#### **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 wellbeing.

##### **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:**



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.

**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.

The COs and POs mapping were performed, the weak areas were pointed out and probable gaps were identified. COs are revived by faculty members faculty members to determine which component of POs was either not mapped or meet to level 1 only.

**Course-PO matrix of courses for all four years of study**

S. No.	Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
1	COBP 101	2.4	2	1.4	1.2	1.7	1	0	0	1.4	1	1
2	COBP 102	2	1.8	0	0	0	1.5	2	1	1	2	1.3
3	COBP 103	1.6	1.3	1.5	1	1.5	2	0	1.8	2	1.2	2.2
4	COBP 104	3	2	1	1	0	1.2	0	0	1	1	2
5	COBP 105	1.8	1.6	2	1.5	1	1.8	2	2	0	0	2
6	COBP 106RB	3	3	1	2	1	3	1	1	2.7	3	2.6
7	COBP 107	2.4	2	1.4	1.2	1.7	1	0	0	1.4	1	1
8	COBP108	1.8	1.8	0	0	0	1.4	2	1	1	2	1.3
9	COBP109	2	1.3	1.5	1	1.5	1.8	0	1.8	2	1.4	1.6
10	COBP110	1.4	1.8	1.2	1.2	0	1.4	0	1	1.2	1	1.6
11	COBP 111	1.8	1.8	1.7	1.5	1.5	1.5	1.8	0	0	0	2
12	COBP112RB	1.6	1.4	1.7	1.3	1.5	1.8	2	0	0	0	1
13	COBP201	2.2	1.6	1.5	2	1.7	3	0	2	1.4	3	1
14	COBP202	2.4	2.4	2.5	2.3	2	1.8	2	0	1	0	1.2
15	COBP203	2	2	3	3	3	2	0	1.3	1.2	1.8	1.2
16	COBP204	2.8	2	2.6	2	2	2	2.5	0	2.7	2	2.3
17	COBP205	2.2	2	2	1.8	1.3	1.8	2	2	3	1	2
18	COBP206	2.2	1.8	2	1.8	1.5	1.8	2	2.5	2	2	1.5
19	COBP207	2.2	1.8	2	1.8	1.5	1.8	2	0	0	0	2
20	COBP208	2.2	1.8	2	1.8	2	1.8	2	1	1.5	2	2
21	COBP209	2.2	1.8	2	1.8	1.5	1.8	2	0	0	0	2
22	COBP210	2.2	1.8	2	1.5	2	1.8	2	0	0	0	2
23	COBP301	2.6	2.2	2	0	0	1.4	0	0	0	1.6	2.8
24	COBP302	3	3	1	2	1	3	1	1	2.7	3	2.6
25	COBP303	3	3	1.8	2.4	1	2.4	1.5	1	1.3	1	2.4
26	COBP304	3	2.5	2.3	2.2	2	2.5	2	2	1.7	2.6	2
27	COBP305	1.6	1.8	1.6	0	0	1.2	0	0	0	1.6	1.8
28	COBP306	2.6	2.6	1.3	1.8	1.3	2.4	1	1	2.3	2.6	2
29	COBP307	1.8	2.2	1.8	1.6	1.3	2.4	1.5	1	1.3	1	2.2
30	COBP308	2.4	2.5	2.3	2	1.5	2.5	2	2	2.5	2.6	2.2
31	COBP401	2.8	2	2	2	2	2	2.5	0	1.5	2	1.5
32	COBP402	2.2	2.2	2.5	2	0	1.5	0	0	2.6	1.6	1.6
33	COBP403	3	3	2	3	2.2	3	3	1	2.7	3	3

34	COBP404	3	1.6	1	2	1	1.5	0	0	3	2	1.8
35	COBP405	2	2	2.5	1.3	1	1	0	0	1.7	1.3	2
36	COBP406	1.8	2.2	2	2	0	1.5	0	0	2	1.6	1.6
37	COBP407	3	2.6	2	2.5	2.2	2.4	2.8	1.4	2.7	2.4	2.4
38	COBP408	2.6	1.6	1	1.8	1.3	1.5	0	0	2.6	2	1.8
39	COBP409	1.8	1.6	1.5	1.5	1.5	1.5	0	0	1.7	1.5	1.5
40	COBP501	2.2	2.2	2.5	2	2.5	2	2	0	1	2	1.2
41	COBP502	2.4	2.4	0	0	0	1	3	1	0	1.3	2
42	COBP503	2.2	2	1	3	2	2	2	2	2.4	2	2.2
43	COBP504	2.6	2.2	2	1.6	1.3	1.5	2	0	1.7	1.3	1.8
44	COBP505	2.6	2.5	2	3	1.5	2	1.3	0	0	1.5	1.8
45	COBP506	2.2	2	2	1.8	1.5	1.8	2.3	0	0	0	2
46	COBP507	2.2	2	1.8	1.8	1.7	1.8	2	0	0	0	2
47	COBP508	2.2	1.8	2	1.8	1.7	1.5	2.3	0	0	0	2
48	COBP601	2	2	0	0	2	2	0	0	2	2	1
49	COBP602	2	1.8	1.7	1.7	2	3	0	0	3	2	2
50	COBP603	2.6	2.5	1.8	2.3	1	1	0	0	1.4	1.2	1.8
51	COBP604	3	3	0	1.3	0	1.7	1	0	1	1	1.8
52	COBP605	3	3	3	2.6	2.2	2.8	1.8	2	2.5	3	2.8
53	COBP606	3	1.7	1	0	1.3	2.2	1	1	1	2.4	1
54	COBP607	2	2	0	0	2	2	0	0	1.6	2	1
55	COBP608	1.8	1.5	1.7	1.3	1.7	2	0	0	2.7	2	2
56	COBP609	1.8	1.8	1.8	2	1	1.3	0	0	1.4	1.4	1.8
57	COBP701	2.8	2.2	2.5	1.6	1.5	2.6	2.5	0	0	2.3	1.8
58	COBP702	2.6	2.6	2.3	3	1.7	3	3	2	2	2.3	2.5
59	COBP703	2.4	0	2.5	2	1.7	2.7	2	3	2.6	3	1.8
60	COBP704	2.6	2.2	2.2	2.5	1.3	2.7	2	2	2.3	2	2.7
61	COBP705	2.4	2	1.8	2.3	2.2	2	2	2	1.6	2	2
62	COBP706	2.8	2.4	2	1.8	1.7	1.6	1.5	1	1.8	1.8	1.8
63	COBP801	2.6	2	2	2	2.3	1.8	2.5	0	2	2	2.3
64	COBP802	1.8	1.6	2.2	0	1.5	1.3	2.5	2	2.7	1.6	2
65	COBP803	1.6	1.4	1.8	1.7	1.5	2	0	1.8	2	1.2	2.2
66	COBP804	2.6	2.2	2	2.6	1.4	1.7	2	2	1	1.3	2.4
67	COBP805	2.6	1.6	2	1.7	1.7	1.5	2.3	1.7	1.6	2	2
<b>Total</b>		<b>156.20136.00114.20110.2093.10127.2087.6052.30100.10105.40125.70</b>										
<b>Average</b>		<b>2.33</b>	<b>2.06</b>	<b>1.87</b>	<b>1.64</b>	<b>1.39</b>	<b>1.90</b>	<b>1.31</b>	<b>0.78</b>	<b>1.49</b>	<b>1.57</b>	<b>1.88</b>
<b>Percent</b>		<b>77.71</b>	<b>68.69</b>	<b>62.40</b>	<b>54.83</b>	<b>46.32</b>	<b>63.28</b>	<b>43.58</b>	<b>26.02</b>	<b>49.80</b>	<b>52.44</b>	<b>62.54</b>

Faculty focus on either level 1 of introductory nature was adequate or the institutes need to develop more beyond syllabus topic to improve the level. For developing content beyond the syllabus the feedback from alumina and industry (Training and Placement Department) were discuss thoroughly. Demands of pharmaceutical industries were also assessed and analyzed the same by Institutional Advisory Committee (IAC) and subject expert while reviewing the syllabus provided by university to find the compliance of curriculum for PO attainment and to identify the gaps.

#### Curriculum Gap Identified

S. No.	Curriculum Gaps and its justification	Pos	Sem	Identified Subjects
1.	Understanding concept of calibration is crucial for students across various disciplines.	PO2,11	1	BP102T
2.	Understanding essential and trace elements is must to be known for student	PO1	1	BP104T
3.	Soft skills and body language play important roles in a students life, impacting their academic success, personal development, and future career prospects	PO7	1	BP105T
4.	Flower dissection and transverse section (TS) cutting are fundamental techniques used in biology to study the internal structure of flowers.	PO7	1	BP106RBT

5.	Improving mental health through meditation offers numerous benefits, including stress reduction, anxiety management, depression relief, and enhanced self-awareness. Research and development, and global trade in the herbal products industry.	PO2	2	BP-202T
6.	Correlations in human health provide valuable insights into the complex interplay of biological and behavioral factors that influence health outcomes.	PO7	2	BP-203T
7.	Microsoft Office applications play a multifaceted role in pharmacy practice, education, quality assurance, research.	PO2	2	BP205T
8.	Standardization of herbs is essential for ensuring product quality, safety,	PO2	2	BP208T
9.	Heterocyclic nucleolus compounds play vital roles in pharmaceutical applications.	PO6	3	BP301T
10.	Chemical kinetics plays a important role in physical pharmaceuticals, particularly in the formulation and manufacturing of pharmaceutical products.	PO6	3	BP302T
11.	Studying new viruses and different strains requires interdisciplinary collaboration among virologists, epidemiologists, microbiologists, immunologists, bioinformaticians, and clinicians.	PO1	3	BP303T
12.	Chemical structure drawing tools play a vital role in various aspects of chemistry, from education and research to drug discovery and development.	PO10	4	BP402T
13.	Drug interactions play a central role in pharmacy practice, guiding pharmacists in their efforts to promote safe and effective medication use, optimize therapy outcomes, and enhance patient care	PO7, 9	4	BP403T
14.	Crude drugs in pharmacy persist, there is ongoing research, standardization efforts, and integration with conventional medicine to enhance their role in healthcare and ensure patient safety and efficacy.	PO7	4	BP405T
15.	Clinical trials play a vital role in advancing medical science, informing clinical practice, and improving patient outcomes.	PO9	5	BP503T
16.	Validation and calibration processes, organizations can ensure the accuracy, reliability, and compliance of equipment, processes, and systems.	PO1,PO10	5	BP506T
17.	Software-based experiments in pharmacology offer numerous benefits, including cost-effectiveness, scalability, reproducibility, and accessibility	PO10	5	BP507P
18.	Plasma drug concentration and drug release statistics is essential for optimizing drug therapy, designing effective dosage forms.	PO2	6	BP604T
19.	Pharmacokinetics examines how drugs move in the body, while compartment modeling provides a mathematical framework to understand and predict these movements.	PO1	6	BP606T
20.	Interpreting IR spectra requires a combination of theoretical knowledge of molecular vibrations.	PO2,11	7	BP701T
21.	Applying for a patent involves a structured process governed by specific guidelines and requirements established by patent offices around the world.	PO5	7	BP-702T
22.	Specific guidelines and requirements may vary depending on the jurisdiction and the type of invention being patented (e.g., utility patents, design patents, or plant patents)	PO8	7	BP703T
23.	Several software tools are commonly used for research publication and dissertation writing due to their features that aid in organization, writing, referencing, and collaboration.	PO10	8	BP801T
24.	Social awareness plays a crucial role in influencing attitudes, behaviors, and practices related to self-medication.	PO4, PO5, PO9	8	BP802T
25.	Studying intellectual property rights in the field of pharmacy is essential for pharmaceutical scientists to navigate the ethical considerations surrounding drug development and access to medicines.	PO06	8	BP804ET

#### Implementation Process:

Identified content beyond the syllabus (theory and lab work), if any would be conducted in classroom and laboratory by the subject teachers and guest lecture are also arranged to bridge the gap to meet content beyond the syllabus. Effectiveness of this process would be analyzed through feedback from the students and their performance in examination

2023-24

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	No of students Present	Relevance to POs
1	Calibration of g	Expert Lecture	03/01/2024	Mr. Bhushan Korde Associa	85	PO2
2	Drug Design ar	Expert Lecture	08/01/2024	Dr Umesh Jain Director, BI	78	PO2,11
3	Introduction of	Expert Lecture	16/01/2024	Mr. Abhijit Raghuwanshi As	90	PO7
4	Essential and t	Expert Lecture	23/01/2024	Dr Ameeta Argal Professor	80	PO1
5	Concepts of Cε	Expert Lecture	28/01/2024	Pushpa Semiya Associate F	80	PO7
6	Preparation of	Expert Lecture	14/01/2024	Dr A K Budhwani Professor	95	PO10
7	Drug-Drug and	Expert Lecture	03/08/2023	Dr Sanjay Jain, Medicaps U	90	PO6
8	Introduction to	Expert Lecture	01/08/2023	Dr. Deepak Basedia Profes	85	PO6
9	Study of New v	Expert Lecture	14/08/2023	Dr. Mukesh Patel, Professo	90	PO1
10	Amendments ir	Expert Lecture	18/07/2023	Dr M L Kori, PCI CC Memb	96	PO7
11	Validation and	Demonstration	24/07/2023	DR Ameeta Argal, Prof	90	PO01,10
12	Data Interpreta	Expert Lecture	10/07/2023	Dr. Sateesh Nayak Principa	90	PO02,11
13	Patent applicat	Expert Lecture	17/07/2023	Dr. Piush Khare, Wave Pha	95	PO5
14	ICH Guidelines	Expert Lecture	07/08/2023	Dr. Sunil Shah TIT COP Br	85	PO8
15	Animal Handlin	Expert Lecture	09/02/2024	Brijesh Jahlawa, Asso. Prof	85	PO4,6
16	Pharmaceutica	Expert Lecture	16/02/2024	Dr Surendra Jain Director, I	96	PO2
17	Seminar on Na	Expert Lecture	22/02/2024	Dr. Arun K Pandey, Director	95	PO6
18	Chiral synthesi	Expert Lecture	09/01/2024	Mr Bhushan Korde, Asso Pi	85	PO1
19	Study of Chem	Expert Lecture	16/01/2024	Mr. Pradeep Patra SSSUTM	96	PO10
20	Drug Interactio	Expert Lecture	23/01/2024	Brijesh Jahlawa, Asso. Prof	96	PO7,9
21	Current status	Expert Lecture	29/01/2024	Dr. Mukesh Patel Prof	85	PO7
22	Commercial cu	Expert Lecture	12/01/2024	Ms. Neelmani Chouhan Ass	90	PO2
23	Interpretation c	Expert Lecture	22/01/2024	Mr. Shailendra Tiwari Asst F	98	PO2
24	Study of Pharm	Expert Lecture	29/01/2024	Dr. B. K. Dubey, Director	75	PO1
25	Software tools	Expert Lecture	10/01/2024	Dr. Bhupendra Verma Tech	70	PO10
26	Social awarene	Awareness rall	18/01/2024	Dr. Sateesh Nayak Principa	75	PO4,5,9
27	Intellectual Pro	Expert Lecture	08/02/2024	Dr. Neeraj Umanyu SAGE I	80	PO6
28	Novel Techniq	Expert Lecture	26/04/2024	Dr. Prateek Kumar Jain, Pri	80	PO11
29	Product Develc	Expert Lecture	16/05/2024	Dr. Suman Ramteke, Prof F	90	PO11

2022-23

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	No of students Present	Relevance to POs
1	Soft skill and B	Expert Lecture	02/01/2023	Dr Kavita Burse Prof, T&P C	80	PO7
2	Basics of Flow	Expert Lecture	17/01/2023	Dr S K Jain Govt. SV Poly E	95	PO7
3	Calibration of g	Expert Lecture	23/01/2023	Dr. Deepak Basedia Profes	98	PO2
4	Essential and 1	Expert Lecture	30/01/2023	Dr Ameeta Argal, Prof	96	PO1
5	Dietary Compo	Expert Lecture	10/04/2023	Ms Urvashi Mishra, Dietitiar	86	PO7
6	Handling and u	Expert Lecture	28/04/2023	Ms Deepali Lariya, Asst Pro	92	PO2
7	Pharmaceutica	Expert Lecture	25/04/2023	Dr Surendra Jain Director, 1	94	PO2
8	Pharmaceutica	Expert Lecture	02/05/2023	Dr O P Agrawal, SRK Univ	65	PO2
9	Introduction to	Expert Lecture	08/08/2022	Dr Kailash Pathak, Asso Pri	53	PO6
10	Study of New v	Expert Lecture	17/08/2022	Ms Deepali Lariya, Asst Pro	48	PO1
11	Drug-Drug and	Expert Lecture	23/07/2022	Dr. Prashant Chaubey, MB	56	PO6
12	Current status	Expert Lecture	18/02/2023	Dr Sanjay K Jain Govt SV F	54	PO7
13	Study of Chem	Expert Lecture	17/01/2023	Dr Sandeep Sahu, Prof. Ve	50	PO10
14	Drug Interactio	Expert Lecture	07/02/2023	Ms Pushpa Simaiya, Asst P	52	PO7,9
15	Validation and	Demonstration	22/08/2022	Dr Kailash Pathak, Asso Pri	58	PO1,PO10
16	Basics of Clinic	Expert Lecture	29/08/2022	Ms Pushpa Simaiya, Asst P	55	PO9
17	Software base	Expert Lecture	12/09/2022	Dr. Dilip Bharti, Prof	55	PO10
18	Study of Pharm	Expert Lecture	11/02/2023	Dr Sanjay Jain DOPS Dr H	58	PO1
19	Interpretation c	Expert Lecture	20/02/2023	Dr C P Jain, M L Sukhadiya	65	PO2
20	ICH Guidelines	Expert Lecture	20/08/2022	Dr Kailash Pathak, Asso Pri	54	PO8
21	Patent applicat	Expert Lecture	22/08/2022	Dr. S. K Shah, Prof TIT COI	62	PO5
22	Data Interpreta	Expert Lecture	26/08/2022	Dr Sanjay Jain, Mediacaps U	58	PO2,11
23	Social awarene	Awareness rall	13/03/2023	Dr. Mahendra Jain, Profess	55	PO4,5,9
24	Intellectual Pro	Expert Lecture	28/03/2023	Dr. D.N. Jahde Prof, ST Wil	54	PO6
25	Software tools	Expert Lecture	03/04/2023	Dr. Sashi Jain Technocrats	48	PO10
26	Chiral synthesi	Expert Lecture	23/01/2023	Mr Bhushan Korde, Asso Pi	54	PO1
27	Concepts of C	Expert Lecture	19/10/2022	Ms Najmus Sehar, Asst Pro	85	PO7
28	Essential and t	Expert Lecture	27/10/2022	Dr Ameeta Argal, Prof	85	PO1
29	Use of Herbals	Workshop	28/10/2022	Ms Neelmani Chauhan and	76	PO2,9,10
30	World Pharmac	Expert Lecture	29/10/2022	Dr Devendra Bhopte, Prof S	110	PO2,5,6,8
31	Commercial cu	Expert Lecture	06/03/2023	Mr. Saurav Malviya, Vindhy	86	PO2

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	No of students Present	Relevance to POs
1	Calibration of g	Video Lecture	10/09/2021	Dr. Deepak Basedia Profes:	57	PO2
2	Essential and 1	Video Lecture	28/09/2021	Dr. Ameeta Argal, Professor	52	PO1
3	Soft skill and B	Expert Lecture	04/10/2021	Dr Kavita Burse Prof, T&P C	49	PO7
4	Basics of Flowr	Video Lecture	12/10/2021	Dr S K Jain Govt. SV Poly E	49	PO7
5	Pharmaceutica	Expert Lecture	03/02/2022	Dr R K Agrawal, Dr H S Go	59	PO2
6	Dietary Compo	Expert Lecture	12/02/2022	Ms Urvashi Mishra, Dietitiar	55	PO7
7	Handling and u	Expert Lecture	25/02/2022	Mr MPS Kushwaha	50	PO2
8	Pharmaceutica	Expert Lecture	03/03/2022	Dr Surendra Jain Director, 1	59	PO2
9	Drug-Drug and	Expert Lecture	23/07/2021	Dr Sanjay Jain, Medicares U	52	PO6
10	Introduction to	Video Lecture	02/08/2021	Dr Kailash Pathak, Asso. Pr	50	PO6
11	Study of New v	Expert Lecture	10/08/2021	Mr Prithwish Nandi, Asso P	45	PO1
12	Study of Chem	Expert Lecture	17/01/2022	Dr Sandeep Sahu, Prof. Ve	52	PO10
13	Drug Interactio	Expert Lecture	07/02/2022	Ms Pushpa Simaiya, Asst P	51	PO7, 9
14	Current status	Expert Lecture	18/02/2022	Dr Sanjay K Jain Govt SV F	55	PO7
15	Basics of Clinic	Video Lecture	20/08/2021	Dr Manmeet Saluja, Prof	50	PO9
16	Validation and	Expert Lecture	16/09/2021	Dr Kailash Pathak, Asso. Pr	54	PO1,10
17	Software base	Video Lecture	22/10/2021	Mr Prashant Uchadia, Asst.	52	PO10
18	Interpretation c	Expert Lecture	22/04/2022	Dr C P Jain, M L Sukhadiya	49	PO2
19	Study of Pharm	Expert Lecture	29/04/2022	Dr Sanjay Jain DOPS Dr H	50	PO1
20	Data Interpreta	Expert Lecture	26/08/2021	Dr I J Singhvi, Pacific Unive	53	PO2,11
21	Patent applicat	Expert Lecture	13/09/2021	Dr. Piush Khare, Wave Pha	49	PO5
22	ICH Guidelines	Expert Lecture	02/09/2021	Dr S K Sharma, VP, Lupin F	52	PO8
23	Software tools	Expert Lecture	20/04/2022	Dr. Bhupendra Verma Tech	49	PO10
24	Social awarene	Expert Lecture	21/04/2022	Dr. Sateesh Nayak Principa	50	PO4, PO5, PO
25	Intellectual Pro	Expert Lecture	28/04/2022	Dr. Piush Khare, Wave Pha	52	PO6

### 2.1.3 Adherence to Academic Calendar (10)

Institute Marks : 10.00

The University rolls out its own Academic calendar in the beginning of the academic session which earmarks the major activities and proceedings of the University like schedule of Internal Examinations and external Theory and Practical Examinations. It also give the dates for commencement and end of teaching days and probable dates of Form filling. From time to time, the dates for uploading the internal marks are also notified.

Keeping the University Academic Calendar as a reference, In the beginning of every academic year, an academic calendar of the Institution is prepared with an objective to plan the academic activities to be undertaken in the coming session. It is finalized by the College Examination committee in consultation with the Principal and the Academic Advisory Board. The calendar specifies the number of days available for teaching excluding Holidays, Sundays and Examination days. It also gives tentative dates for conduction of internal theory and practical examinations. The planned dates are subject to change as per the University circular related to examinations. The teaching plan is prepared adhering to the academic calendar and given to the students in the beginning of the semester. Other activities including various cultural events, extra and co- curricular events, health campaigns and sports events are also planned in advance.



## TECHNOCRATS INSTITUTE OF TECHNOLOGY - PHARMACY

Approved By AICTE New Delhi & Govt. of Madhya Pradesh  
Affiliated To Rajeev Gandhi Proudyogiki Vishwavidyalaya, Bhopal  
Anand Nagar (Infront of Hathakhedha Dam), P.B. No. 24, Post Piplani, BHEL, Bhopal-21  
Ph. No.- 2685977, 2751693, 2713736 Fax: 0755-2751679 E-mail: titbhopal@gmail.com, www.titbhopal.net

ISO: 9001:2000

Reg. TITPY/GCA/

Date:

### Academic Calendar 2023-24 B. Pharmacy Odd Semester

S.No.	Particular	Dates			
		III Sem	V Sem	VII Sem	I Sem
01.	Duration of Semester	July to December 2023			
02.	Registration Date & Commencement of Classes	11 August 2023	10 August 2023	08 August 2023	20 sept. 2023
03.	Orientation Program for First year students of TIT-PY	25/09/2023			
04.	Dealing with the short attendance student (Before first sessional exam) Dispatch short attendance Letter to the Parents through Registered address and display attendance % of the all student on college notice board	05 sept.2023			
05.	First Faculty Feedback from students(Particular student should have attendance greater than 50% attendance strictly )	13 sept.2023			
05	I Sessional Examination	15 Sept. to 20 Sept.2023			
06.	Display of the marks of I Sessional Examination	26 Sept.2023			
08.	Dealing with the short attendance student (After first sessional exam) Dispatch short attendance Letter / Final warning letter to the Parents through Registered address and display attendance % of the all student on college notice board	10 Oct.2023			
09.	Dussehra Holiday	23 Oct. to 01 Nov.2023			
10.	Submission of Examination Form through RGPV Portal				
	i. Without late fee	01 Nov. to 17 Nov.2023			
	ii. With Late Fee.	18 Nov. to 27Nov.2023			
11.	Diwali Vacation	11 Nov. to 15 Nov.2023			
12.	II Sessional Examination (Full Syllabus)	18 Nov. to 23 Nov.2023			
13.	Last date of Teaching	25 Dec 2023			
14.	Display of the marks of II Sessional Examination	24 Nov.2023			
15.	Practical Viva Voice Examination	05 Feb to 09 Feb 2024			
16.	Submission of Sessional marks in the University	28 Nov.- 27 Dec. 2023			
17.	Semester Examination (Theory)	18 Jan to 03 Feb 2024			
18.	Semester Break/ Internship	After end semester examination			
19.	National Pharmacy Week	As per Available Dates			



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ISO: 9001:2000

Reg. TITPY/GCA/012

Date: 01/01/2024

## Academic Calendar 2023-24 B. Pharmacy Even Semester

S.No.	Particular	Dates			
		IV Sem	VI Sem	VIII Sem	II Sem
01.	Duration of Semester	January- June 2024			
02.	Registration Date & Commencement of Classes	05Feb 2024	10 Jun 2024	02 Jun 2024	29 April 2024
03.	Dealing with the short attendance student (Before first sessional exam) Dispatch short attendance Letter to the Parents through Registered address and display attendance % of the all student on college notice board	23 March 2024			
04.	Holi Vacation	24 March to 29 March 2024			
05.	First Faculty Feedback from students(Particular student should have attendance greater than 50% attendance strictly)	30 March 2024			
05	I Sessional Examination	01 April to 06 April 2024			
06.	Display of the marks of I Sessional Examination	10 April 2024			
08.	Dealing with the short attendance student (After first sessional exam) Dispatch short attendance Letter / Final warning letter to the Parents through Registered address and display attendance % of the all student on college notice board	25 April 2024			
10.	Submission of Examination Form through RGPV Portal				
	i. Without late fee	06 May to 23 May 2024			
	ii. With Late Fee	24 May to 29 May 2024			
12.	II Sessional Examination (Full Syllabus)	01 May to 07 May 2024			
13.	Last date of Teaching	30 May 2024			
14.	Display of the marks of II Sessional Examination	15 May 2024			
15.	Practical Viva Voice Examination	On the date of Practical Examination			
16.	Submission of Sessional marks in the University	22 May to 31 May 2024			
17.	Semester Examination (Theory)	03 June to 05 July 2024			
18.	Semester Break/ Internship	After end semester examination			





## 1. Adopted Teaching & Learning Processes

**Classroom / blackboard teaching:** Mainstay of traditional college education, a verbal transaction with the use of blackboard and chalk so that students get clear picture of topic.

**Tutorials:** Tutorials are a way of better interaction with students. Problem solving and discussion about the earlier topics is done with small number of students in batches.

**Projects:** The B. Pharmacy final semester students are given minor projects to create their interest in research and motivate them for higher studies.

**Laboratory teaching:** The laboratories are used as a good source of educating students in a practical way. Presentations (through slide projectors): Ideas and concepts taught during lectures are reinforced in minds of students with aid of presentations-both videos and pictures.

**Assignments:** Assignments make the students self-reliant in solving problems through understanding of theory through practice.

**Demonstrations:** Demonstrations are given by faculty to the students before they perform experiments.

**Continuous assessment:** Regular evaluation of the student performance during practical classes. Study Material in Library, Journals, E-Journals, Books & e-Books

**Museum:** Knowledge about history and present scope of pharmacy Medicinal Plant Garden: Variety of species of plants are available in the garden for knowledge of students

### A. Initiatives in Teaching / learning methods

- Provision of computers with internet connection to faculty as well as students
- Multi-media projectors in class rooms
- Smart classrooms e-learning
- Conduction of Value Addition Courses Example based teaching
- Peer groups
- Small discussions and support groups
- Use of sophisticated instruments during practical classes Organizing Industrial visits, industrial expert talks
- Software training (ChemDraw), preparation of models, herbarium etc Encouraging students to participate in conferences at graduation level
- Students are encouraged to take GPAT, CAT, GRE exam by providing special classes

### B. Collaborative Learning

Following initiatives have been taken:

Experts in various fields both from industry and institutions/universities are invited to deliver lectures Expert faculty in the subjects of Mathematics, Communicative English, Computers, Accountancy and Biotechnology are invited to deliver lectures. Faculty is encouraged to attend workshops and seminars. Students go for industrial training projects after third year during their graduation.

### C. Quality of Laboratory experiments

Experiments as per curriculum are performed in the laboratories by students individually or in small groups using sophisticated instruments and equipments for effective practical learning of the subject.

### D. Assisting weak students Peer groups:

To assist weak students, the class is divided into small groups, with each student with higher grade caliber responsible for teaching and understanding of other students in the group and each contributing a unique piece to the group performance.

### E. Encouraging the Strong Students:

The Students who perform well and also play role in Peer teaching and other contributions in reaching out to the weaker students, a policy of providing extra books from the Library has been made. Such Students can take 7 books instead of 5 as for the normal students and similar policy also exists for the students having 90 - 100% attendance in classes. Such students are also felicitated annually during college events through certificates & trophies.

### F. Implementation and Monitoring:

Strategies are implemented within the teaching-learning environment. Continuous monitoring and evaluation mechanisms are established to track progress towards CO and PO attainment. Regular reviews allow for adjustments to be made promptly, ensuring alignment with predetermined objectives.

### G. Faculty Appraisal:

A structured faculty appraisal mechanism is in place to evaluate faculty performance based on academic results, student feedback, research contributions, professional development activities, and industry engagement. This appraisal process supports faculty growth and ensures high-quality teaching standards.

### H. Feedback Collection Process:

The feedback phenomenon has also been developed to obtain the feedback from students in respect of teaching, classrooms, library, computing facilities, interaction with the office, canteen, sports etc. A standard feedback questionnaire is given to students for each faculty and the data obtained is utilized for the quality enhancement and improvement in various aspects. This overall information is helping the institution in making progress.

### I. Alignment with Educational Goals:

Throughout the strategic planning process, alignment with broader educational goals, industry trends, accreditation standards, and regulatory requirements is maintained. This alignment ensures that the teaching-learning process equips students with the knowledge, skills, and competencies needed to excel in their engineering careers and contribute to society. Also improvement in teaching and learning is ensured through course delivery planning, selection of appropriate pedagogical technique, and timely assessments. Teaching learning quality assurance process begins with semester planning which is published through academic calendar.

## **2. Pedagogical process used to improve quality of Teaching and Learning:**

Department uses variety of methods of delivery for theory as well as laboratory experiments.

**For theory courses, interactive sessions for delivering Lectures along with collaborative learning through**

- Improved teaching by Power point presentations through faculty members.
- Guided learning efforts by NPTEL Videos of signal and Systems, Antenna and Wave
- Propagation, Microcontroller and Embedded Systems etc.
- Tutorial classes for students. Tutorials provide opportunities to assess students individually which are not possible during lectures.
- Brain storming tutorials questions on Network Theory, Digital Signal Processing, Electromagnetic Theory etc.
- Quiz and assignments.

- Group assignments

### **a. Practical courses are delivered through**

- Guided laboratory demonstration,
- Group and individual experimentation and presentations.
- Projects give true exposure of overall development. It makes students to apply skills they have learned in other subjects and also develops attitude to learn new concepts on their own.
- Department adapts systematic process to ensure development of problem solving skills through laboratory courses. Adaption of Outcome Based Education is one of the steps toward teaching and learning quality assurance.

### **Process used for course allotment:**

- Course allotment is done in departmental meeting.
- Field of specialization is taken into consideration while allotting course.
- Course allotments for undergraduate program are changed after three years.
- Course attainment is taken into consideration while allotting the course. Courses are changed if attainment of course outcomes is not attained for last two years. If outcomes are not met in any particular semester then faculty member is counselled for improvement by PC.
- Courses are allotted well in advance before beginning of classes for the upcoming semester. This gives enough time to faculty for preparation of course.

### **b. Process used to deliver theory course:**

- Every faculty member who is assigned a course prepares a lecture delivery plan before commencement of classes.
- Faculty member prepares COs for his/her allotted course and maps it with POs and PSOs.
- Lectures are also delivered through improved teaching methods like Power Point Presentations (PPT) etc.
- Students are given individual assignments and group assignment to enhance collaborative learning.
- Guided learning efforts through MOOC courses on SWAYAM, NPTEL etc.
- Students are asked to present selected topics in class through interactive discussion sessions and PPT.
- Faculty members prepares assessment plan for course. Question papers for internal assessment are set and mapped with COs.
- Assessments questions are prepared in such a manner that possibly all concerned CO attainment is addressed.

### **c. Process used for conducting laboratory courses:**

- Experiment list is prepared with reference to university suggested list of experiments and mapped to COs.
- Laboratory manual is prepared and updated time to time for every course.
- Student performs experiment individually or in group.
- Faculty member and technical staff remain present during laboratory session to teach students.
- Before performing experiments faculty member explains theory/principle behind the experiment.
- Faculty evaluates performance of every student at the end of every experiment and assigns grades according to their performance.
- Internal practical exams/viva exams are conducted at the end of semester and its assessment record is maintained.
- Attainment of COs is calculated based on the performance of students.

### **d. Process used for Tutorials:**

- Tutorial sheets are prepared/ updated for the given course before the commencement of semester. Tutorial sheets are designed such that it addresses all COs and is a good mix of problems covering various levels of Blooms Taxonomy.
- Tutorials are conducted batch wise with a batch size of 30 students.
- During every tutorial session the students are required to attempt it with in stipulated time.
- Evaluation of the tutorial sheet is done and important steps/tips for attempting the problems are discussed with the students for future performance improvement.

### **e. Other initiatives taken by institute to improve Quality of Teaching-Learning:**

- Extra classes are allotted to subjects requiring more classes to cover the content.
- Many self-learning courses from NPTEL and spoken tutorials are made available.
- Tanning Institute conducts supplementary classes to improve placement prospects of students.
- Co-curricular activities are organized regularly in every semester for providing the platform to the students to demonstrate their skills.
- Workshops are organized regularly for skill enhancement in design software and other technical areas to cover new topics in latest research areas.
- Guest lecturers from distinguished personalities and alumnus are organized to enhance technical knowledge.

## **3. Methodology to Identify Weak and Bright students:**



**Fig. 2.2.1 a- Flowchart to identify weak and bright students**

**a. Identification of weak students and remedial measures:**

**Weak students are identified as**

- Students having less than 50% marks in internal and external examination.
- Student not participating in classroom discussion due to poor communication skills.
- Based on their performance in the class, lab, tutorial sessions and internal assessments.
- 

**To improve the performance of weak students following activities are carried out:**

- Extra lectures /remedial classes are arranged for courses having lower percentage of passing and also considering students demand for extra guidance.
- To improve the communication skills of weak students, soft skill programs are conducted by external experts in department. These programs also help in the personality development of students and prepare them to face interviews.
- Technical sessions are also arranged for final year students for refreshing their knowledge of basic courses. These courses help week students to prepare for campus interviews.
- Tutor Guardian establishes a close relationship with each student, orients them to departmental practices, follows their progress regularly and helps them to improve in academics.
- During Tutorial sessions, special attention is given to weak students.

**b. Identification of bright students and measures adopted to encourage them:**

The bright students are identified based on their overall performance and their orientation towards academics. The students are also observed as their ability to work independently, curiosity, ability in one or more areas of technology, are highly motivated and have excellent inter and intra personal skills.

- Bright students are provided necessary guidance and moral support from the institute.
- More books are issued from library to bright students.
- Bright students are motivated to participate and solve higher level problems and take part in quizzes, project and paper presentation contests at the institute level, university level and at the national level.
- The toppers of every class are also awarded by the institute during annual function.
- The students are encouraged to attend conferences, workshops and publish papers.
- The bright students having high academic track records are encouraged by the faculty to achieve university ranks and appear in various competitive examinations like GPAT, GRE etc.
- The bright students having orientation towards research are encouraged by faculty to opt research oriented higher study.

**4. Students' Feedback of Teaching Learning Process and Action Take**

**a. Feedback collection process:**

Department takes four types of students' feedback for the improvement of teaching quality. These are:

- Student feedback for Quality of Teaching(End of the semester)
- Course end Survey (After course completion)
- Program End Survey (End of programme)
- Informal feedbacks (On random basis)

**b. Student feedback for Quality of Teaching:**

- Teaching feedback form is designed at institute level related to teaching methodology, doubt clearance, behaviour in the class and communication etc. At the end of semester, students give feedback for quality of teaching for every course.
- The average of collected feedback forms is calculated to assess quality of teaching of faculty members.
- Finally, assessment of quality of teaching based upon the feedback for each faculty is forwarded to the Director, duly signed by HOD for verification. After verification Director provides appreciation or instructions for improvement to the concerned faculty those who are lacking. These appreciation and instructions are communicated to the concerned faculty through the HOD.
- Feedback collected from those students having attendance more than 75 %.

**c. Course End Survey:**

- At the end of the semester students are given feedback forms for each course.
- This feedback form is designed focusing on the course outcome attainment.
- All the students enrolled for the course are allowed to submit the feedback manually.
- Analysis of feedback is used to identify the poorly attained COs and to decide further corrective action to improve the attainment of COs.

**d. Program End Survey:**

- This feedback is taken to assess quality of entire program for the duration of four years from the passing out students.
- Feedback is focused on the attainment of program outcomes (POs) by the passing out students.
- Analysis of feedback is used to identify the poorly attained POs and to decide further corrective action to improve the attainment of POs.

**e. Informal feedbacks:**

- The HODs of the department meets the students in the classroom for oral informal feedback randomly. It is an open discussion forum where students share their problems related to teaching, lab work, infrastructure etc.
- In addition, Director takes frequent rounds of the classes and obtains verbal feedback from the students and implements appropriate corrective measures accordingly.

The above feedbacks are analysed by course coordinator and program coordinator. The analysis report is presented in the IAC meeting to decide appropriate action plan for improvement and corrective measures if any.

**Action Taken:**

1. HOD counsels the faculty members scoring less feedback to improve their classroom teaching-learning quality.
2. Faculty members having low level of feedback are encouraged to attend Faculty Development Program (FDP)/Refresher Program on technical and pedagogical aspects.
3. They are also motivated to register for MOOCs on NPTEL and SWAYAM etc. in the identified domain.
4. In addition to above, the faculty members are encouraged to attend various training programs, participate in various orientation programs which help them in improving their teaching methodologies in the classroom.
5. Apart from the above-mentioned practices, various Short-Term Courses (STCs) and FDPs are conducted in the institute to help the faculty members to gain perspective about various aspects of teaching in the classroom.

**Impact Analysis:**

1. University results are progressively improved.
2. Due to sustained academic performance, students are taking admissions from various states.
3. Students secured position in university merit list and got chancellors award.
4. Recognition at national level completion like Smart India Hackathon.
5. Placement has improved year by year.
6. Students contribute in socio economic development by performing well after their graduation.

**A. Following Process adopted to prepare Sessional examination question papers and conduct the internal assessment:**

For internal examinations (Sessional), the question paper setting or preparation is an important task which is usually entrusted to the teaching faculty. They follow the standard format prescribed by university for question paper setting.

As per the current adapted practice the Format of Internal Sessional Exam is as given below:

Q1. Ten MCQ Questions with 3-4 options each	10x1 Marks	= 10 Marks
Q2. Two Short Answer Questions among 3 Questions	02x2.5 Marks	= 05 Marks
Q3. One Long Answer Question among 2 Questions	01x10 Marks	= 10 Marks

Two such Sessional Exams are conducted for each course every semester. These papers are reviewed by the Director randomly or as required and after revision (if any) are submitted in sealed envelope to the examination section. For CBSGS pattern, in addition to the internal periodic examination, college conducts Five Unit tests for each course corresponding to each unit of syllabus which is a part of the continuous evaluation system. In addition to the internal periodic examination, surprise tests are also conducted if deemed suitable. Sometimes students are given assignments in their respective subjects to upgrade their knowledge. These are evaluated by individual faculties with their own perspective.

**TECHNOCRATS INSTITUTE OF TECHNOLOGY-PHARMACY****I- Sessional Exam 2024****B. Pharm VI Semester****Subject: Medicinal Chemistry III (Theory) (BP601T)**

**Max. Marks: 15**

**Times: 1:00 hr.**

**Note-Attempt all questions, each question carries equal marks.**

<b>CO1</b>	<b>Q1. Multiple-choice Questions (05 X 01 mark = 05)</b> 1. Penicillin was discovered by scientist _____. (a) Paul Ehrlich (b) Alexander Fleming (c) Gerhard Domagk (d) None of the above 2. The drug which is metabolized by acetylation is (a) Rifampicin (b) Ethambutol (c) Dapsone (d) Isoniazid 3. Which of the following species is used for producing streptomycin? (a) S. ramosus (b) S. Griseus (c) S. aureofaciens (d) S. Griseoflavus 4. Antibiotics are used to treat infections by (a) Virus (b) Bacteria (c) All the microorganisms (d) None of the above 5. Grey baby syndrome is associated with (a) Chloramphenicol (b) Gentamycin (c) Tetracycline (d) Ciprofloxacin
<b>CO2</b>	
<b>CO3</b>	
<b>CO4</b>	
<b>CO5</b>	
<b>CO1</b>	<b>Question No. 2- Section B: Write Short Notes on (any two) (2.5'02=05)</b> 1. Write a short note on beta lactam inhibitors. 2. Explain the mechanism of action and uses of amino glycosides. 3. Define first line anti-tubercular drugs? Give the structure of any two drugs? Give the synthesis of para amino salicylic acid
<b>CO2</b>	
<b>CO3</b>	
<b>CO4</b>	<b>Question No. 3- Section C: Long answer type question (any one) (01'05=05)</b> 1. Discuss anti-malarial drugs? Write the malaria life cycle and different drug acting on the different stages. 2. Classify tetracycline derivatives and give the structure and uses. Illustrate the SAR of tetracycline in brief.
<b>CO5</b>	

**B. Following Process adapted to improve quality and evaluation of the assignments:**

Assignments are also an important part of summative assessment and contribute three marks out of twenty. Assignments are designed keeping in view, the learning goals of students, course outcome and expectations by the teachers.

- In a semester two assignments are given to the students, each assignment includes three to five questions with respect to concern COs.
- The questions framed in the assignments are taken from multiple sources (previous year's university question papers, text books, etc).
- Mapping is done for all questions of the assignment with the CO's of the course.
- Assignment issue and submission dates are announced by the respective faculty members.
- The assignments are evaluated within two weeks after submission and the valued assignments are returned to the students for their scrutiny and improvement.
- In order to bridge the gap in university curriculum, sometimes students are also given assignments beyond syllabus.
- Students not submitting their assignments are further counseled and if required his/her feedback may be shared to his/her parents.
- Assignments are given for each CO of all courses.

- Marks are recorded in the exam cell after valuation and are finally considered for calculation of internal marks.
- Sample copies of checked assignments for evaluation are analyzed by the institutional advisory committee.

#### Sample Assignment are given below

#### Assignment-1

- CO 1 Elaborate briefly the "Pharmacy career" in India.
- CO 2 Name the four distinct Dosage forms. Discuss briefly on different types of tablets with examples
- CO 3 Discuss in details the official preparation of powder.
- What do you mean by molecular weight method? How would you prepare 2.5% (w/v) Dextrose injection? Make it isotonic by using Sodium Chloride (NaCl) (Molecular weight of Dextrose is 180).
- CO 4
- CO 5 Enumerate different methods that are used in the preparation of emulsion. Write down the identification tests of emulsion

#### Assignment-11

#### Subject-Pharmaceutical Organic Chemistry -I (BP--202)

- CO 1 Design the scheme involved in qualitative test of carbonyl compounds.
- CO 2 Give the structure and uses of paraldehyde
- CO 3 Demonstrate electromeric effect with examples
- CO 4 Write the structure and uses of amphetamine
- CO 5 Design and give the synthesis of aliphatic amines

#### Evaluation of assignments

Evaluation of assignments is done on the basis of marks per assignment. In each semester, one assignment is given to each student. The evaluation is based on the following criteria and parameters:

- Structure and Organization
- Presentation of Facts and Figures

#### Impact / Usefulness of Written Assignments

- Submitting self prepared/ written assignments enables the students to do self assessment and an opportunity to clarify doubts, if any.
- Assignments given to students to increase the knowledge and improve the abilities and skills of the students, to reinforce what students have already learned thus preparing them for upcoming (or complex or difficult) lessons.

As per PCI ordinance and RGPV ordinance the weightage given to internal assessment is as per the following

S. No.	Scheme	Sessional theory	End Sem	Weightage of internal assessment (in %)	Sessional practical	End Sem practical	Weightage of internal assessment (in %)
1	PCI scheme	25	75	25%	15	35	30%
2	CBCS scheme	40	60	40%	40	10	80%
3	Grading scheme	30	70	30%	20	30	40%

Evaluation parameter	Poor	Fair	Average	Good	Excellent
Assignment	Majority of content is missing, incomplete and/or extremely inaccurate	Content shows very basic understanding and includes several inaccuracies.	Content is mostly accurate and shows a basic of key ideas.	Content is accurate, thorough and shows clear understanding through appropriate Explanation.	Meets and exceeds "Good" criteria with rich explanation, examples and application of Content Idea.
Sessional Examination	Either the student is Absent or the response is not available/ incomplete.	The student's response is incomplete or extremely inaccurate.	The student's response shows very basic understanding and has several inaccuracies.	The student's response is mostly accurate and has basic understanding of key concept.	The student's response is accurate, thorough and shows clear understanding through appropriate explanation.
Attendance	Student's attendance is below 40 %.	Student's attendance is between 40 % and 50 %.	Student's attendance is between 50 % and 59 %.	Student's attendance is between 60 % and 74 %.	Student's attendance is 75% and above.

End Semester Examination (60)	Grade F represents marks between 30 - 0 and performance is Fail	Grade D represents marks between 31-40 and performance is Marginal	Grade C + represents marks between 51-60 and performance is Average	Grade B + represents marks between 71-80 and performance is Very Good	Grade A + represents marks between 91-100 and performance is Outstanding
Grade					
% Marks range (based on absolute marks system)	Grade I represent Incomplete.		Grade C represents marks between 41-50 and performance is Satisfactory	Grade B represents marks between 61-70 and performance is Good	Grade A represents marks between 81-90 performance is Excellent
Description of performance)	Grade W represents Withdrawal				

From the above scheme, the weightage given to theory are 25%, 40% and 30% for the internal assessment and for practical 30%, 80% and 40% for internal assessment. The remaining is included in university assessment. The university examinations are conducted at a center other than this college.

Though the percentage of internal assessment is low, it is covering a limited number of components of assessments. The internal examination and the prescribed marks are to be compiled with the regulation. Therefore, the scope for assessment is narrow. In this frame work the college conducts the following components-

1. Multiple choice question tests
2. Assignments
3. Attendance

#### Guidelines for Internal Assessment:

The internal marks are based upon a continuous assessment system including: two/three written sessional examination conducted in each session in college, daily attendance of students and academic activities (assignments / seminar / quiz) performed in a session.



## TECHNOCRATS INSTITUTE OF TECHNOLOGY - PHARMACY

ISO: 9001:2000

Approved By AICTE New Delhi & Govt. of Madhya Pradesh  
Affiliated To Rajeev Gandhi Proudyogiki Vishwavidyalaya, Bhopal  
Anand Nagar (Infront of Hathkheda Dam), P.B. No. 24, Post Piplani, BHEL, Bhopal-21  
Ph.No.- 2685977, 2751693, 2713736 Fax: 0755-2751679 E-mail: titbhopal@gmail.com, www.titbhopal.net

Reg. TITPY/GCA/43

Date: 01/08/2023

### Scheme Internal Marks

All the students are hereby informed/ reminded that as per Rajiv Gandhi Proudyogiki Vishwavidyalaya Bhopal, ordinance No. 7 C (Section 40 (1) for PCI Grading system, the award of internal mark in Theory as well as Practical examination will be strictly as per the University norms and is mentioned below

#### PCI Scheme

Theory Examination (Out of 25)			
S.No.	Particulars	Weightage (Marks)	Weightage (%)
1.	Mid Sem/PUT	15 marks	60%
2.	Attendance		
	1. Regularity	3 marks	12%
	2. Punctuality	2 marks	8%
3.	Assignments/Quiz	5 marks	20%
4.	Total	25 marks	100%
Practical Examination (Out of 15)			
S.No.	Particulars	Weightage (Marks)	Weightage (%)
1.	Attendance (Regularity)/ Lab performance	05 marks	33%
2.	Practical file/ Lab assignments/ Quiz	10 marks	67%
3.	Total	15 marks	100%

#### Grading Scheme of Award

Theory Examination (Out of 30)			
S.No.	Particulars	Weightage (Marks)	Weightage (%)
1.	Mid Sem/PUT	20 marks	67%
2.	Attendance		
	1. Regularity	3 marks	10%
	2. Punctuality	2 marks	7%
3.	Assignments/Quiz	5 marks	16%
4.	Total	25 marks	100%
Practical Examination (Out of 20)			
S.No.	Particulars	Weightage (Marks)	Weightage (%)
1.	Attendance (Regularity)/ Lab performance	10 marks	50%
2.	Practical file/ Lab assignments/ Quiz	10 marks	50%
3.	Total	20 marks	100%

**Note:** In Internal Assessment (Practical Exam) as per PCI which is mentioned in the scheme of every semester in B.Pharmacy, the distribution will be exactly like practical exam i.e. Out of 15 marks- 5 marks (33%) will be for attendance performance and 10 marks (67%) will be for assignment/ seminars etc.

In Internal Assessment (Theory Exam) as per PCI which is mentioned in the scheme of every semester in B.Pharmacy, the distribution will be exactly like theory exam i.e. Out of 25 marks- 15 marks (60%) will be for sessional and 5 marks (20%) will be for attendance & performance and 5 marks (20%) will be for assignment/seminars etc.

In Internal Assessment (Practical Exam) as per Grading system which is mentioned in the scheme of every semester in B.Pharmacy, the distribution will be exactly like practical exam i.e. Out of 20 marks- 10 marks (50%) will be for attendance performance and 10 marks (50%) will be for assignment/ seminars etc.

In Internal Assessment (Theory Exam) as per Grading system which is mentioned in the scheme of every semester in B.Pharmacy, the distribution will be exactly like theory exam i.e. Out of 30 marks- 20 marks (67%) will be for sessional and 5 marks (17%) will be for attendance & performance and 5 marks (16%) will be for assignment/seminars etc.

#### Important:

1. No students will be permitted to appear in the sessionals, if their attendance will be less than 75%, and there assignment is not submitted at the time of sessional/ theory examination.
2. No students will be permitted to appear in the practical examination, if their attendance will be less than 75%, and their assignment is not submitted/ checked at the time of practical exam.

Dr.B.K. Dubey  
(Director TIT-Pharmacy)



To execute this research activity, all the third year students were given a mini research project under the guidance of respective faculty members. The project was research, review or case study based. The project work was done in the college in the span of Four months. The selection criteria for mini research project were, It should be cost effective Safe and eco-friendly During the projects, the students develop effective planning abilities and organizational skills. They also learn and develop the ability to solve problems and making decisions using scientific and analytical mindset as in case of organic synthesis and analytical experiments performed during project work. The project increases the practical capabilities as they are exposed to modern pharmacy related analytical tools. The case studies performed during the project work helps in enhancing communication abilities and professional identity. The knowledge gained through these projects is carried forward throughout their career which is applied for the societal and environmental development.

The students submitted a report consisting of the Abstract, Introduction, Rationale, Literature Search, Methodology, Result and Conclusion. The students presented their work in the form of posters and were evaluated by all the faculty members in the college. As the criteria for evaluation were Project Sustainability, Quality of Review or Research, Presentation and Defence, the quality of these projects was evaluated based on its reflection on various Program Outcomes like PO1, PO2, PO3, PO5 and PO8. From the results, it was observed that maximum students identified and understood the problem given to them. They tried their best to solve the project and apply the available scientific knowledge to interpret the data efficiently. Simultaneously it was observed that some students could present the data well and defend their work in a proper technical manner.

#### PROJECT DETAIL AY -2021-22

S. No	Title of Project	Roll No.	Student	Mentor	Type
1	Diabetes and its Management	0165PY181001	ABDUL AZEEM	Dr. Ashok Kumar Budhwani	Review
2	Detailed study on Good Pharmacy Practice	0165PY181002	ABDUL BASIT	Dr. Manmeet Singh Saluja	Project
3	Over The Counter Drugs	0165PY181003	ABHAY TIWARI	Dr. Sahadev Kumar Yadav	Project
4	Applications of Nanotechnology in Cancer	0165PY181009	AJIT KUMAR SHARMA	Mr. Prashant Uchadia	Application
5	Review of masked study in the field of Clinical trials	0165PY181010	AKASH PANDEY	Mr. Abhijeet Raghuwanshi	Review

#### PROJECT DETAIL AY -2022-2023

S. No	Title of Project	Roll No.	Student	Mentor	Type
1	Health Supplements and Nutraceuticals	0165PY191001	AASHITA RAUT	Dr. Sahadev Kumar Yadav	Project
2	Modification of herbal drugs	0165PY191002	ABHAY KUMAR SINGH	Dr. Deepak Kumar Basedia	Research
3	Fast Dissolving Drug Delivery System	0165PY191008	AKASH THAKUR	Mr. Bhushan Kumar Korde	Application
4	Source and Properties of various Natural Flavour	0165PY191009	AMAN PATLE	Mr. Prashant Uchadia	Review
5	Transdermal Drug Delivery Systems	0165PY191015	ANURAG VISHWAKARMA	Mr. Pawan Dubey	Review

#### PROJECT DETAIL AY -2023-24

S. No	Title of Project	Roll No.	Student	Mentor	Type
1	Sedentary Lifestyle and Healthy Issue	0165PY191043	MD ALI RAZA	Ms. Prithwish Nandi	Project
2	Controlled Drug Delivery System	0165PY191044	MD ANAS MANSOORI	Ms. Chandra Chaurasia	Project
3	Techniques for Drug Design, Discovery & Development	0165PY191050	MD TANVEER ALAM	Ms. Deepali Lariya	Application
4	Neutraceuticals & their Assessment in Functional food	0165PY191073	PUSHKAR RAJ	Mohd Adil Khan	Review
5	Gastro Retentive Drug Delivery System	0165PY191076	RAJESHWARI KOURAV	Mr. Neeraj Sharma	Research

#### Evaluation of Project

The following committee members are responsible for complete evaluation of projects:

1. Program Coordinator
2. Project Coordinator
3. Senior Faculty member
4. Guide

Phase-1 (First Review) 30 Marks

S. No.	Performance Indicator	Marks
1	Title & Feasibility	(05)

2	Abstract & Depth Knowledge	(10)
3	Presentation	(15)

#### Sample Rubric for Synopsis Work

<u>Rubric</u>	<u>Excellent (3)</u>	<u>Acceptable(2)</u>	<u>Unacceptable(1)</u>
<b>Presentation (15)</b>			
Presentation (50%) CO1, CO2	Delivered presentation with excellent and confident good communication skill	Delivered presentation with good communication skill	Delivered presentation with poor communication skill
Subject knowledge (25%) CO3	Deep understanding of subject with relevant literature and visuals.	Understanding of subject with relevant literature and visuals.	Subject knowledge is poor
Handling of Audience with important Queries (25%) CO1, CO3	Maximum answering questions of audience precisely and accurately	Some difficulty in answering questions precisely and accurately	Not able to Handle audience Queries
<b>Selection of Task(15)</b>			
<b>Rubrics</b>	<b>Highly competent (3)</b>	<b>Competent (2)</b>	<b>Beginner (1)</b>
Selection of task (50%) CO3	Ability to use effective tool or technology for design, implementation and optimization task	Ability to use tool or technology for design, implementation and optimization task but not effectively.	Not able to use effective tool or technology for design, implementation and optimization task
Literature gathering (50%) CO4, CO5	Collect all kinds of information about the tool or technology for design, implementation and optimization task	Collect adequate information about the tool or technology for design, implementation and optimization task.	Lack of information about the tool or technology for design, implementation and optimization task

#### Phase-2 (Second Review) 60 Marks

S. No.	Performance Indicator	Marks	Total(60)
1	Design and analysis [CO1], [CO5]	CO1=12,CO5=8	20
2	Implementation strategy [CO2], [CO5]	CO2=12,CO5=8	20
3	Expected Result [CO3]	CO3	10
4	Presentation [CO4]	CO4	10

#### Phase-3 (Final Presentation) 60 Marks

S. No.	Performance Indicator	Marks	Total(60)
1	Implementation [CO2], [CO5]	CO2=12,CO5=8	20
2	Results [CO3]	CO3	10
3	Final report [CO5]	CO5	10
4	Overall Presentation [CO4]	CO4	10
5	Addressing Contemporary issues [CO1]	CO1	10

#### Process to assess performance

- To assess the Project progress presentation are conducted twice in semester.
- All the project according to the division of work should give the project presentation.
- Each student in the project is assessed as per his performance.
- Project are also assessed through live demonstration of project/ working prototype
- Individual is evaluated based on progress of work they show to their guide, project seminar presentation, project demonstration and viva voice.
- The projects are evaluated and are awarded internal assessment marks for maximum 150 and are graded according to the project contribution towards attainment of PO's.
- Extra weightage is given to projects dealing with Contemporary issues, innovations, inducing lifelong learning, publications and awards if any.

With an aim to encourage students to gain hands-on training the pharmacy students are exposed to recent technologies using commercially viable machineries, equipments, sophisticated process, validated documents, job training, career opportunities, campus recruitments, innovative idea generation. To accomplish this objective, the Institution facilitates Industrial visits, Industrial Training and Short term Value Addition Courses.

The Institute has entered into several MoU with various Industries for the same.

S. No.	Date	Type of Association	Subject	List of Activities Since Tie-up	% No. of Students	Relevance to PO
1	2023	CEDMAP, Bhopal	Training / Academics	B. Pharm Students Training	80	PO 2,4,5 and 10
2	2023	National Entrepreneurship Network, Bhopal	Training / Academics	Training cum Workshop for B. Pharm and M. Pharm Students	78	PO 2,4,5 and 10
3	2022	Scan Research Lab, Bhopal	Training / Academics	B. Pharm Students project	75	PO 1,3,4
4	2019	Phytodrugs Pvt Ltd Bhopal	Training / Academics	B. Pharm Students Training/ Visit	80	PO 1,3,4 and 7
5	2018	Lenience Biotech Labs, Mandideep Bhopal	Training / Academics	Consultancy work	69	PO 1,3,4 and 6
6	2018	Advanced Analytical Research and Unicode Laboratory, Bhopal	Training / Academics	B. Pharm/ M. Pharm Students Training	70	PO 1,3,4 and 9
7	2018	Centre for Molecular Biology Research CMBR, Bhopal	Training / Academics	B. Pharm Students Training/ Visit	70	PO 1,3,4 and 10
8	2021	Sponsors India Laboratories, Sagar	Training / Academics	B. Pharm Students Training/ Visit	75	PO 1,3,4,7 and 11

Our institution holds great importance and value on closer and effective interactions with industry and R & D organizations.

The objective of the Industry academia interaction is to reduce the gap between industry expectations (practice) and teaching & learning so as to establish the symbiotic relationship. Industrial visit is an essential part of the curriculum of our four year course.

The aim is to develop the insights of the students in application of theories learnt in class rooms to practical applications in real life industries. The students become familiar about the industrial set-up and different departments in industry such as production, formulation, quality control and packaging section.

Moreover, industrial visits reinforce class room learning. Also these visits provide career guidance and counselling to the students, thereby, encourage the placement of students in industry.

Besides this, experts from industry are also invited to give lectures/ talks focusing on current developments/ scenario. The experts are also invited to give demonstrations on in- house equipment so that the students can have hands on training on this equipment under expert guidance. Hands on training programmes are also organized for the faculty in the institutions.

2021-22

S. No.	Topic of Expert Lecture	Speaker	Date	% No. of Students	Relevance to PO
1	Designing of aerosol dispenser	Mr Sanjay Jain Aristo Pharmaceuticals, Bhopal	24/07/2021	68	PO 1,4and 6
2	Interpretation of Data - IR Spectrophotometry	Dr R K Agrawal DOPS Sagar University	02/08/2021	72	PO 1,2,3 and 4
3	Challenges in Pharmaceutical marketing	Mr. Manish Singh Vellinton Healthcare	28/08/2021	73	PO 1,6,7 and 8
4	Body language	Dr Kavita Burse Prof, T&P Cell, Technocrats Institute of Technology, Bhopal.	03/09/2021	79	PO 5,6,8 and 11
5	Brain Power	Dr Vandna Sharma Gayatri Tapobhumi, Mathura	27/09/2021	65	PO 1,5,7 and 8
6	Patent application and its guide line	Dr Ashish Jain LNCT University, Bhopal	04/10/2021	69	PO 1,2,3 and 4
7	Lack of corelation with pharmacy	Dr S K Jain Govt SV Poly Bhopal	22/10/2021	72	PO 1,5,7 and 11

8	Memorandum of Understanding(MOU)	Mr. Hitendra Yadav Director, Shreyes Pharma Vapi, Gujrat	20/11/2021	75	PO 1,4,7 and 11
9	Panchkarma	Dr. Vandna Sharma Gayatri Tapo bhumi, Mathura	28/01/2022	79	PO 1,4,8 and 10
10	Advances in Tablet Technology	Dr. Shailendra Patil SIPS, Sagar	21/02/2022	69	PO 1,2,3 and 4
11	Animal welfare in Education & Research	Dr. Mukul Tailung Jiwaji University, Gwlor	22/2/2022	70	PO 1,6,7 and 10
12	Alternative to Animal in teaching & Research	Dr. N. Ganesh, Jawaharlal Nehru Hospital and Research Centre, Bhopal	23/02/2022	80	PO 1,6,7 and 10
13	Role of community Pharmacist	Chardra Kant Thakre, Cipla Pharmaceuticals, Indore	23/02/2022	79	PO 1,2,3 and 5
14	In vitro-in vivo correlation	Dr. Ashish Maniguha, Principal MIPS, Bhopal	26/02/2022	78	PO 3,4 and 9

2022-23

S. No	Topic of Expert Lecture	Speaker	Date	% No. of Students	Relevance to PO
1	Incorporating seeds of research and innovation in the students	Dr. Sandeep Kumar Sahu, Professor Vedula College of Pharmacy, Bhopal	26/8/2022	78	2,3,10 and 11
2	Treatment & Prevention of Hepatitis B & C	Dr. Narendra Kumar Lariya, Professor Vedula College of Pharmacy, Bhopal	16/9/2022	75	PO 1,3,7 and 8
3	Bridging gap between Industry & Academic	Dr. Subhash Pandey Ex Vice President Zydus Group Ahmedabad	07/10/2022	76	PO 1,2,5 and 6
4	Biotechnology Lab Setup Guidelines	Dr R K Singh Scientist, CDRI, Lucknow	06/02/2023	67	PO 2,5,8 and 11
5	Shelf life of Drugs and Drug Products	Dr. Kunal Shrivastav Hindustan Antibiotics Ltd, Pune	07/02/2023	80	PO 1,3,4 and 7
6	Guidelines of US FDA	Mr. Vardhman Jain Wallac Pharma. Goa	07/02/2023	85	PO 6,7 and 8
7	Intellectual Property Rights	Dr. N S Thakur MPCST, Bhopal	18/04/2023	86	PO 2,5,6 and 7
8	COVID-19 Vaccination	Dr. Ramkumar Rai, Coordinator, Unicef	22/04/2023	82	PO 4,5,6 and 8
9	Pharmacokinetics Modeling: An Introduction	Dr. Sanjay Jain, DOPS Dr H S Gour University Sagar	29 /04/ 2023	76	PO 1,2,4 and 11
10	Drug Interaction	Dr. V. K. Mourya, Principal	06/05/ 2023	72	PO 2,3,4 and 9
11	Comprehensive Review on Formulation & Development	Dr. Subhash Pandey, Ex Vice President Zydus Group Ahmedabad	08/05/2023	78	PO 1,2,3 and 4
12	Pharma marketing challenges and opportunities	Mr Ameet Guha Unichem laboratories, Mumbai	15/05/2023	75	PO 2,5,7 and 8
13	Development and professionalism	Dr. Kuldeep Ganju, Principal, SIPTECH, Bhopal	16/05/2023	67	PO 1,2,3 and 5
14	Medicine And Meditation: A Journey Towards Excellence And Beyond	Dr. O. P. Katore, Professor, Chairperson, University Institute of Pharmaceutical Science	21/05/2023	87	PO 1,6,9 and 10
15	Online Pharmacy: Current Scenario & Future Prospects in India	Mr. Sunil Thakur, Asst. Manager, Pharmease, Mumbai	22/05/2023	79	PO 1,4,6 and 7
16	Redefining the Pharmacy Services in Healthcare System of India	Dr. R A Gupta, Chief Pharmacist, Rani Lakshmi Bai Govt hospital Lucknow	25/05/2023	75	PO 4,7 and 8
17	Life Style Disorder and Ayurveda	Dr. Durgesh Senthia, BAMS MD AIIMS	27/05/2023	78	PO 5,7,9 and 11

18	Career in R & D: Opportunity and challenges for Pharmacy students".	Dr. Sayan Dutta Gupta, Korea Research Foundation (KRF) postdoctoral researcher	28/05/2023	76	PO 1,7 and 9
19	Challenges of quality of Herbal Medicines product and Botanical Food Supplements	Prof. Umesh Patil,	02/06/2023	75	PO 1,6 and 9
20	Scope in Sales& marketing how to prepare your self	Mr. Amol Yadav, Product Specialist in Pfizer Ltd.	17/06/2023	85	PO 1,5,6 and 7
21	Drug Design and Discovery	Dr.Vineet Singh, Asst Prof., DOP, Shri G.S.I.T.S., Indore	24/06/2023	80	PO 1,2,3 and 4

2023-24

S. No	Topic of Expert Lecture	Speaker	Date	% No. of Students	Relevance to PO
1	Current job opportunities in Pharmaceutical sector in India and how to prepare for getting good job	Dr. Sabyasachi Patri, Director and Founder and Sr. Consultant , Biointegrity consultant	07-07-2023	85	PO 1,2,3 and 5
2	Quality by Design in Pharmaceuticals.	Dr. P R. Mahaparale, Associate Prof, Govt. College of Pharmacy Aurangabad Maharashtra	08-07-2023	78	PO 1,2,3 and 4
3	"Natural Way to Boost Immunity With Beauty".	Dr. Ankit Pandey, Practicing Ayurvedacharya, MD	29-07-2023	84	PO 1,4 and 10
4	Computer Added Drug Design (CADD).	Dr. Sushil Kashaw, Asso. Prof., Dr. H. S. Gour University, Sagar	30-07-2023	83	PO 2,3 and 4
5	Regulatory Affairs	Dr. Shubhash Pandey GM, Zydus Pharma.	04/03/2022	77	PO 1,4,7 and 9
6	Chemical Structure drawing tools	Dr Deepak Basedia, Prof	16/03/2022	75	PO 2,3,6 and 7
7	Motivational Lecture On Meditation for enhancing brain power	Mr. Rahul Shrivastav Director, Infotek pvt ltd.	12/04/2022	68	PO 1,3,4,6 and 9
8	Clinical Trial	Dr. N. Ganesh Jawaharlal Nehru Hospital and Research Centre, Bhopal	6/05/2022	80	PO 1,2,3 and 4
9	Teaching Methodology	Dr. Abhishek Dwivedi, Professor Dr. Satyendra Kumar Memorial college of Pharmacy, Bhopal	20/05/2022 22/05/2022	79	PO 1,2,4 and 8
10	GPAT Preparation & Tools : How to Achieve Success	Prof. Dr. Dheeraj bele , Principal Charak Institute of Pharmaceutical Science	02-10-2023	68	PO 1,2,3 and 4
11	GPAT Preparation How & Tools : How to Achieve Success	Prof. Dr. Dheeraj Bele , Principal, Charak Institute of Pharmaceutical Sci	02-11-2023	70	PO 1,2,4 and 5
12	Swasthya m Ayurved ka mahatwa on occasion of Dhanvantri Jayanti	Dr. Navin Chandra Joshi M.D. Ayurveda	12-11-2023	79	PO 1,2,7 and 8
13	The Brain of Pharmacy Company product Management Team	Mr.Amit Khanna, Sr.Therapy Executive, Asterea-Neuro-Psychiatry Division of Intas Pharmaceuticals	25-01-2024	85	PO 1,2,7 and 9
14	Implementation and Application of Green Chemistry in Pharmaceutical Sciences	Dr. Prateek K Jain, Principal, AIPS, Sagar	26/04/2024	86	PO 1,2,3 and 4
15	Common Cancer: Sign Symptoms and Prevention	Dr. Shashank Bansal, Asst Prof AIIMS, Bhopal	04/05/2024	87	PO 1,3,6 and 9
16	Drug Targetting	Dr. Suman Ramteke, Prof, RGPV, Bhopal	16/05/2024	81	PO 1,2,3 4 and 8



Institute has made mandatory industrial training for B. Pharm. students as per the guidelines of Pharmacy Council of India.

In the curriculum of pharmacy there is compulsory one month industrial training after 6th semester where students are required to work in different departments of industrial set-up. After the training the students are required to submit a report on the work done in the industry. As a result of this training programme, the students become more aware about departments of the industry such as research and development, formulation development, quality control and production. They are able to visualize processes and procedures taught theoretically and are able to implement them during remaining course of their study.

Institute's Training and Placement Cell facilitates arrangements for four weeks in-plant training to be undergone by the B. Pharm students. At the beginning of Semester-V, the Cell gives orientation to the students regarding the purpose of In-plant training and procedure to approach industries for the same. The Cell facilitates issue of official appeal letters to the students which need to be submitted to industries.

The Cell further coordinates with industries for the confirmation of accommodation of training. On completion of the training, the students are asked to submit a report of the same and appear for a short individual interactive session with the Training Cell regarding their observations and experiences during the training. Students are evaluated based on the above criteria and top three reports are issued a Certificate of Merit which is handed over to them during the annual gathering function.

Students are benefitted from the practical In-Plant training activity since they have related topics such as Pilot-Plant scale up techniques in their subsequent final year syllabus. The issue of Certificate of Merit additionally motivates the students to strive for active participation in this co-curricular activity.

#### AY 2020-21

S. No.	Enrolment Number	NAME OF STUDENT	NAME OF INDUSTRY	Duration
1	0165PY171006	Anshul Pandey	Cipla Laboratories	Four Week
2	0165PY171007	Anshul Sharma	Cipla Laboratories	Four Week
3	0165PY171023	Geetanjali Soni	IPCA Laboratory	Four Week
4	0165PY171078	Shanti Patel	Aristo Pharmaceuticals Pvt.Ltd	Four Week
5	0165PY171090	Tarunendra Tiwari	Aristo Pharmaceuticals Pvt.Ltd	Four Week
6	0165PY171096	VIPIN THAKUR	Alkem Laboratory	Four Week

#### AY 2021-22

S. No.	Enrolment No	NAME OF STUDENT	NAME OF INDUSTRY	Duration
1	0165PY181003	Abhay Tiwari	Lupin Pharmaceuticals Pvt. Ltd	Four Week
2	0165PY181025	Atul Pal	Lupin Pharmaceuticals Pvt. Ltd	Four Week
3	0165PY181037	Harsh Jain	Aristo Pharmaceuticals Pvt. Ltd	Four Week
4	0165PY181067	Pooja Lodhi	Aristo Pharmaceuticals Pvt. Ltd	Four Week
5	0165PY181068	Prachi Sharma	IPCA Laboratory	Four Week
6	0165PY181084	Shailesh Pal	IPCA Laboratory	Four Week
7	0165PY181094	Tejaswee Raj	Harsh health care	Four Week
8	0165PY181099	Yogesh Pandey	Harsh health care	Four Week

#### AY 2022-23

S. No.	Enrolment No	Name of student	Name of industry	Duration
1	0165PY191001	Aashita Raut	Aristo Pharmaceuticals Pvt. Ltd	Four Week
2	0165PY191031	Gunja Devi	Aristo Pharmaceuticals Pvt. Ltd	Four Week
3	0165PY191038	Khushal Chouriya	Aristo Pharmaceuticals Pvt.Ltd	Four Week
4	0165PY191040	Manish Kumar Singh	Lupin Pharmaceuticals Pvt. Ltd	Four Week
5	0165PY191058	Nikhil Singh	Lupin Pharmaceuticals Pvt. Ltd	Four Week
6	0165PY191083	Rohit Tyagi	Alkem Laboratory	Four Week
7	0165PY191100	Vishnu Dhakad	Alkem Laboratory	Four Week

The students are additionally given training on following subjects in form of Value Addition Courses and Summer Schools for skill development

S. No	Title of VAC / Summer School	Dates	Number of Participants	Relevance to PO
1.	Discover your personality	20-08-2019	20	PO 2,5,and 6
2.	Hands on training on Drug designing Tools.	8-9 Sept 2019	14	PO 1,2,3and 4
3.	Rheological studies of Pharmaceutical Dosage forms	15-16 Sept 2019	15	PO 1and3
4.	Hands on training on Drug designing Tools.	23-24 Feb 2020	15	PO 1,2,3and 4
5.	Discover your persona	16-17 Feb 2020	15	PO 6,8and 11
6.	Rheological studies of Pharmaceutical Dosage forms	16-17 Feb 2020	13	PO 1and3
7.	Brain storming, brain mapping and mind development exercise	14-15 Sept 2020	18	PO 2,3,5and 6
8.	Discover your persona	8-9 March 2021	16	PO 6,8and 11
9.	Chromatographic techniques and its applications	5-6 April 2021	15	PO 1,3and 4

10.	Discover your persona	18-19 Oct 2021	17	PO 6,8and 11
11.	Hands on training cum workshop on Molecular modelling techniques.	30 Nov & 2 Dec 2021	16	PO 1,2,3and 4
12	Cosmeceuticals: Cosmetics in Pharmaceuticals	2-3 Dec 2021	11	PO 1,4,6and 7
13	Resume writing, Group Discussions & Personal Interview Skills.	28 May 2022	48	PO 2,4,6 and 8
14	Enhancement of Verbal & non verbal Communication Skills.	16 June 2022	54	PO 2,4,6 and 8
15	D I Y: Herbal Selfcare	04 July 2022	54	PO 1,3,10 and 11
16	Entrepreneurship-Development: Opportunities and Challenges.	20 Sep 2022	210	PO 5,6 and 7
17	Organic farming of Nutraceuticals: A Boon for Health & Wealth	9 Nov 2022	60	PO 1,3,10 and 11
18	Phytochemical Screening of Bioactive Herbs	10-04-2023	79	PO 1,9, and 11
19	Development of Integrated mental health program and its challenges	30-05-2023	92	PO 2,3, and 11

#### 2.2.6 Continuous Evaluation Process (10)

Institute Marks : 10.00

The continuous evaluation process is based on internal assessment of theory and practicals conducted by institution and semester end examinations conducted by University.

S. No.	Methods of evaluation	Effectiveness of method	Effectiveness
1.	Class test	Excellent	The students learn the individual topics through these tests and their performance is evaluated by the concerned teachers
2.	Practical viva voce	Excellent	It leads to better clarity of the practical performed and the concept behind it. The students become capable of answering all the questions related to conduct/procedure/mechanisms of practicals.
3.	Assignments	Excellent	By preparing the assignments of certain topics the students are able to improve their writing skills and attain better understanding of the topic.
4.	Sessional examination	Excellent	The three sessional exams conducted help the students to prepare the syllabus in parts for the final examination. This also adds to the overall percentage marks of the students. Students are subjected to regular learning process throughout the session and can judge their preparedness for final examination.
5.	Final Theory examination and practical viva voce	Excellent	This is the final evaluation step for the students. The evaluation is done by an external expert (both theory and practical)



#### 2.2.7 Quality of Experiments (20)

Institute Marks : 20.00



The college has a Sophisticated Instrument room and a machine room which is having sophisticated instruments such as HPLC and UV Spectrophotometer and instruments for pilot-plant scale up studies like Tablet Punching Machine, Dissolution Apparatus, and Disintegration Apparatus, etc respectively. College laboratories are well equipped with basic requirements as per the syllabus.

1. The University curriculum specifies the number of experiments in each course along with the type of practical's to be conducted.
2. Students are given demonstration and hands-on experience on equipments some of which are a part of their theory syllabus. Thus, students can correlate theoretical concepts with practical knowledge, enabling them to have a better understanding of the subject.
3. The practicals of the overall Program taken together from Sem I to Sem VIII involve skills addressing various Bloom Levels depending on the respective course and year of study (e.g. tabulation of readings, calculations, plotting graphs, interpretation of results and comment on the results, wherever applicable).
4. Safe handling of chemicals, instruments and equipments is taught, wherever applicable.
5. After conduction of every practical, results obtained are discussed.
6. Students are oriented to refer Standard Operating Procedures (SOPs) before using any instrument or equipment especially for those which are sophisticated.
7. Safety precautions while operating equipments are explained.
8. Trouble shooting and maintenance is taught and demonstrated.
9. Students are also explained the importance of documentation.

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### 3 COURSE OUTCOMES (COS) AND PROGRAM OUTCOMES (POS) (100)

Total Marks 100.00

#### 3.1 Establish the correlation between the courses and the Program Outcomes (NBA defined Program Outcomes as mentioned in Annexure I) (20)

Total Marks 20.00

**3.1.1 Course Outcomes (SAR should include course outcomes of one course from each semester of study, however, should be prepared for all courses) (5)**

Institute Marks : 5.00

**Note : Number of Outcomes for a Course is expected to be around 6.**

Course Name :	C1 01	Course Year :	2023-24
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Course Name	Statements
C1 01.1	Understanding, cell structure and function, histology and physiology of various tissues and organs of different systems of human body. <span>↗</span>
C1 01.2	Understand the concepts and knowledge of gross anatomy, and physiology related to the integumentary, skeletal, muscular and its articulation. <span>↗</span>
C1 01.3	Apply concepts of nervous systems and its coordination. <span>↗</span>
C1 01.4	Analyze the sense organs mechanism and their disorders. <span>↗</span>
C1 01.5	Classify and identify principal hormones and their function. <span>↗</span>

Course Name :	C1 02	Course Year :	2023-24
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Course Name	Statements
C1 02.1	Apply the principles of organic chemistry to identify and name organic compounds and isomers <span>↗</span>
C1 02.2	Identify and distinguish the structural isomers organic compounds <span>↗</span>
C1 02.3	Predict the reaction orientation and mechanism <span>↗</span>
C1 02.4	Discuss the orientation, reactivity and stability of organic compounds <span>↗</span>
C1 02.5	Identify and confirm the organic compounds by qualitative tests <span>↗</span>

Course Name :	C2 03	Course Year :	2023-24
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Course Name	Statements
C2 03.1	Applying terminology related to properties of matter. <span>↗</span>
C2 03.2	Outline physicochemical properties, complexation and protein binding of drug molecules <span>↗</span>
C2 03.3	Utilize the knowledge of solubility of drugs in formulation <span>↗</span>
C2 03.4	Examine the tonicity of parenteral and ophthalmic preparations. <span>↗</span>
C2 03.5	Evaluate formulation based on its solid state properties <span>↗</span>

Course Name :	C2 04	Course Year :	2023-24
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Course Name	Statements
C2 04.1	Outline the basic scientific concepts and principles that serve as the foundational underpinnings of the pharmacological sciences including pharmacokinetics, pharmacodynamics, drug metabolism
C2 04.2	Enumerates about autonomic nervous system and list out different types of drugs used to treat disorders of autonomic nervous system.
C2 04.3	List and discuss selected drugs used to treat disorders of central nervous system including their clinical uses and potential adverse effects.
C2 04.4	Elucidate the pharmacology of NSAIDS, Narcotic analgesics & antagonists, local anaesthetics and drugs acting on various CNS disorders.
C2 04.5	Understands pharmacology of anti-psychotics, anti-depressants, anti-maniacs, hallucinogens, anti- epileptic and anti-parkinsonian drugs.

Course Name :	C3 05	Course Year :	2023-24
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Course Name	Statements
C3 05.1	Elucidate the chemistry of drugs with respect to their pharmacological activity.
C3 05.2	Delineate the drug metabolic pathways, adverse effects and therapeutic value of drugs
C3 05.3	Elucidate the physicochemical properties and pharmacokinetic properties of the drugs
C3 05.4	Understands the structural activity relationship of different class of drugs.
C3 05.5	Examine the chemical synthesis of various drugs.

Course Name :	C3 06	Course Year :	2023-24
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Course Name	Statements
C3 06.3	Elucidate the physicochemical properties and pharmacokinetic properties of the drugs
C3 06.4	Delineate the structural activity relationship of different class of drugs.
C3 06.5	Examine the chemical synthesis of various drugs
C3 06.1	Elucidate the chemistry of drugs with respect to their pharmacological activity.
C3 06.2	Delineate the drug metabolic pathways, adverse effects and therapeutic value of drugs.

Course Name :	C4 07	Course Year :	2023-24
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Course Name	Statements
C4 07.1	Elucidate pilot plant scale up techniques and SUPAC guidelines
C4 07.2	Outline various aspects of technology transfer involved from R & D to productions.
C4 07.3	Choose and apply various responsibilities and regulatory requirements for drug approval. new drugs by Indian Regulatory
C4 07.4	Analyze and study various quality management systems in pharmacy field.
C4 07.5	Delineate about the approval process and regulatory requirements for drug products

Course Name :	C4 08	Course Year :	2023-24
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Course Name	Statements
C4 08.1	Analyze the operation of M.S. Excel, SPSS.
C4 08.2	Understands the operation of, R and MINITAB®.
C4 08.3	Analyze the operation of DoE ( Design of Experiment)
C4 08.4	Understands the various statistical techniques to solve statistical problems
C4 08.5	Elucidate statistical techniques in solving the problems

3.1.2 CO-PO matrices of courses selected in 3.1.1 (four matrices to be mentioned; one per semester from 1st to 8th semester; atleast one per year) (5)

Institute Marks : 5.00

1 . course name : C101

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C101.1	3 ▾	2 ▾	1 ▾	1 ▾	- ▾	- ▾	- ▾	- ▾	1 ▾	- ▾	1 ▾
C101.2	2 ▾	2 ▾	1 ▾	1 ▾	- ▾	- ▾	- ▾	- ▾	1 ▾	- ▾	1 ▾
C101.3	2 ▾	2 ▾	1 ▾	1 ▾	1 ▾	- ▾	- ▾	- ▾	1 ▾	- ▾	1 ▾
C101.4	2 ▾	2 ▾	1 ▾	1 ▾	1 ▾	1 ▾	- ▾	- ▾	2 ▾	- ▾	1 ▾
C101.5	3 ▾	2 ▾	3 ▾	2 ▾	3 ▾	- ▾	- ▾	- ▾	2 ▾	1 ▾	1 ▾
Average	2.40	2.00	1.40	1.20	1.70	1.00	0.00	0.00	1.40	1.00	1.00

2 . course name : C102

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C102.1	2 ▾	2 ▾	- ▾	- ▾	- ▾	1 ▾	2 ▾	- ▾	1 ▾	- ▾	1 ▾
C102.2	2 ▾	2 ▾	- ▾	2 ▾	2 ▾	- ▾	- ▾	- ▾	1 ▾	- ▾	1 ▾
C102.3	2 ▾	3 ▾	- ▾	- ▾	- ▾	2 ▾	2 ▾	- ▾	1 ▾	- ▾	1 ▾
C102.4	3 ▾	2 ▾	2 ▾	2 ▾	- ▾	2 ▾	- ▾	- ▾	1 ▾	- ▾	1 ▾
C102.5	3 ▾	3 ▾	3 ▾	3 ▾	2 ▾	2 ▾	2 ▾	- ▾	- ▾	- ▾	2 ▾
Average	2.40	2.40	2.50	2.30	2.00	1.70	2.00	0.00	1.00	0.00	1.20

3 . course name : C203

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C203.1	3 ▾	3 ▾	- ▾	- ▾	- ▾	3 ▾	1 ▾	- ▾	- ▾	3 ▾	2 ▾
C203.2	3 ▾	3 ▾	- ▾	2 ▾	- ▾	3 ▾	- ▾	- ▾	- ▾	3 ▾	3 ▾
C203.3	3 ▾	3 ▾	1 ▾	2 ▾	1 ▾	3 ▾	1 ▾	1 ▾	2 ▾	3 ▾	2 ▾
C203.4	3 ▾	3 ▾	1 ▾	2 ▾	1 ▾	3 ▾	1 ▾	- ▾	3 ▾	3 ▾	3 ▾
C203.5	3 ▾	3 ▾	1 ▾	2 ▾	1 ▾	3 ▾	1 ▾	1 ▾	3 ▾	3 ▾	3 ▾
Average	3.00	3.00	1.00	2.00	1.00	3.00	1.00	1.00	2.60	3.00	2.60

4 . course name : C204

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C204.1	3 ▾	2 ▾	1 ▾	2 ▾	1 ▾	1 ▾	- ▾	- ▾	3 ▾	1 ▾	2 ▾
C204.2	3 ▾	2 ▾	1 ▾	1 ▾	1 ▾	1 ▾	- ▾	- ▾	3 ▾	- ▾	1 ▾
C204.3	3 ▾	1 ▾	- ▾	2 ▾	- ▾	- ▾	- ▾	- ▾	3 ▾	- ▾	2 ▾
C204.4	3 ▾	2 ▾	- ▾	2 ▾	- ▾	3 ▾	- ▾	- ▾	3 ▾	3 ▾	2 ▾
C204.5	3 ▾	1 ▾	1 ▾	3 ▾	1 ▾	1 ▾	- ▾	- ▾	3 ▾	- ▾	2 ▾
Average	3.00	1.60	1.00	2.00	1.00	1.50	0.00	0.00	3.00	2.00	1.80

5 . course name : C305

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C305.1	2 ▾	2 ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	1 ▾	- ▾	1 ▾
C305.2	2 ▾	2 ▾	2 ▾	- ▾	- ▾	- ▾	- ▾	- ▾	1 ▾	- ▾	1 ▾
C305.3	2 ▾	2 ▾	- ▾	- ▾	- ▾	- ▾	- ▾	- ▾	1 ▾	- ▾	1 ▾
C305.4	2 ▾	2 ▾	- ▾	- ▾	2 ▾	2 ▾	- ▾	- ▾	1 ▾	2 ▾	1 ▾
C305.5	3 ▾	3 ▾	3 ▾	2 ▾	3 ▾	2 ▾	2 ▾	- ▾	- ▾	- ▾	2 ▾
Average	2.20	2.20	2.50	2.00	2.50	2.00	2.00	0.00	1.00	2.00	1.20

6 . course name : C306

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
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C306.3	2	▼	2	▼	-	▼	-	▼	-	▼	-	▼	-	▼	-	▼
C306.4	2	▼	2	▼	-	▼	-	▼	-	▼	-	▼	2	▼	-	▼
C306.5	2	▼	2	▼	-	▼	-	▼	-	▼	-	▼	2	▼	-	▼
C306.1	2	▼	2	▼	-	▼	-	▼	-	▼	-	▼	2	▼	-	▼
C306.2	2	▼	2	▼	-	▼	-	▼	2	▼	2	▼	-	▼	-	▼
<b>Average</b>	<b>2.00</b>		<b>2.00</b>		<b>0.00</b>		<b>0.00</b>		<b>2.00</b>		<b>2.00</b>		<b>0.00</b>		<b>0.00</b>	

7 . course name : C407

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11					
C407.1	3	▼	3	▼	3	▼	-	▼	3	▼	-	▼	-	▼	3	▼
C407.2	3	▼	3	▼	-	▼	-	▼	2	▼	-	▼	-	▼	-	▼
C407.3	3	▼	3	▼	2	▼	3	▼	-	▼	-	▼	-	▼	2	▼
C407.4	3	▼	3	▼	-	▼	-	▼	2	▼	-	▼	-	▼	2	▼
C407.5	1	▼	1	▼	2	▼	-	▼	1	▼	-	▼	3	▼	2	▼
Average	2.60		2.60		2.30		3.00		1.70		3.00		3.00		2.00	

8 . course name : C408

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11			
C408.1	3	▼	2	▼	-	▼	3	▼	3	▼	2	▼	3	▼
C408.2	3	▼	2	▼	-	▼	1	▼	2	▼	2	▼	-	▼
C408.3	2	▼	2	▼	-	▼	-	▼	1	▼	-	▼	1	▼
C408.4	2	▼	1	▼	1	▼	-	▼	2	▼	3	▼	-	▼
C408.5	3	▼	3	▼	3	▼	2	▼	2	▼	-	▼	-	▼
Average	2.60		2.00		2.00		2.30		1.80		2.50		0.00	



Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
COBP607	2	2	0	0	2	2	0	0	01.6	2	1
COBP608	1.8	1.5	1.7	1.3	1.7	2	0	0	1.4	1.4	1.8
COBP609	1.8	1.8	1.8	2	1	1.3	0	0	1.4	1.4	1.8
COBP701	2.8	2.2	2.5	1.6	1.5	2.6	2.5	0	0	2.3	1.8
COBP702	2.6	2.6	2.3	3	1.7	3	3	2	2	2.3	2.5
COBP703	2.4	0	2.5	2	1.7	2.7	2	3	2.6	3	1.8
COBP704	2.6	2.2	2.2	2.5	1.3	2.7	2	2	2.3	2	2.7
COBP705	2.4	2	1.8	2.3	2.2	2	2	2	1.6	2	2
COBP706	2.8	2.4	2	1.8	1.7	1.6	1.5	1	1.8	1.8	1.8
COBP801	2.6	2	2	2	2.3	1.8	2.5	0	2	2	2.3
COBP802	1.8	1.6	2.2	0	1.5	1.3	2.5	2	2.7	1.6	2
COBP803	1.6	1.4	1.8	1.7	1.5	2	0	1.8	2	1.2	2.2
COBP804	2.6	2.2	2	2.6	1.4	1.7	2	2	1	1.3	2.4
COBP805	2.6	1.6	2	1.7	1.7	1.5	2.3	1.7	1.6	2	2
COBP205	2.2	2	2	1.8	1.3	1.8	2	2	3	1	2
COBP206	2.2	1.8	2	1.8	1.5	1.8	2	2.5	2	2	1.5
COBP207	2.2	1.8	2	1.8	1.5	1.8	2	0	0	0	2
COBP208	2.2	1.8	2	1.8	2	1.8	2	1	1.5	2	2
COBP209	2.2	1.8	2	1.8	1.5	1.8	2	0	0	0	2
COBP210	2.2	1.8	2	1.5	2	1.8	2	0	0	0	2
COBP301	2.6	2.2	2	0	0	1.4	0	0	0	1.6	2.8
COBP302	3	3	1	2	1	3	1	1	2.7	3	2.6
COBP303	3	3	1.8	2.4	1	2.4	1.5	1	1.3	1	2.4
COBP304	3	2.5	2.3	2.2	2	2.5	2	2	1.7	2.6	2
COBP305	1.6	1.8	1.6	0	0	1.2	0	0	0	1.6	1.8
COBP306	2.6	2.6	1.3	1.8	1.3	2.4	1	1	2.3	2.6	2
COBP307	1.8	2.2	1.8	1.6	1.3	2.4	1.5	1	1.3	1	2.2
COBP308	2.4	2.5	2.3	2	1.5	2.5	2	2	2.5	2.6	2.2
COBP 101	2.4	2	1.4	1.2	1.7	1	0	0	1.4	1	1
COBP 102	2	1.8	0	0	0	1.5	2	1	1	2	1.3
COBP 103	1.6	1.3	1.5	1	1.5	2	0	1.8	2	1.2	2.2
COBP 104	3	2	1	1	0	1.2	0	0	1	1	2
COBP 105	1.8	1.6	2	1.5	1	1.8	2	2	0	0	2
COBP 106	3	3	1	2	1	3	1	1	2.7	3	2.6
COBP 107	2.4	2	1.4	1.2	1.7	1	0	0	1.4	1	1
COBP108	1.8	1.8	0	0	0	1.4	2	1	1	2	1.3
COBP109	2	1.3	1.5	1	1.5	1.8	0	1.8	2	1.4	1.6
COBP110	1.4	1.8	1.2	1.2	0	1.4	0	1	1.2	1	1.6
COBP 111	1.8	1.8	1.7	1.5	1.5	1.5	1.8	0	0	0	2
COBP112	1.6	1.4	1.7	1.3	1.5	1.8	2	0	0	0	1
COBP201	2.2	1.6	1.5	2	1.7	3	0	2	1.4	3	1
COBP202	2.4	2.4	2.5	2.3	2	1.8	2	0	1	0	1.2
COBP203	2	2	3	3	3	2	0	1.3	1.2	1.8	1.2
COBP204	2.8	2	2.6	2	2	2	2.5	0	2.7	2	2.3
COBP205	2.2	2	2	1.8	1.3	1.8	2	2	3	1	2
COBP206	2.2	1.8	2	1.8	1.5	1.8	2	2.5	2	2	1.5

COBP207	2.2	1.8	2	1.8	1.5	1.8	2	0	0	0	2
COBP208	2.2	1.8	2	1.8	2	1.8	2	1	1.5	2	2
COBP209	2.2	1.8	2	1.8	1.5	1.8	2	0	0	0	2
COBP210	2.2	1.8	2	1.5	2	1.8	2	0	0	0	2
COBP301	2.6	2.2	2	0	0	1.4	0	0	0	1.6	2.8
COBP302	3	3	1	2	1	3	1	1	2.7	3	2.6
COBP303	3	3	1.8	2.4	1	2.4	1.5	1	1.3	1	2.4
COBP304	3	2.5	2.3	2.2	2	2.5	2	2	1.7	2.6	2
COBP305	1.6	1.8	1.6	0	0	1.2	0	0	0	1.6	1.8
COBP306	2.6	2.6	1.3	1.8	1.3	2.4	1	1	2.3	2.6	2
COBP307	1.8	2.2	1.8	1.6	1.3	2.4	1.5	1	1.3	1	2.2
COBP308	2.4	2.5	2.3	2	1.5	2.5	2	2	2.5	2.6	2.2
COBP401	2.8	2	2	2	2	2	2.5	0	1.5	2	1.5
COBP402	2.2	2.2	2.5	2	0	1.5	0	0	2.6	1.6	1.6
COBP403	3	3	2	3	2.2	3	3	1	2.7	3	3
COBP404	3	1.6	1	2	1	1.5	0	0	3	2	1.8
COBP405	2	2	2.5	1.3	1	1	0	0	1.7	1.3	2
COBP406	1.8	2.2	2	2	0	1.5	0	0	2	1.6	1.6
COBP407	3	2.6	2	2.5	2.2	2.4	2.8	1.4	2.7	2.4	2.4
COBP408	2.6	1.6	1	1.8	1.3	1.5	0	0	2.6	2	1.8
COBP409	1.8	1.6	1.5	1.5	1.5	1.5	0	0	1.7	1.5	1.5
COBP501	2.2	2.2	2.5	2	2.5	2	2	0	1	2	1.2
COBP502	2.4	2.4	0	0	0	1	3	1	0	1.3	2
COBP503	2.2	2	1	3	2	2	2	2	2.4	2	2.2
COBP504	2.6	2.2	2	1.6	1.3	1.5	2	0	1.7	1.3	1.8
COBP505	2.6	2.5	2	3	1.5	2	1.3	0	0	1.5	1.8
COBP506	2.2	2	2	1.8	1.5	2	1.3	0	0	0	2
COBP507	2.2	2	1.8	1.8	1.7	1.8	2	0	0	0	2
COBP508	2.2	1.8	2	1.8	1.7	1.5	2.3	0	0	0	2
COBP601	2	2	0	0	2	2	0	0	2	2	1
COBP602	2	1.8	1.7	1.7	2	3	0	0	3	2	2
COBP603	2.6	2.5	1.8	2.3	1	1	0	0	1.4	1.2	1.8
COBP604	3	3	0	1.3	0	1.7	1	0	1	1	1.8
COBP605	3	3	3	2.6	2.2	2.8	1.8	2	2.5	3	2.8
COBP606	3	1.7	1	0	1.3	2.2	1	1	1	2.4	1

### 3.2 Attainment of Course Outcomes (40)

Total Marks 40.00

**3.2.1 Describe the assessment processes used to gather the data upon which the evaluation of Course Outcome is based (10)**

Institute Marks : 10.00

Course outcomes of a course are the attributes that the students are expected to achieve after completing the course. The assessment results are used for continuous quality improvement and it is also used to improve the teaching and learning process in a particular course.

#### CO assessment process and methods:

Assessment of course outcomes is a systematic and ongoing process. The methods employed to assess the course outcomes include direct method of assessment. The direct method involves the assessment of students' performance in internal and external (at the end of semester) evaluation/examinations.

#### Total Attainment of CO in a Theory/Lab Course (TA) = Total Direct Assessment

The CO is evaluated using marks obtained by the students, where the student marks consist of

- i. End Term Exam:
  - Final exam Result
- ii. Internal Exam result:
  - Mid Semester Tests
    - Quizzes
    - Assignments
    - Project etc.

Initially, targets are set for each course individually. Then computation of attainment of COs in a particular course is calculated as:

$$\text{CO Attainment (Theory)} = 0.75 \times \text{DEE} + 0.25 \times \text{DIE}$$

$$\text{CO Attainment (Lab)} = 0.7 \times \text{DEE} + 0.3 \times \text{DIE}$$

**Note: The proportional weightage of Internal Exam and External Exam is taken as 25:75 as per university scheme**

#### Rubric for Direct CO attainment rubrics for theory

Assessment Methods	Level	Range of Students in a class / branch with target marks
DEE (Direct External Evaluation)	Level 3	If 80% of students scoring more than benchmark ( $\geq 60\%$ marks)
	Level 2	If 70% of students scoring more than benchmark ( $\geq 60\%$ marks)
	Level 1	If 60% of students scoring more than benchmark ( $\geq 60\%$ marks)
DIE (Direct Internal Evaluation)	Level 3	If 80% of students scoring more than benchmark ( $\geq 80\%$ marks)
	Level 2	If 70% of students scoring more than benchmark ( $\geq 80\%$ marks)
	Level 1	If 60% of students scoring more than benchmark ( $\geq 80\%$ marks)

**Table 3.2.1: CO assessment tools and related attributes**

Course Type	Assessment Tool	Assessment Criteria	Data Collection
Theory	Sessional Exam I & II	Based on student performance in internal Exams	Twice in a semester
	Assignments/Quiz	Based on student performance in Assignment/Quiz	Two assignments per semesters covering all COs.
	University Exams for Theory	Based on student performance in University Exam	Once in a semester
Lab	Lab Work Assignment and Lab Performance	Based on Student performance in labs	Every turn of laboratory performance
	University Exam for Lab	Based on student performance in external viva	Once in a semester
Project	University Examination	Based on student performance in University Exam (final project viva)	Once in a semester
	Internal Presentations	Based on student performance in internal presentations for projects	Twice in a semester

#### Components of Course Evaluation Plan and their Contributions

##### Theory Course

S No	Evaluation Parameter	Frequency	CO Coverage	Scaling of Marks	Max Marks Assigned	Marks obtained
1	Sessional Exam	SE-I (15 Marks)	CO1,CO2,CO3,CO4,CO5	3 Marks per CO	15	As per actual
		SE-II (15 Marks)	CO1,CO2,CO3,CO4,CO5	2 Marks per CO		
2	Assignment/Theory Quiz	2 Assignments/ Quiz of 10 marks Each	CO1,CO2,CO3,CO4,CO5	2 Marks per CO	10	As per actual
3	University Examination	At the End of Semester	CO1,CO2,CO3,CO4,CO5	15 Marks per CO	75	As per actual

## Lab Course

S No	Evaluation Parameter	Frequency	CO Coverage	Scaling of Marks	Max Marks Assigned	Marks obtained
1	Lab work	Every week during semester	CO1, CO2, CO3, CO4, CO5	2 Marks per CO	10	As per actual
2	Assignment/ Quiz/Attendance	Every week during semester	CO1, CO2, CO3, CO4, CO5	1 Marks per CO	5	As per actual
3	External Viva	At the End of Semester	CO1, CO2, CO3, CO4, CO5	7 Marks per CO	35	As per actual

Computation of attainment of CO in a theory/lab course is calculated using following attributes:

- Direct-Internal Evaluation (DIE)** - involve students performance in sessional exam, theory/practical quiz, lab work, viva-voce, project work and assignments. The questions in the question papers of these internal examinations are based on concerned course outcomes. Likewise, assignment questions are also course outcome based.
- Direct-External Evaluation (DEE)**-involve students performance in end semester examination, conducted by affiliating university (RGPV, Bhopal). For computations, the grades/ marks records of students in different courses have been taken from the tabulation record received from university/ marks-sheet of respective students that can be obtained from the official website of RGPV.

## Rubric for CO Assessment: Theory Course

Assessment /Attainment	Attributes
Total Direct Attainment of COs (TDA)	$0.75 \times \text{Direct External Evaluation (DEE)} + 0.25 \times \text{Direct Internal Evaluation (DIE)}$
Direct Internal Evaluation (DIE)	$0.60 \times \text{Mid Semester marks} + 0.4 \times \text{Quiz/Assignment marks}$
Direct External Evaluation (DEE)	Marks in end semester theory exam

The process is depicted in figure 3.2.1 (A)

## Rubric for CO Assessment: Lab Course

Assessment /Attainment	Attributes
Total Direct Attainment of COs (TDA)	$0.7 \times \text{Direct External Evaluation (DEE)} + 0.3 \times \text{Direct Internal Evaluation (DIE)}$
Direct Internal Evaluation (DIE)	Lab Sessional Marks
Direct External Evaluation (DEE)	Practical End Semester

The process is depicted in figure 3.2.1 (B)

## Rubrics for setting CO attainment level for all courses:

### Direct CO attainment rubrics for lab courses:

Assessment Methods	Level	Range of Students in a class / branch with target marks
Direct Assessment (External Evaluation)	Level 3	If 80% of students scoring more than benchmark ( $\geq 70\%$ marks)
	Level 2	If 70% of students scoring more than benchmark ( $\geq 70\%$ marks)
	Level 1	If 60% of students scoring more than benchmark ( $\geq 70\%$ marks)
Direct Assessment (Internal Evaluation)	Level 3	If 80% of students scoring more than benchmark ( $\geq 80\%$ marks)
	Level 2	If 70% of students scoring more than benchmark ( $\geq 80\%$ marks)
	Level 1	If 60% of students scoring more than benchmark ( $\geq 80\%$ marks)

## CO Targets

Course	Targets
Theory Course	CO TARGET=2 (Moderate)

Practical Course	CO TARGET=2 (Moderate)
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### 3.2.1 (A) Sample calculation for attainment of CO (Theory)

#### Direct Assessment of Batch 2019-23 Semester IV BP 201 (Human Anatomy and Physiology II) – Theory

S.NO.	ENROLLMENT	NAME	Status	SGP	ACG	GPA	External Evaluation					Mid Term					T Quiz/ASSIGNMENT				
							75	CO1	CO2	CO3	CO4	CO5	CO1	CO2	CO3	CO4	CO5	10			
1	0165PY191001	Aashita Raut	PASS	10.00	8.90		67	3	3	3	3	3	15	2	2	2	2	2	10		
2	0165PY191002	Abhay Kumar Singh	PASS	9.21	8.52		64	3	3	2	3	3	14	2	2	2	1	2	9		
3	0165PY191003	Abhineet Kumar	PASS	8.24	6.55		50	3	2	3	2	3	13	2	1	2	1	2	8		
4	0165PY191005	Adarsh Singh	PASS	8.24	6.14		48	3	3	3	2	3	14	1	2	1	2	2	8		
5	0165PY191006	Adil Afaq	PASS	10.00	8.74		66	3	3	3	3	3	15	2	2	2	2	2	10		
6	0165PY191007	Aditya Kumar	PASS	8.24	6.93		53	2	3	2	3	3	13	2	1	2	2	1	8		
7	0165PY191008	Akash Thakur	PASS	9.24	7.59		60	3	3	3	3	3	15	2	2	2	2	2	10		
8	0165PY191009	Aman Patle	PASS	9.10	8.47		64	3	3	2	3	3	14	2	1	2	2	2	9		
9	0165PY191010	Anamika Tiwari	PASS	9.97	9.33		70	3	3	3	3	3	15	2	2	2	2	2	10		
10	0165PY191011	Aniket Singh	PASS	10.00	9.42		71	3	3	3	3	3	15	2	2	2	2	2	10		
11	0165PY191015	Anurag Vishwakarma	PASS	9.21	8.58		64	3	2	3	3	3	14	2	2	1	2	2	9		
12	0165PY191017	Aryan Kumar	PASS	8.55	7.00		53	2	3	3	3	3	14	2	2	1	2	1	8		
13	0165PY191018	Ashish Dwivedi	PASS	8.34	6.23		50	3	2	3	3	3	14	2	1	2	2	2	9		
14	0165PY191020	Awantika Keshari	PASS	10.00	9.24		69	3	3	3	3	3	15	2	2	2	2	2	10		
15	0165PY191021	Ayub Ansari	PASS	9.97	8.80		66	3	3	3	3	3	15	2	2	2	2	2	10		
16	0165PY191022	Ayush Singh	PASS	9.10	8.31		63	3	3	3	2	3	14	2	2	1	2	2	9		
17	0165PY191023	Banti Kumar Singh	PASS	7.48	5.60		45	3	2	3	2	3	13	1	2	1	2	2	8		
18	0165PY191025	Brijendra Bahadur Patel	PASS	8.45	6.21		52	3	3	3	3	3	15	2	2	2	2	2	10		
19	0165PY191026	Deepak Verma	PASS	8.24	6.14		50	3	2	3	3	3	14	2	1	2	2	2	9		
20	0165PY191027	Deepak Vinod Prajapati	PASS	9.00	8.28		63	3	3	3	2	3	14	2	2	2	1	2	9		
21	0165PY191028	Devshankar Dwivedi	PASS	10.00	8.71		65	3	3	3	3	3	15	2	2	2	2	2	10		
22	0165PY191029	Gourav Koushal	FAIL	6.21	3.73		37	3	2	3	2	3	13	2	1	2	1	2	8		
23	0165PY191030	Gourav Maran	PASS	9.00	8.19		62	3	3	3	3	2	14	2	1	2	2	2	9		
24	0165PY191031	Gunja Devi	PASS	9.24	7.95		62	3	3	3	3	3	15	2	2	2	2	2	10		
25	0165PY191033	Hrithik Upadhyay	PASS	9.97	9.06		68	3	3	3	3	3	15	2	2	2	2	2	10		
26	0165PY191034	Huzaifa	PASS	10.00	9.12		68	3	3	3	3	3	15	2	2	2	2	2	10		
27	0165PY191035	Jayadeep Gupta	PASS	8.03	6.59		51	3	2	2	3	3	13	1	2	2	1	2	8		
28	0165PY191036	Junaid Khan	PASS	10.00	9.14		69	3	3	3	3	3	15	2	2	2	2	2	10		
29	0165PY191037	Kaushal Kumar	PASS	9.21	8.00		60	3	3	3	2	3	14	2	2	2	1	2	9		
30	0165PY191038	Khushal Chouriya	PASS	8.66	7.26		56	3	2	3	3	3	14	2	2	1	2	2	9		
31	0165PY191039	Kunal Devkar	PASS	9.21	8.42		63	2	3	3	3	3	14	1	2	2	2	2	9		
32	0165PY191040	Manish Kumar Singh	PASS	10.00	9.04		68	3	3	3	3	3	15	2	2	2	2	2	10		
33	0165PY191042	Mariam Aziz Khan	PASS	10.00	9.24		69	3	3	3	3	3	15	2	2	2	2	2	10		
34	0165PY191043	Md Ali Raza	PASS	9.21	7.08		56	3	3	3	3	3	15	2	2	2	2	2	10		
35	0165PY191044	Md Anas Mansoori	PASS	8.34	6.19		50	3	2	3	3	3	14	2	2	1	2	2	9		
36	0165PY191046	Md Asif Alam	PASS	9.97	9.02		68	3	3	3	3	3	15	2	2	2	2	2	10		
37	0165PY191047	Md Danish Hussain	PASS	10.00	8.76		66	3	3	3	3	3	15	2	2	2	2	2	10		
38	0165PY191048	Md Khushdil Ansari	PASS	9.97	8.73		66	3	3	3	3	3	15	2	2	2	2	2	10		
39	0165PY191049	Md Nazim	PASS	8.24	7.37		56	3	3	3	2	2	13	2	2	1	2	1	8		
40	0165PY191050	Md Tanveer Alam	PASS	9.97	8.85		66	3	3	3	3	3	15	2	2	2	2	2	10		

41	0165PY191051	Md Umar	PASS	9.10	8.36	63	3	3	2	3	3	14	2	1	2	2	2	9
42	0165PY191052	Mohammad Faizan	PASS	9.31	8.71	65	3	3	3	3	2	14	2	2	2	1	2	9
43	0165PY191053	Mohd Ahmad Khan	PASS	9.21	8.62	65	3	3	3	2	3	14	2	2	2	2	1	9
44	0165PY191054	Mohd Daud	PASS	10.00	8.83	66	3	3	3	3	3	15	2	2	2	2	2	10
45	0165PY191055	Mohd Zaid	PASS	9.00	8.52	62	3	2	3	2	3	13	2	2	1	2	1	8
46	0165PY191056	Nasim Akhtar	PASS	10.00	8.88	67	3	3	3	3	3	15	2	2	2	2	2	10
47	0165PY191058	Nikhil Singh	PASS	10.00	9.02	68	3	3	3	3	3	15	2	2	2	2	2	10
48	0165PY191059	Nikita Chandrabhan Shende	PASS	10.00	9.52	71	3	3	3	3	3	15	2	2	2	2	2	10
49	0165PY191060	Niraj Kumar	PASS	8.24	6.59	50	2	2	3	3	3	13	1	2	1	2	2	8
50	0165PY191061	Nisha Kumari	PASS	10.00	9.17	69	3	3	3	3	3	15	2	2	2	2	2	10
51	0165PY191062	Parag Sharma	PASS	8.24	7.05	53	3	3	2	2	3	13	2	1	1	2	2	8
52	0165PY191064	Piyush Nagar	PASS	10.00	8.83	66	3	3	3	3	3	15	2	2	2	2	2	10
53	0165PY191066	Prateek Kumar Shrivastva	PASS	10.00	9.10	68	3	3	3	3	3	15	2	2	2	2	2	10
54	0165PY191067	Pratik Patil	PASS	9.00	8.71	63	2	3	3	2	3	13	1	2	2	1	2	8
55	0165PY191068	Pratima Singh	PASS	10.00	8.97	67	3	3	3	3	3	15	2	2	2	2	2	10
56	0165PY191070	Prince Pal	PASS	8.34	7.10	56	3	3	2	3	3	14	2	2	1	2	2	9
57	0165PY191071	Prince Raj	PASS	9.97	8.88	67	3	3	3	3	3	15	2	2	2	2	2	10
58	0165PY191072	Priyank Singh	PASS	9.97	9.00	68	3	3	3	3	3	15	2	2	2	2	2	10
59	0165PY191073	Pushkar Raj	PASS	9.97	8.90	67	3	3	3	3	3	15	2	2	2	2	2	10
60	0165PY191074	Raj Kumar Singh	PASS	9.97	8.94	67	3	3	3	3	3	15	2	2	2	2	2	10
61	0165PY191075	Rajeev Ranjan	PASS	9.97	8.85	67	3	3	3	3	3	15	2	2	2	2	2	10
62	0165PY191076	Rajeshwari Kourav	PASS	8.24	6.09	49	2	3	3	3	3	14	1	2	2	2	2	9
63	0165PY191077	Ramji Kushwaha	PASS	10.00	9.17	69	3	3	3	3	3	15	2	2	2	2	2	10
64	0165PY191078	Raushan Kumar	PASS	9.97	9.12	69	3	3	3	3	3	15	2	2	2	2	2	10
65	0165PY191079	Ravi Kumar Singh	PASS	8.55	7.12	56	3	3	3	3	3	15	2	1	2	2	1	8
66	0165PY191080	Ravi Ranjan Kumar	PASS	9.21	7.59	60	3	3	3	3	3	15	2	2	2	2	2	10
67	0165PY191081	Ritik Londhe	PASS	8.24	6.62	52	3	2	3	2	3	13	2	2	1	2	2	9
68	0165PY191082	Rohit Kumar Manikpuri	PASS	7.48	5.19	42	3	2	2	3	3	13	2	2	1	2	1	8
69	0165PY191083	Rohit Tyagi	PASS	10.00	8.95	67	3	3	3	3	3	15	2	2	2	2	2	10
70	0165PY191084	Sachin Sen	FAIL	6.28	5.25	54	3	3	3	3	3	15	2	2	2	2	2	10
71	0165PY191085	Sagar Mathnkar	PASS	10.00	8.81	66	3	3	3	3	3	15	2	2	2	2	2	10
72	0165PY191086	Sandeep Kumar Singh	PASS	9.21	8.42	63	3	3	3	2	3	14	2	2	2	2	1	9
73	0165PY191087	Saquib Husain	PASS	8.55	7.19	56	3	3	3	3	3	15	1	2	1	2	2	8
74	0165PY191089	Shashi Raj	PASS	10.00	8.93	67	3	3	3	3	3	15	2	2	2	2	2	10
75	0165PY191090	Sheel Nidan Dwivedi	PASS	8.24	7.00	53	3	3	2	3	2	13	2	2	1	2	1	8
76	0165PY191091	Shivam Goswami	PASS	8.03	6.47	50	3	3	2	2	3	13	2	1	2	1	2	8
77	0165PY191092	Shivesh Kumar Tiwari	PASS	8.03	6.43	50	2	2	3	3	3	13	1	2	2	1	2	8
78	0165PY191094	Shubham Singh	PASS	9.97	8.63	65	3	3	3	3	3	15	2	2	2	2	2	10
79	0165PY191095	Sivendra Thakur	PASS	8.24	6.97	53	3	2	3	3	2	13	1	2	2	2	1	8
80	0165PY191096	Sneha Paul	PASS	9.21	7.47	59	3	3	3	3	3	15	2	2	2	2	2	10
81	0165PY191097	Vikash Kushwaha	PASS	7.48	5.62	46	3	2	3	2	3	13	2	1	2	1	2	8
82	0165PY191098	Vishal Barne	PASS	9.21	8.35	63	3	2	3	3	3	14	2	2	2	1	2	9
83	0165PY191099	Vishnu Dhakad	PASS	10.00	9.24	69	3	3	3	3	3	15	2	2	2	2	2	10

S.NO.	ENROLLMENT	NAME	Status	SGPA	CGPA	External Evaluation	Direct Internal Evaluation				
						75	CO1	CO2	CO3	CO4	CO5
1	0165PY191001	Aashita Raut	PASS	10.00	8.90	67	100	100	100	100	100
2	0165PY191002	Abhay Kumar Singh	PASS	9.21	8.52	64	100	100	80	80	100
3	0165PY191003	Abhineet Kumar	PASS	8.24	6.55	50	100	60	100	60	100
4	0165PY191005	Adarsh Singh	PASS	8.24	6.14	48	80	100	80	80	100

5	0165PY191006	Adil Afaque	PASS	10.00	8.74	66	100	100	100	100	100
6	0165PY191007	Aditya Kumar	PASS	8.24	6.93	53	80	80	80	100	80
7	0165PY191008	Akash Thakur	PASS	9.24	7.59	60	100	100	100	100	100
8	0165PY191009	Aman Patle	PASS	9.10	8.47	64	100	80	80	100	100
9	0165PY191010	Anamika Tiwari	PASS	9.97	9.33	70	100	100	100	100	100
10	0165PY191011	Aniket Singh	PASS	10.00	9.42	71	100	100	100	100	100
11	0165PY191015	Anurag Vishwakarma	PASS	9.21	8.58	64	100	80	80	100	100
12	0165PY191017	Aryan Kumar	PASS	8.55	7.00	53	80	100	80	100	80
13	0165PY191018	Ashish Dwivedi	PASS	8.34	6.23	50	100	60	100	100	100
14	0165PY191020	Awantika Keshari	PASS	10.00	9.24	69	100	100	100	100	100
15	0165PY191021	Ayub Ansari	PASS	9.97	8.80	66	100	100	100	100	100
16	0165PY191022	Ayush Singh	PASS	9.10	8.31	63	100	100	80	80	100
17	0165PY191023	Banti Kumar Singh	PASS	7.48	5.60	45	80	80	80	80	100
18	0165PY191025	Brijendra Bahadur Patel	PASS	8.45	6.21	52	100	100	100	100	100
19	0165PY191026	Deepak Verma	PASS	8.24	6.14	50	100	60	100	100	100
20	0165PY191027	Deepak Vinod Prajapati	PASS	9.00	8.28	63	100	100	100	60	100
21	0165PY191028	Devshankar Dwivedi	PASS	10.00	8.71	65	100	100	100	100	100
22	0165PY191029	Gourav Koushal	FAIL	6.21	3.73	37	100	60	100	60	100
23	0165PY191030	Gourav Maran	PASS	9.00	8.19	62	100	80	100	100	80
24	0165PY191031	Gunja Devi	PASS	9.24	7.95	62	100	100	100	100	100
25	0165PY191033	Hrithik Upadhyay	PASS	9.97	9.06	68	100	100	100	100	100
26	0165PY191034	Huzaifa	PASS	10.00	9.12	68	100	100	100	100	100
27	0165PY191035	Jayadeep Gupta	PASS	8.03	6.59	51	80	80	80	80	100
28	0165PY191036	Junaid Khan	PASS	10.00	9.14	69	100	100	100	100	100
29	0165PY191037	Kaushal Kumar	PASS	9.21	8.00	60	100	100	100	60	100
30	0165PY191038	Khushal Chouriya	PASS	8.66	7.26	56	100	80	80	100	100
31	0165PY191039	Kunal Devkar	PASS	9.21	8.42	63	60	100	100	100	100
32	0165PY191040	Manish Kumar Singh	PASS	10.00	9.04	68	100	100	100	100	100
33	0165PY191042	Mariam Aziz Khan	PASS	10.00	9.24	69	100	100	100	100	100
34	0165PY191043	Md Ali Raza	PASS	9.21	7.08	56	100	100	100	100	100
35	0165PY191044	Md Anas Mansoori	PASS	8.34	6.19	50	100	80	80	100	100
36	0165PY191046	Md Asif Alam	PASS	9.97	9.02	68	100	100	100	100	100
37	0165PY191047	Md Danish Hussain	PASS	10.00	8.76	66	100	100	100	100	100
38	0165PY191048	Md Khushdil Ansari	PASS	9.97	8.73	66	100	100	100	100	100
39	0165PY191049	Md Nazim	PASS	8.24	7.37	56	100	100	80	80	60
40	0165PY191050	Md Tanveer Alam	PASS	9.97	8.85	66	100	100	100	100	100
41	0165PY191051	Md Umar	PASS	9.10	8.36	63	100	80	80	100	100
42	0165PY191052	Mohammad Faizan	PASS	9.31	8.71	65	100	100	100	80	80
43	0165PY191053	Mohd Ahmad Khan	PASS	9.21	8.62	65	100	100	100	80	80
44	0165PY191054	Mohd Daud	PASS	10.00	8.83	66	100	100	100	100	100
45	0165PY191055	Mohd Zaid	PASS	9.00	8.52	62	100	80	80	80	80
46	0165PY191056	Nasim Akhtar	PASS	10.00	8.88	67	100	100	100	100	100
47	0165PY191058	Nikhil Singh	PASS	10.00	9.02	68	100	100	100	100	100
48	0165PY191059	Nikita Chandrabhan Shende	PASS	10.00	9.52	71	100	100	100	100	100
49	0165PY191060	Niraj Kumar	PASS	8.24	6.59	50	60	80	80	100	100
50	0165PY191061	Nisha Kumari	PASS	10.00	9.17	69	100	100	100	100	100
51	0165PY191062	Parag Sharma	PASS	8.24	7.05	53	100	80	60	80	100
52	0165PY191064	Piyush Nagar	PASS	10.00	8.83	66	100	100	100	100	100
53	0165PY191066	Prateek Kumar Shrivastva	PASS	10.00	9.10	68	100	100	100	100	100
54	0165PY191067	Pratik Patil	PASS	9.00	8.71	63	60	100	100	60	100



55	0165PY191068	Pratima Singh	PASS	10.00	8.97	67	100	100	100	100	100
56	0165PY191070	Prince Pal	PASS	8.34	7.10	56	100	100	60	100	100
57	0165PY191071	Prince Raj	PASS	9.97	8.88	67	100	100	100	100	100
58	0165PY191072	Priyank Singh	PASS	9.97	9.00	68	100	100	100	100	100
59	0165PY191073	Pushkar Raj	PASS	9.97	8.90	67	100	100	100	100	100
60	0165PY191074	Raj Kumar Singh	PASS	9.97	8.94	67	100	100	100	100	100
61	0165PY191075	Rajeev Ranjan	PASS	9.97	8.85	67	100	100	100	100	100
62	0165PY191076	Rajeshwari Kourav	PASS	8.24	6.09	49	60	100	100	100	100
63	0165PY191077	Ramji Kushwaha	PASS	10.00	9.17	69	100	100	100	100	100
64	0165PY191078	Raushan Kumar	PASS	9.97	9.12	69	100	100	100	100	100
65	0165PY191079	Ravi Kumar Singh	PASS	8.55	7.12	56	100	80	100	100	80
66	0165PY191080	Ravi Ranjan Kumar	PASS	9.21	7.59	60	100	100	100	100	100
67	0165PY191081	Ritik Londhe	PASS	8.24	6.62	52	100	80	80	80	100
68	0165PY191082	Rohit Kumar Manikpuri	PASS	7.48	5.19	42	100	80	60	100	80
69	0165PY191083	Rohit Tyagi	PASS	10.00	8.95	67	100	100	100	100	100
70	0165PY191084	Sachin Sen	FAIL	6.28	5.25	54	100	100	100	100	100
71	0165PY191085	Sagar Mathnkar	PASS	10.00	8.81	66	100	100	100	100	100
72	0165PY191086	Sandeep Kumar Singh	PASS	9.21	8.42	63	100	100	100	80	80
73	0165PY191087	Saqib Husain	PASS	8.55	7.19	56	80	100	80	100	100
74	0165PY191089	Shashi Raj	PASS	10.00	8.93	67	100	100	100	100	100
75	0165PY191090	Sheel Nidan Dwivedi	PASS	8.24	7.00	53	100	100	60	100	60
76	0165PY191091	Shivam Goswami	PASS	8.03	6.47	50	100	80	80	60	100
77	0165PY191092	Shivesh Kumar Tiwari	PASS	8.03	6.43	50	60	80	100	80	100
78	0165PY191094	Shubham Singh	PASS	9.97	8.63	65	100	100	100	100	100
79	0165PY191095	Sivendra Thakur	PASS	8.24	6.97	53	80	80	100	100	60
80	0165PY191096	Sneha Paul	PASS	9.21	7.47	59	100	100	100	100	100
81	0165PY191097	Vikash Kushwaha	PASS	7.48	5.62	46	100	60	100	60	100
82	0165PY191098	Vishal Barne	PASS	9.21	8.35	63	100	80	100	80	100
83	0165PY191099	Vishnu Dhakad	PASS	10.00	9.24	69	100	100	100	100	100

**Summary of CO Attainment for BATCH 2019-23 II SEM**

**BP-201 Human Anatomy and Physiology II (Theory)**

**Computation of attainment**

**Attainment  $CO_{xx} = 0.25 IE + 0.75 EE$**

CO assessment sheet for BP-201 Human Anatomy and Physiology II (Theory) Course					
CO	Attainment through Direct External Evaluation (DEE)	Attainment through Direct Internal Evaluation (DIE)	Total Direct Attainment (TDA)= DEE*0.75+DIE*0.25	CO Target (Weightage as per attainment Rubrics)	Gap
BP-201 CO1	3	3	3	2	-1
BP-201CO2	3	3	3	2	-1
BP-201 CO3	3	3	3	2	-1
BP-201 CO4	3	3	3	2	-1
BP-201 CO5	3	3	3	2	-1

Program shall have set course Outcome attainment levels for all courses.

(The attainment levels shall be set considering average performance levels in the university examination or any higher value set as target for the assessment years. Attainment level is to be measured in terms of student performance in internal assessments with respect to the course Outcomes of a course in addition to the performance in the University examination)

**Rubrics for setting CO attainment level for all courses:**

**Direct CO attainment rubrics for theory and lab courses:**

Assessment Methods	Level	Range of Students in a class / branch with target marks
Direct Assessment (External Evaluation)	<b>Level 3</b>	If 80% of students scoring more than benchmark ( $\geq 60\%$ marks)
	<b>Level 2</b>	If 70% of students scoring more than benchmark ( $\geq 60\%$ marks)
	<b>Level 1</b>	If 60% of students scoring more than benchmark ( $\geq 60\%$ marks)
Direct Assessment (Internal Evaluation)	<b>Level 3</b>	If 80% of students scoring more than benchmark ( $\geq 80\%$ marks)
	<b>Level 2</b>	If 70% of students scoring more than benchmark ( $\geq 80\%$ marks)
	<b>Level 1</b>	If 60% of students scoring more than benchmark ( $\geq 80\%$ marks)

#### CO Targets

Course	Targets
<b>Theory Course</b>	<b>CO TARGET=2 (Moderate)</b>
<b>Practical Course</b>	<b>CO TARGET=2 (Moderate)</b>

#### A. Measuring overall CO attainment and Gaps with respect to CO Targets of all the courses including first year courses.

Course Outcome attainment and respective gap table for batch 2019-2023 is shown in following table

Table B-3.2.2

#### Batch 2019-2023 (Grading System)

		Batch 2019-2023 (Grading System)											
SEM	COURSE	TARGET	CO1		CO2		CO3		CO4		CO5		
			Attainment	GAP	Attainment	GAP	Attainment	GAP	Attainment	GAP	Attainment	GAP	
	COBP 101	2.00	0.25	1.75	0.50	1.50	0.25	1.75	0.50	1.50	0.25	1.75	
	COBP 102	2.00	0.25	1.75	0.50	1.50	0.50	1.50	0.25	1.75	0.75	1.25	
	COBP 103	2.00	0.50	1.50	0.50	1.50	0.50	1.50	0.00	2.00	0.50	1.50	
	COBP 104	2.00	0.50	1.50	0.25	1.75	0.25	1.75	0.50	1.50	0.50	1.50	
	COBP 105	2.00	2.40	-0.40	3.00	-1.00	2.70	-0.70	3.00	-1.00	2.40	-0.40	
I	COBP 106RB /												
	COBP 106RM	2.00	2.70	-0.70	2.70	-0.70	2.70	-0.70	2.40	-0.40	3.00	-1.00	
	COBP 107	2.00	2.70	-0.70	2.70	-0.70	2.10	-0.10	2.70	-0.70	2.70	-0.70	
	COBP108	2.00	2.70	-0.70	2.70	-0.70	2.70	-0.70	2.70	-0.70	3.00	-1.00	
	COBP109	2.00	3.00	-1.00	2.70	-0.70	2.70	-0.70	2.70	-0.70	2.70	-0.70	
	COBP110	2.00	2.70	-0.70	2.70	-0.70	2.70	-0.70	3.00	-1.00	2.70	-0.70	
	COBP 111	2.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	
	COBP112RB	2.00	2.40	-0.40	2.40	-0.40	2.40	-0.40	2.40	-0.40	2.40	-0.40	

	COBP201	2.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00
	COBP202	2.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00
	COBP203	2.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00
	COBP204	2.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00
II	COBP205	2.00	2.97	-0.97	2.97	-0.97	2.97	-0.97	2.97	-0.97	2.97	-0.97
	COBP206	2.00	2.97	-0.97	2.97	-0.97	2.97	-0.97	2.97	-0.97	2.97	-0.97
	COBP207	2.00	2.30	-0.30	2.00	0.00	2.00	0.00	2.30	-0.30	2.30	-0.30
	COBP208	2.00	2.30	-0.30	2.30	-0.30	2.00	0.00	2.30	-0.30	2.30	-0.30
	COBP209	2.00	2.30	-0.30	2.30	-0.30	2.00	0.00	2.30	-0.30	2.30	-0.30
	COBP210	2.00	3.00	-1.00	3.00	-1.00	2.20	-0.20	3.00	-1.00	3.00	-1.00
	COBP301	2.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00
	COBP302	2.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00
	COBP303	2.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00
III	COBP304	2.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00
	COBP305	2.00	3.00	-1.00	3.00	-1.00	2.70	-0.70	2.70	-0.70	3.00	-1.00
	COBP306	2.00	3.00	-1.00	3.00	-1.00	2.70	-0.70	3.00	-1.00	3.00	-1.00
	COBP307	2.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00
	COBP308	2.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00
	COBP401	2.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00
	COBP402	2.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00
	COBP403	2.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00
	COBP404	2.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00
IV	COBP405	2.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00
	COBP406	2.00	2.40	-0.40	2.10	-0.10	2.10	-0.10	2.10	-0.10	2.70	-0.70
	COBP407	2.00	2.70	-0.70	2.10	-0.10	2.10	-0.10	2.10	-0.10	2.70	-0.70
	COBP408	2.00	2.70	-0.70	2.10	-0.10	2.10	-0.10	2.10	-0.10	2.70	-0.70
	COBP409	2.00	2.40	-0.40	2.10	-0.10	2.10	-0.10	2.10	-0.10	2.40	-0.40
	COBP501	2.00	3.00	-1.00	3.00	-1.00	2.50	-0.50	2.75	-0.75	3.00	-1.00
	COBP502	2.00	3.00	-1.00	2.75	-0.75	2.75	-0.75	3.00	-1.00	3.00	-1.00
	COBP503	2.00	3.00	-1.00	2.75	-0.75	3.00	-1.00	2.25	-0.25	3.00	-1.00
V	COBP504	2.00	2.75	-0.75	3.00	-1.00	2.25	-0.25	3.00	-1.00	3.00	-1.00
	COBP505	2.00	3.00	-1.00	2.75	-0.75	2.50	-0.50	3.00	-1.00	3.00	-1.00
	COBP506	2.00	2.40	-0.40	2.10	-0.10	2.10	-0.10	2.10	-0.10	2.10	-0.10
	COBP507	2.00	2.10	-0.10	2.10	-0.10	2.10	-0.10	2.10	-0.10	2.10	-0.10
	COBP508	2.00	2.10	-0.10	2.10	-0.10	2.10	-0.10	2.10	-0.10	2.10	-0.10
	COBP601	2.00	0.75	1.25	0.50	1.50	0.75	1.25	0.75	1.25	0.75	1.25
	COBP602	2.00	0.25	1.75	0.50	1.50	0.75	1.25	0.75	1.25	0.75	1.25
	COBP603	2.00	0.75	1.25	0.50	1.50	0.50	1.50	0.50	1.50	0.75	1.25
	COBP604	2.00	0.75	1.25	0.50	1.50	0.25	1.75	0.75	1.25	0.75	1.25
VI	COBP605	2.00	0.75	1.25	0.50	1.50	0.50	1.50	0.75	1.25	0.75	1.25
	COBP606	2.00	0.75	1.25	0.75	1.25	0.50	1.50	0.50	1.50	0.50	1.50
	COBP607	2.00	0.00	2.00	0.30	1.70	0.00	2.00	0.30	1.70	0.00	2.00
	COBP608	2.00	0.30	1.70	0.30	1.70	0.00	2.00	0.00	2.00	0.00	2.00
	COBP609	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00	2.00	0.00	2.00
	COBP701	2.00	0.75	1.25	0.75	1.25	0.75	1.25	0.75	1.25	0.75	1.25
	COBP702	2.00	0.50	1.50	0.00	2.00	0.50	1.50	0.25	1.75	0.75	1.25
VII	COBP703	2.00	0.75	1.25	0.75	1.25	0.75	1.25	0.75	1.25	0.75	1.25
	COBP704	2.00	1.20	0.80	1.20	0.80	1.20	0.80	1.20	0.80	1.20	0.80
	COBP705	2.00	1.80	0.20	1.80	0.20	1.80	0.20	2.20	-0.20	2.20	-0.20
	COBP706	2.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00

	COBP801	2.00	0.50	1.50	0.25	1.75	0.00	2.00	0.25	1.75	0.75	1.25
	COBP802	2.00	0.25	1.75	0.25	1.75	0.25	1.75	0.50	1.50	0.50	1.50
<b>VIII</b>	COBP803	2.00	0.50	1.50	0.25	1.75	0.50	1.50	0.25	1.75	0.50	1.50
	COBP804	2.00	0.50	1.50	0.25	1.75	0.00	2.00	0.75	1.25	0.75	1.25
	COBP805	2.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00	3.00	-1.00

3.3 Attainment of Program Outcomes (40)

**3.3.1 Describe assessment tools and processes used for assessing the attainment of each PO (10)**

With reference to the institute's guideline, following two types of assessment tools were finalized for computing attainment of Program Outcomes (POs):

- i. Direct Assessment Tool
- ii. Indirect Assessment Tool

**i. Direct Assessment Tool**

These tools are used to assess the knowledge acquired and learning abilities of students. The assessment is carried out with the help of external and internal assessment p term assessment, assignment and tutorials, project evaluation, seminar and industrial training/internship presentations.

**ii. Indirect Assessment Tool**

Indirect assessment tools are used to assess the level of compliance and suitability of program's curriculum and additional support for inculcating graduate attributes among are based on ascertaining opinion of stakeholders which include graduating students, alumni and employer. Feedback survey questions are designed to assess the attainme assessment of POs are as follows:

- a) Program end survey
- b) Parent's feedback survey
- c) Alumni feedback survey
- d) Employers' feedback survey

PO assessment tools have been summarized in Table B.3.3.1a as mentioned below:

**Table B.3.3.1a**

Types of Assessment	Assessment Tools	
Direct Assessment	External Assessment	End Semester Theory Examination
		End Semester Practical Examination
		End Semester Project Evaluation
	Internal Assessment	Mid-sem Tests
		Assignments/Tutorial
		Lab Work
		Industrial Training/Internship
		Seminar Work
		Project Work
Indirect Assessment	Program end survey	
	Parent's feedback survey	
	Alumni feedback survey	
	Employers' feedback survey	

**Direct Assessment Method:**

Direct methods show the students' knowledge and skills from their performance in the internal evaluation such as internal mid semester test, assignment, presentations and provide a sampling of what students know, thus provide strong evidence of student learning against measurable course outcomes. The knowledge and skills described by th problems on internal exams/assignment/group task. Throughout the semester the faculty records the performance of each student on each course outcome. At the end of th combining the students' performance in university exam as well as in internal examination giving them 75:25 weightage in theory and 70:30 weightage in practical.

**Indirect Assessment Method:**

Direct assessment methods do not completely able for the assessment of student's performance like leadership quality, lifelong learning, social responsibility and their perfoi method are employed for the assessment of such attributes of learning.

Indirect methods use surveys and feedback from students and rest of the stakeholders such as parents, their employer, alumni to assess students learning. Indirect assessn them in the Parent's survey, Employer's survey, Program end survey and Alumni Survey. Finally, program outcomes are assessed combining the attainments through direct

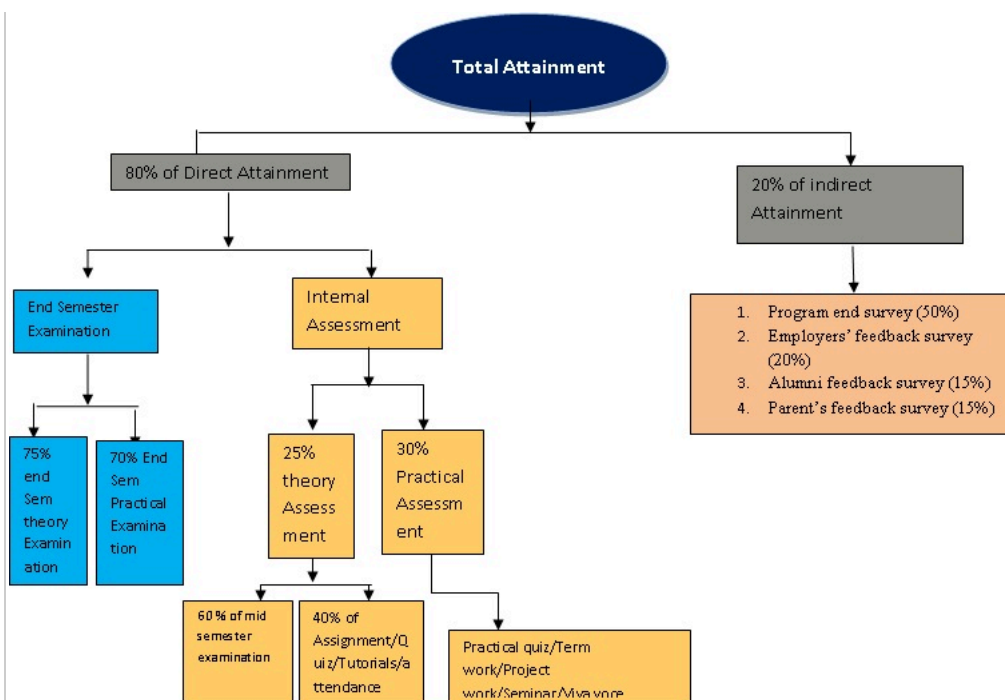


Figure 3.3: Flow Chart of Attainment Calculations

#### Rubrics for attainment of PO

S. No.	Type of Assessment	Weightage	Remark
1	Direct Assessment	80%	As per institute guidelines
2	Indirect Assessment	20%	

PO target for assessment of attainment for the Batch 2019-23	<p>As per Institute policy department has taken 80% of highest occurrence value i.e3 in CO-PO mapping as target for all PO.</p> <p>80% of 3 = 2.4 (target for all PO attainment computation)</p>
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#### A) Attainment of Program Outcome and Program Specific Outcomes

Total PO attainment= 0.8 Direct PO attainment + 0.2 Indirect PO attainment

1. Direct PO Attainment: Attainment of Program Outcome/Program Specific Outcomes through Course Outcomes.
2. Direct PO attainment is calculated using CO attainment with and CO-PO mapping table of a course, (table 3.1.3.a).
3. For each course, the no. of COs mapped to each PO are identified.

c. PO attainment of a course (Theory or Lab) is calculated by taking average of the PO attained for each CO of the course under consideration. The process is explained

#### Attainment of Program Outcome through Course Outcomes

d. Direct PO attainment is calculated using CO attainment with the help of the mapping table for CO-PO.

e. For each course, the no. of COs mapped to each PO are identified.

f. PO attainment due to one course is calculated by average sum of product of weightage and CO attainment

a. i.e  
b. where

g. Then final PO attainment of each batch is calculated by taking the average of these attainments as a result of all contributing subjects.

Example: For a course "BP 201 (Human Anatomy and Physiology II Theory):" CO-PO mapping is as shown below:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	1						
CO2	2	2	1					
CO3	2	1			1			
CO4	3	3	2	3	3	3		2

CO5	2	1		1	1			
Avg	2.2	1.6	1.5	2	1.7	3	0	2

**CO attainment of Course BP 201 (Human Anatomy and Physiology II Theory)**

S. No	CO	Attainment Through External Evaluation	Attainment Through Internal Evaluation	Final Direct CO attainment +0.75 EE
		(EE)	(IE)	
1	BP201.1	3	3	3
2	BP201.2	3	3	3
3	BP201.3	3	3	3
4	BP201.4	3	3	3
5	BP201.5	3	3	3

**PO1 attainment BP 201 (Human Anatomy and Physiology II Theory) :**

Attainment of PO1 is obtained from mapping with COs and percentage CO attainments and it is as follows:

Attainment of PO1

$$= \frac{3 \times \text{CO1 Attainment} + 3 \times \text{CO2 Attainment} + 3 \times \text{CO3 Attainment} + 2 \times \text{CO4 Attainment} + 2 \times \text{CO5 Attainment}}{\text{Sum of mapped values}}$$

$$= 3.0$$

Similarly attainment of PO2, PO3, PO4, PO6, PO7, PO8, PO9, PO10 and PO11 are calculated.

BP 201 (Human Anatomy and Physiology II Theory)	PO1	PO2	PO3	PO4	PO5	PO6	PO7
PO Attainment	3.00	3.00	3.00	3.00	3.00	3.00	-

**Indirect PO attainment**

The tools used for calculating Indirect PO attainment are Program End Survey, Employer Survey, Alumni Survey, and Parents feedback.

Indirect PO attainment is evaluated with the help of different surveys according to their weightages as per guideline of institute.

$$\text{Indirect PO attainment} = 0.5 \times \text{PES Attainment} + 0.2 \times \text{ES Attainment} + 0.15 \times \text{AS Attainment} + 0.15 \times \text{PS Attainment}$$

**Rubrics for Indirect PO attainment**

Kind of Survey	Weightage
Program end survey	50%
Employers' feedback survey	20%
Alumni feedback survey	15%
Parent's feedback survey	15%

**2 a) Indirect PO Attainment:**

**PO attainment through indirect assessment of 2019-23 batch:**

Survey	PO1	PO2	PO3	PO4	PO5	PO6	PO7	F
Program end sem survey /Exit Survey (50%)	2	3	2	3	2	2	2	
	1	1.5	1	1.5	1	1	1	
Employer survey (20%)	2	2	3	2	3	2	3	
	0.4	0.4	0.6	0.4	0.6	0.4	0.6	
Alumni survey (15%)	3	2	3	2	2	2	2	
	0.45	0.3	0.45	0.3	0.3	0.3	0.3	0
Parents Feedback (15%)	2	2	2	2	3	2	3	
	0.3	0.3	0.3	0.3	0.45	0.3	0.45	
Indirect Attainment (Sum)	2.15	2.5	2.35	2.5	2.35	2	2.35	2
20% of Indirect Attainment	0.43	0.5	0.47	0.5	0.47	0.4	0.47	0



PO Attainment

[illegible]

BP508P	2.10	2.10	2.10	2.10	2.10	2.10	2.10	0	0
BP601T	0.70	0.70	0	0	0.75	0.75	0	0	0
BP602T	0.63	0.68	0.65	0.65	0.75	0.75	0	0	0
BP603T	0.60	0.55	0.57	0.56	0.58	0.56	0	0	0
BP604T	0.60	0.60	0	0.75	0	0.75	0.75	0	0
BP605T	0.65	0.65	0.65	0.65	0.66	0.64	0.67	0.75	0
BP606T	0.60	0.55	0.58	0	0.55	0.61	0.50	0.50	0
BP607P	0.12	0.12	0	0	0	0	0	0	0
BP608P	0.10	0.10	0.12	0.08	0	0	0	0	0
BP609P	0	0	0	0	0	0	0	0	0
BP701T	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0	0
BP702T	0.35	0.35	0.57	0.50	0.25	0.50	0.75	0.75	0
BP703T	0.75	0	0.75	0.75	0.75	0.75	0.75	0.75	0
BP704T	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1
BP705PN2	2	2	1.98	2.02	2.02	2.20	1.80	1.80	1
BP706PN2	3	3	3	3	3	3	3	3	3
BP801T	0.38	0.40	0.63	0.53	0.50	0.39	0.45	0	0
BP802T	0.33	0.34	0.34	0	0.25	0.38	0.33	0.33	0
BP803T	0.38	0.39	0.36	0.45	0.33	0.40	0	0.39	0
BP804T	0.44	0.45	0.40	0.40	0.43	0.70	0.67	0.25	0
BP805PA2	3	3	3	3	3	3	3	3	3

PO Attainment Level									
Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	Pt
Direct Attainment	2.04	2.06	2.13	2.17	2.09	2.13	2.20	2.13	1
InDirect Attainment	2.15	2.5	2.35	2.5	2.35	2.00	2.35	2.15	2
PO Attainment	2.06	2.15	2.17	2.24	2.14	2.10	2.23	2.13	2

4 STUDENTS' PERFORMANCE (180)
Total Marks 131.15

Total Marks 20.00

Table 4.1

Item	2023-24 (CAY)	2022-23 (CAYm1)	2021-22 (CAYm2)	2020-21 (CAYm3)	2019-20 (CAYm4)	2018-19 (CAYm5)	2017-18 (CAYm6)
Sanctioned intake of the program(N)	100	100	100	100	100	100	100
Total number of students admitted in first year (N1)	105	100	100	100	100	100	102
Number of students admitted in 2nd year in the same batch via lateral entry (N2)	0	10	10	10	10	10	10
Total number of students admitted in the programme(N1 + N2)	105	110	110	110	110	110	112

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**4.1 Enrolment Ratio (20)**

Institute Marks : 20.00

	N (From Table 4.1)	N1 (From Table 4.1)	Enrollment Ratio [(N1/N)*100]
2023-24	100	105	105.00
2022-23	100	100	100.00
2021-22	100	100	100.00

Average [ (ER1 + ER2 + ER3) / 3 ] : 101.67

Assessment : 20.00

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**4.2 Success Rate in the stipulated period of the program (50)**

Total Marks 26.80

Table 4.2

Year of entry	Number of students admitted in 1st year + admitted via lateral entry in 2nd year (N1 + N2)	Number of students who have successfully graduated without backlogs in any year of study (Without backlog means no compartment/failure in any semester/year of study)			
		I year	II year	III year	IV year
2023-24 (CAY)	105				
2022-23 (CAYm1)	110	34			
2021-22 (CAYm2)	110	37	22		
2020-21 (CAYm3)	110	93	68	43	
2019-20 (LYG)	110	50	56	45	40
2018-19 (LYGm1)	110	43	40	40	38
2017-18 (LYGm2)	112	62	49	48	47

Table 4.3

Year of entry	Number of students admitted in 1st year + admitted via lateral entry in 2nd year (N1 + N2)	Number of students who have successfully graduated in stipulated period of study) [Total of with Backlog + without Backlog]			
		I year	II year	III year	IV year
2023-24 (CAY)	105				
2022-23 (CAYm1)	110	98			
2021-22 (CAYm2)	110	94	81		
2020-21 (CAYm3)	110	94	104	92	
2019-20 (LYG)	110	84	91	85	72
2018-19 (LYGm1)	110	95	100	99	97
2017-18 (LYGm2)	112	92	90	87	87

## 4.2.1 Success rate without backlogs in any year of study (30)

Institute Marks : 11.40

Item	Latest Year of Graduation, LYG (2019-20)	Latest Year of Graduation minus 1, LYGm1 (2018-19)	Latest Year of Graduation minus 2 LYGm2 (2017-18)
X Number of students admitted in the corresponding First Year + admitted in 2nd year via lateral entry	110.00	110.00	112.00
Y Number of students who have graduated without backlogs in the stipulated period	40.00	38.00	47.00
Success Index [ SI = Y / X ]	0.36	0.35	0.42

Average SI [ (SI1 + SI2 + SI3) / 3 ] : 0.38

Assessment = 30 \* Average SI : 11.40

## 4.2.2 Success rate in stipulated period (20)

Institute Marks : 15.40

Item	Latest Year of Graduation, LYG (2019-20)	Latest Year of Graduation minus 1, LYGm1 (2018-19)	Latest Year of Graduation minus 2 LYGm2 (2017-18)
X Number of students admitted in the corresponding First Year + admitted in 2nd year via lateral entry	110.00	110.00	112.00
Y Number of students who have graduated in the stipulated period	72.00	97.00	87.00
Success Index [ SI = Y / X ]	0.65	0.88	0.78

Average SI [ ( SI1 + SI2 + SI3) / 3 ] : 0.77

Assessment = 20 \* Average SI : 15.40

**Note** : If 100% students clear without any backlog then also total marks scored will be 40 as both 4.2.1 & 4.2.2 will be applicable simultaneously.

#### 4.3 Academic Performance in Final Year (10)

Total Marks 7.44

Institute Marks : 7.44

Academic Performance	2019-20 (LYG)	2018-19 (LYGm1)	2017-18 (LYGm2)
Mean of CGPA or mean percentage of all successful students(X)	8.07	7.96	7.67
Total number of successful students(Y)	72.00	97.00	87.00
Total number of students appeared in the examination(Z)	85.00	99.00	87.00
API [ X*(Y/Z) ]:	6.84	7.80	7.67

Average API [ (AP1 + AP2 + AP3)/3 ] : 7.44

Academic Performance = Average API = [ (AP1 + AP2 + AP3)/3 ] : 7.44

#### 4.4 Academic Performance in Third Year (10)

Total Marks 7.61

Institute Marks : 7.61

Academic Performance	CAYm3 (2020-21)	LYG (2019-20)	LYGm1 (2018-19)
Mean of CGPA or mean percentage of all successful students(X)	7.97	8.33	8.07
Total number of successful students (Y)	92.00	85.00	99.00
Total number of students appeared in the examination (Z)	104.00	91.00	100.00
API [ X * (Y/Z) ]	7.05	7.78	7.99

Average API [ (AP1 + AP2 + AP3)/3 ] : 7.61

Academic Performance = Average API [ (AP1 + AP2 + AP3)/3 ] : 7.61

#### 4.5 Academic Performance in Second Year (10)

Total Marks 7.60

Institute Marks : 7.60

Academic Performance	2021-22 (CAYm2)	2020-21 (CAYm3)	2019-20 (LYG)
Mean of CGPA or mean percentage of all successful students(X)	7.87	8.43	8.52
Total number of successful students(Y)	81.00	104.00	91.00
Total number of students appeared in the examination(Z)	104.00	104.00	94.00
API [ X*(Y/Z) ]:	6.13	8.43	8.25

Average API [ (AP1 + AP2 + AP3)/3 ] : 7.60

Academic Performance = Average API = [ (AP1 + AP2 + AP3)/3 ] : 7.60

#### 4.6 Academic Performance in First Year (20)

Total Marks 15.83

Academic Performance	2022-23 (CAYm1)	2021-22 (CAYm2)	2020-21 (CAYm3)
Mean of CGPA or mean percentage of all successful students(X)	7.60	8.27	9.06
Total number of successful students(Y)	98.00	94.00	94.00
Total number of students appeared in the examination(Z)	100.00	100.00	100.00
API [ $X \cdot (Y/Z)$ ]:	7.45	7.77	8.52

Average API [  $(AP1 + AP2 + AP3)/3$  ] : 7.91

Academic Performance = Average API = [  $(AP1 + AP2 + AP3)/3$  ] : 7.91

#### 4.7 Placement and Higher Studies (40)

Total Marks 25.87

Institute Marks : 25.87

Item	2019-20 (LYG)	2018-19 (LYGm1)	2017-18 (LYGm2)
Total No of Final Year Students(N)	85.00	99.00	87.00
Number of students placed in Industries/ Hospitals/ Government sector through on/off campus recruitment or opted for Entrepreneurship(x)	47.00	55.00	48.00
No. of students admitted to higher studies with valid scores in various qualifying exams(y)	12.00	8.00	5.00
Placement Index [ $(X + Y)/N$ ] :	0.69	0.64	0.61

Average Placement [  $(X + Y)/N$  ] : 0.65

Assessment [  $40 \cdot \text{Average Placement}$  ] : 25.87

#### 4.8 Professional Activities (20)

Total Marks 20.00



**Professional Society Activities Academic Year 2023-24**

Sr.No.	Professional Society Name/Chapter	Events Organized	Date
1	APTI	Expert Lecture on Common Cancers : Signs, Symptoms and Prevention ,TIT Pharmacy Bhopal MP	08/05/2024
2	AICTE	Expert Lecture on Implementation and Application Green Chemistry in Pharmaceutical Science ,TIT Pharmacy Bhopal MP	21/04/2024
3	APTI	Instrument Handling and Calibration of U.V TIT Pharmacy Bhopal MP	19/12/2023
4	AICTE	Guest Lecture on Laboratory Animal Handling and Care, TIT Pharmacy Bhopal MP	05/12/2023
5	APTI	Wisely Employed Solid Shall Replace Harmful Organic Solvents in Future, TIT Pharmacy Bhopal MP	03/10/2023
6	IPA	Instrument Handling and Calibration of U.V ,TIT Pharmacy Bhopal MP from SCAN Lab	16/12/2023
7	APTI	National Seminar on Advances in Drug Delivery Technology ,TIT Pharmacy Bhopal MP	30/12/2022
8	APTI	Expert Lecture on Common Cancers : Signs, Symptoms and Prevention ,TIT Pharmacy Bhopal MP	07/05/2024
9	AICTE	Expert Lecture on Implementation and Application Green Chemistry in Pharmaceutical Science ,TIT Pharmacy Bhopal MP	29/04/2024
10	APTI	Instrument Handling and Calibration of U.V	22/12/2023
11	BCI	Seminar on Criminal Law, TIT Pharmacy Bhopal MP	13/11/2023
12	IPA	Entrepreneurship & Job Opportunities in UK, TIT Pharmacy Bhopal MP	10/08/2023

**Academic Year 2022-23**

Sr. No.	Professional Society Name/Chapter	Events Organized	Date
1	APTI	Expert Talk on to avail different funding from MPCST for faculty and students	<b>27/03/2022</b>
2	AICTE	Artificial Intelligence as a career for pharma graduates	14/03/2022
3	IPA	Instrument Handling and Calibration of U.V	27/02/2022
4	IPGA	Empowering Educator in Teaching Social Pharmacy as per ER-2020	31/01/2022
5	APTI	Instrument Handling and Calibration of HPLC	17/01/2022
6	IPGA	Celebrate national Pharmacist day	12/01/2022
7	IPA	Expert Talk On "Pharmaceutical Calibration, Qualification and Validation	06/04/2022
8	IIC	Celebrate nation pharmacy week	23/11/2022
9	AICTE	Pharmacovigilance: A Step Towards Patient Safety	29/11/2022
10	APTI	Short Term Training Programme (STTP) " for pharmacy teachers in India on the theme "An Exploration of Novel Drug Delivery System In Herbal Medicine"	06/02/2022
11	IIC	Guest Talk On "Ideas for inter disciplinary UG Research	25/02/2022
12	APTI	World Pharmacist Day celebration	22/09/2021

**Academic Year 2021-22**

Sr. No.	Professional Society Name/Chapter	Events Organized	Date
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1	APTI	A talk on How to Proceed for Good Research Dr. P. B. Sharma, Former Vice Chancellor of RGPV and DTU, founder of DTU, Present Vice chancellor of AMITY, TIT Pharmacy Bhopal	06/04/2022
2	AICTE	Awareness on sensitization, Dr. Bhoopendra Singh , Associate Professor, RGPV Bhopal, TIT Pharmacy Bhopal	26/03/2022
3	APTI	Organized two days webinar on the theme "Protection Of World From Culprit Of Ridiculous Offensive Nonsense Air: C-O-R-O-N-A"	01/03/2022
4	AICTE	Organized two days webinar entitled "Holistic Approaches in the Management of Lifestyle Diseases	20/02/2022
5	IPGA	Organized Webinar entitled Computer Aided Drug Design: An Overview'	23/11/2021
6	IPGA	organized webinar on 'Modified Excipients: Adding Functionality to Excipients'	28/01/2022
7	APTI	Celebrate national Pharmacist day	12/01/2022
8	AICTE	Expert talk on Status of Pharmacotherapeutics of COVID-19 After Two Years"	10/10/2022
9	Student Chapter	World Pharmacist Day celebration	25/09/2021
10	Student Chapter	Nation pharmacy week celebration	21/09/2021

#### Academic Year 2020-21

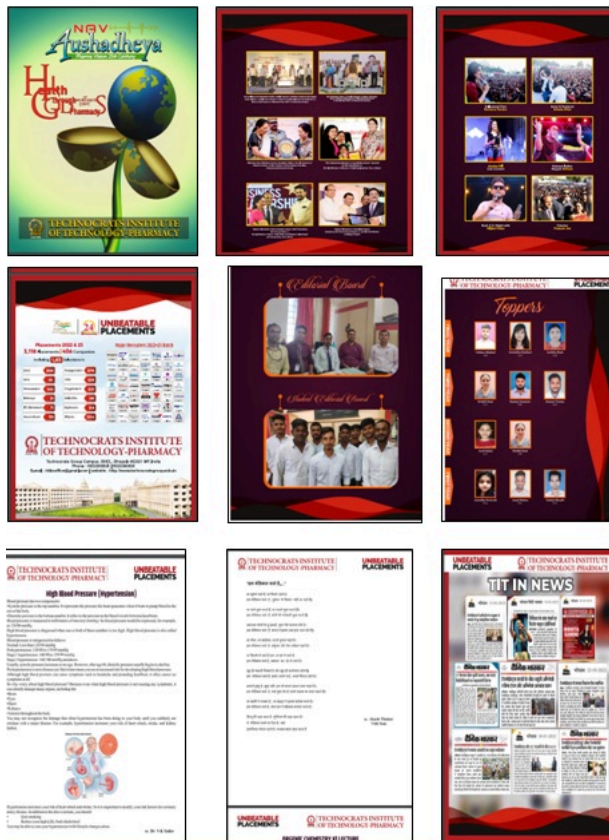
Sr. No.	Professional Society Name/Chapter	Events Organized	Date
1	AICTE	COVID-19 Awareness online program	05/01/2021
2	APTI	Continuous focus on Awareness against COVID-19 disease	15/12/2020
3	APTI	Virtual Industrial Tour	06/10/2020
4	AICTE	Webinar on Green Intellectual Property (Green IP)for Health Care Innovation Globally	27/07/2020
5	APTI	Report on Virtual Visit to Analytical Testing Labs	18/07/2020
6	AICTE	Entrepreneurship, Start-Up, Career Opportunities In Pharmacy Online Webinar	05/06/2020

Newsletter is published on annual basis and is being circulated among faculty, students and parents. Editorial Board for News Letter:

S. No.	Academic Year	Name of the Newsletter	Month and Year of Publication	Name of editors	Name of Publishers
1	2021-2022	Pharma Voice	June, 2022	Chief Editor: 1. Dr. B. K. Dubey Principal, TIT- Pharmacy, Bhopal Student Editors: 1. Mr. Vishnu Dhakad 2. Mr. Shashi Raj 3. Ms. Pratima Singh	TIT, Bhopal
2	2020-21	Pharma Voice	June, 2021	Chief Editor: 1. Dr. B. K. Dubey Principal, TIT- Pharmacy, Bhopal Student Editors: 1. Mr. Ashish Singh 2. Mr. Nikhil Singh 3. Ms. Nikita Shende	TIT, Bhopal
3	2019-20	Pharma Voice	June, 2020	Chief Editor: 1. Dr. B. K. Dubey Principal, TIT- Pharmacy, Bhopal Student Editors: 1. Mr. Khushal Chouriya 2. Mr. Gourav Maran 2. Ms. Awantika Keshari	TIT, Bhopal

Technocrats Institute of Technology - Pharmacy

#### College Magazine



**Batch 2019-20**

S. No.	Name of Student	Events	Date	Organizer
1	Rohit Tyagi	Business Plan Competition	10/02/2020	Technocrats Institute of Technology- MBA
2	Rohit Tyagi	Basic Analytical Techniques	29/02/2020 to 02/03/2020	RB Science Research lab
3	Nikita Chandrabhan shende	Drug Discovery	24/04/2020	UC San Diego
4	Nikita Chandrabhan shende	Drug Commercialization	19/05/2020	UC San Diego
5	Saurabh Mehra	Massive Open Online Courses	06/07/2020	College of Pharmacy SSSUTMS, Sehore Mp
6	Shivani Kumari	Massive Open Online Courses	06/07/2020	College of Pharmacy SSSUTMS, Sehore Mp
7	Shubham Singh	National Webinar on Intellectual Property Rights'	21/07/2020	Society of Pharmaceutical Sciences and Research (SPSR), with Ideal Institute of Pharmacy, Wada, Palghar, Maharashtra,
8	Sonu Vanshkar	National Webinar on Intellectual Property Rights	21/07/2020	Society of Pharmaceutical Sciences and Research (SPSR), with Ideal Institute of Pharmacy, Wada, Palghar, Maharashtra,
9	Surendra Kumar	National Webinar on Intellectual Property Rights	21/07/2020	Society of Pharmaceutical Sciences and Research (SPSR), with Ideal Institute of Pharmacy, Wada, Palghar, Maharashtra,
10	Vashisht Kumar	International Webinar Healing and Health in Pandemic	10/07/2020	School of Physical Education SSSUTMS Sehore MP
11	Nisha Kumari	QUIZ Covid -19 Awareness	12 to 15 may-2020	Maa Narmada Education & Welfare society, Jabalpur
12	Nisha kumari	National Quiz on Pharmacy Research	03/07/2020	Bansal College of Pharmacy, Bhopal (M.P.)
13	Nisha Kumari	Covid-19 Awareness Quiz	17/05/2020	ELIXIR Inst. Of Pharmacy, Pune

**Batch 2020-21**

S. No.	Name of Student	Events	Date	Organizer
1	Rohit Tyagi	Business Plan Competition	10/02/2020	TIT MBA Bhopal (M.P.)
2	Nish Kumari	Online Quiz Competition on COVID-19 Awareness	18-22 May 2020	School of Pharmacy, Madhyanchal Professional University, Bhopal
3	Goldi Kumari	Introduction to the Biology of Cancer	09/05/2020	Johns Hopkins University
4	Goldi Kumari	The Science of Stem Cells	09/05/2020	American Museum of Natural History
5	Nish Kumari	IPQC Testing of Solid Dosage form	15 to 17 feb 2020	RB Science Bhopal MP
6	Shruti Singh	Online Conference	18/ 04/2021	International Model United Nations
7	Shruti Singh	Online Conference	18/04/2021	International Model United Nations
8	Nisha Kumari	National Service Scheme Cell	05/08/2020	Hi-Tech College of Pharmacy, Chandrapur
9	Goldi Kumari	Ecology: Ecosystem Dynamics & Conservation	19/05/2020	American Museum Of National History
10	Nisha Kumari	National QUIZ On Pharmacy Research	03/07/2020	Bansal College of Pharmacy, Bhopal (M.P.)

**Batch 2021-22**

S No.	Name of Student	Events	Date	Organizer
1	Nikita Sindhe	Chemical And Instrumental Method of Analysis of Drug	10/06/2022	Drug Testing Laboratory, Bhopal MP
2	Shashi Raj	Quality control of tablets and microbiological techniques	01-08-2022 to 30-11-2022	RB Science Research lab Bhopal

3	Nikita Shende	Chemical and Instrumental method of Analysis of drug	10-06-2022 to 11-06-2022	FDA, Bhopal MP
4	Shruti Singh	Instructors Vision Training Systems Technology	24/09/2022	ICD 10 & 11 Medical Coding and Billing
5	Shruti Singh	International Model United Nations Conference	18/04/2021	International Model United Nations
6	Nisha Kumari	A Novel Approach to Drug Discovery	18/09/2022	RB Science

**Batch 2022-23**

S No.	Name of Student	Events	Date	Organizer
1	Adarsh kumar Mishra	36 Inter University Central Zone Youth Festival 2022-23	6 to 10 Jan 2023	AIU – AKS university Satna MP
2	Ajit Kumar Pandit	Electronics Components in Artificial Intelligence	03/09/2022	Technocrats Institute of Technology-Computer Science and Engineering, Bhopal, MP
3	Sashi Raj	Training on Preformulation studies, analysis, UV , HPLC, Microbiological TEchniques	01/08/2022	RB Science, Bhopal MP
4	Shruti Singh	Reporting and Public Viewing of Individual Case Safety Reports(ICSRS)	12/02/2023	FDA US FOOD and Drug
5	Sachin Raj	Medical Writing As A Career	25-26 Aug 2023	Community Pharmacy AID Founder & Director At CPA
6	Ankit Chouriya	AB5 Toxin: Biological toxin and weapons	11/08/2023	Aditya College of Pharmacy, Surampalem
7	Nisha kumari	Quiz on COVID- 19	26/05/2022	Aditya College of Technology Pharmacy & Science, Sherganj, Satna (MP)
8	Harsh Malvia	National Conference	20/02/2023	MPCST, Bhopal MP



Name	PAN No.	University Degree	Date of Receiving Degree	Area of Specialization	Research Paper Publications	Ph.D Guidance	Faculty receiving Ph.D during the assessment year	Current Designation	Date (Designated as Prof/Assoc. Prof.).	Initial Date of Joining	Associatic Type
Dr Balkrishna Dubey	ACGPD7642B	M.Pharm and Ph.D	16/03/2006	Pharmaceutics	29	00	00	Professor	01/11/2016	01/11/2016	Regular
Dr. Sahadev Kumar Yadav	AABPY6050B	M.Pharm and Ph.D	10/02/1999	Pharmaceutics	00	00	00	Professor	21/01/2021	21/01/2021	Regular
Dr. Deepak Kumar Basedia	AWKPB0093N	M.Pharm and Ph.D	18/02/2017	Pharmaceutical Chemistry	28	00	00	Professor	11/11/2022	16/11/2009	Regular
Dr. Mukesh Kumar Patel	BCPPP0013G	M.Pharm and Ph.D	10/11/2022	Pharmaceutics	07	00	00	Professor	11/11/2022	01/07/2019	Regular
Dr. Mahendra Jain	AOTPJ9821P	M.Pharm and Ph.D	10/12/2012	Pharmacognosy	00	00	00	Professor	01/08/2014	01/08/2014	Regular
Dr. Amarjit Singh	BSXPS2569E	M.Pharm and Ph.D	04/06/2024	Pharmacology	00	00	00	Professor	12/07/2022	12/07/2022	Regular
Mr. Abhijeet Raghuwanshi	BURPR7997D	M.Pharm	30/12/2014	Pharmaceutics	00	00	00	Associate Professor	12/04/2017	12/04/2017	Regular
Mr. Shailendra Prasad Tiwari	ANUPT7171L	M.Pharm	30/08/2014	Pharmaceutics	00	00	00	Associate Professor	02/10/2023	27/09/2018	Regular
Ms. Kiran Satnami	EKUPK8876E	M.Pharm	30/07/2021	Pharmaceutics	00	00	00	Assistant Professor		20/12/2021	Regular
Ms. Ritu Kushwaha	GTIPK4074B	M.Pharm	18/10/2021	Pharmaceutics	00	00	00	Assistant Professor		31/12/2018	Regular
Ms. Saby Saudagar	HGUPS0919F	M.Pharm	30/06/2018	Pharmaceutics	00	00	00	Assistant Professor		22/09/2021	Regular
Mr. Bhushan Kumar Korde	AIKPK8624L	M.Pharm	29/06/2002	Pharmaceutical Chemistry	03	00	00	Associate Professor	14/05/2007	14/05/2002	Regular
Ms. Najmus Sehar	MOMPS3253P	M.Pharm	15/10/2019	M.Pharm Quality Assurance	01	00	00	Assistant Professor		19/10/2021	Regular
Mr. Anandi Lal Narolia	AALDN8575D	M.Pharm	30/07/2022	Pharmaceutical Chemistry	00	00	00	Assistant Professor		26/09/2022	Regular
Ms. Sandra Gautam	COZPG1242M	M.Pharm	30/12/2020	Pharmaceutical Chemistry	07	00	00	Assistant Professor		08/03/2021	Regular
Mr. Suresh Dhakar	ALDPD1203G	M.Pharm	31/12/2012	Pharmacognosy	00	00	00	Associate Professor	25/04/2018	25/04/2018	Regular
Ms. Neelmani Chauhan	AWPPC5641N	M.Pharm	31/12/2011	Pharmacognosy	10	00	00	Associate Professor	16/03/2022	16/03/2022	Regular
Mr. Prashant Uchadia	ACNPU6891J	M.Pharm	31/12/2013	Pharmacology	00	00	00	Associate Professor	03/02/2014	03/02/2014	Regular
Mr. Mahendra Jaiswal	CCLPJ4778H	M.Pharm	31/12/2021	Pharmacology	00	00	00	Assistant Professor		01/09/2022	Regular
Mr. Neeraj Sharma	LFGPS9233D	M.Pharm	30/06/2021	Pharmacology	00	00	00	Assistant Professor		01/07/2021	Regular
Ms. Pushpa Simaiya	EKYP2190K	M.Pharm	30/06/2020	Pharmacology	04	00	00	Assistant Professor		20/01/2021	Regular
Ms. Rajshree Deshmukh	HOCPD0887R	M.Pharm	31/12/2021	Pharmacology	00	00	00	Assistant Professor		01/11/2022	Regular
Mr. Pawan Dubey	BJHPD2652L	M.Pharm	31/12/2012	M.Pharm Regulatory Affairs	00	00	00	Associate Professor	19/01/2019	19/01/2019	Regular
Mohd Adil Khan	FDGPK7706F	M.Pharm	31/12/2018	Pharmaceutics	00	00	00	Assistant Professor		02/12/2019	Regular
Dr. Ashok Kumar Budhwani	ACQPB5259C	M.Pharm and Ph.D	30/03/2013	Pharmaceutical Chemistry	00	00	00	Professor	23/04/2018	23/04/2018	Regular

Mr. Gopal Krishna Sharma	JHUPS9954R	M.Pharm	30/12/2021	Pharmaceutical Chemistry	00	00	00	Assistant Professor		26/09/2022	Regular
Ms. Prithwish Nandi	AFPPN4987F	M.Pharm	30/06/2008	Pharmaceutical Bio Technology	00	00	00	Associate Professor	20/01/2023	02/08/2008	Regular
Ms. Chandra Chaurasia	BDPC2042B	M.Pharm	30/12/2015	Pharmaceutics	00	00	00	Associate Professor	21/12/2018	21/12/2018	Regular
Mr. Yogendra Rathore	BOZPR9759D	M.Pharm	30/12/2013	Pharmaceutical Chemistry	00	00	00	Associate Professor	19/09/2022	19/09/2022	Regular
Dr. Manmeet Singh Saluja	CJTPS9746W	M.Pharm and Ph.D	06/10/2012	Pharmacology	00	00	00	Professor	01/01/2020	16/11/2019	Regular
Rijwan Arif	AQOPA5310P	M.Pharm	30/06/2017	Pharmacology	00	00	00	Assistant Professor		06/12/2017	Regular
Mr. Shubham Mishra	EZAPM2794A	M.Pharm	30/12/2022	Pharmaceutics	00	00	00	Assistant Professor		05/01/2023	Regular
Mr. Amit Arya	AIMPA9286G	M.Pharm	30/12/2016	Pharmacology	00	00	00	Assistant Professor		21/09/2022	Regular
Mr. Brijesh Jhalava	BXIPK3333A	M.Pharm	30/12/2013	Pharmacology	00	00	00	Associate Professor		01/12/2023	Regular
Dr. Prabhat Kumar Jain	ANNPJ6534C	M.Pharm and Ph.D	17/12/2022	Pharmaceutical Analysis	00	00	00	Professor		01/01/2024	Regular
Dr Jagdish Chandra	GDMFD2549H	M.Pharm and Ph.D	01/08/2018	Pharmacy	00	00	00	Professor		01/12/2023	Regular
Ms. Deepali Lariya	AYZPL6686Q	M.Pharm	31/07/2019	Pharmaceutics	00	00	00	Assistant Professor		20/08/2019	Regular
Dr. Dileep Bharti	AWIPB3526A	M.Pharm and Ph.D	30/08/2021	Pharmacology	00	00	00	Professor		31/01/2019	Regular
Dr. Ameeta Agral	AEPPA7171R	M.Pharm and Ph.D	30/06/2008	Pharmaceutical Chemistry	00	00	00	Professor		01/08/2014	Regular
Dr. Kailash Kumar Pathak	BAWPP0269F	M.Pharm and Ph.D	30/03/2023	Pharmaceutics	00	00	00	Associate Professor		01/07/2020	Regular
Mr. Wasim Raza Ali	BDPPK7416R	M.Pharm	31/03/2008	Pharmaceutical Biotechnology	00	00	00	Assistant Professor		21/04/2008	Regular
Ms. Ritu Mishra	COZPM5592J	M.Pharm	30/06/2017	Pharmacology	00	00	00	Assistant Professor		06/11/2017	Regular
Mr. Mayur Chourey	AKOPC9839P	M.Pharm	31/03/2007	Pharmacognosy	00	00	00	Assistant Professor		10/03/2008	Regular
Ms. Mansi Gupta	AZCPG1586A	M.Pharm	30/12/2010	Pharmaceutics	00	00	00	Assistant Professor		25/02/2011	Regular
Mr. Abhijit Sonje	BVZPS6022D	M.Pharm and Ph.D	10/01/2015	Pharmaceutics	00	00	00	Professor		26/11/2015	Regular
Mr. Sanjay Dwivedi	AXDPD4170C	M.Pharm	12/05/2009	Pharmacology	00	00	00	Assistant Professor		24/05/2010	Regular
Mr. Sharad Sharma	EVMPSP8608P	M.Pharm	25/06/2014	Pharmacology	00	00	00	Assistant Professor		05/01/2016	Regular
Mr. Shiv Kumar Narware	AVYPN1363N	M.Pharm	04/06/2012	Pharmacology	00	00	00	Assistant Professor		04/01/2016	Regular
Ms. Sakshi Singhai	MTUPS5015A	M.Pharm	31/07/2019	Pharmaceutical Chemistry	00	00	00	Assistant Professor		02/03/2020	Regular
Ms. Farheen Ansari	BPKPA9937E	M.Pharm	30/12/2022	Pharmacology	00	00	00	Assistant Professor		03/01/2022	Regular
Mr. Sanjay Jamaliya	AMMPJ3651J	M.Pharm	31/12/2018	Pharmacology	00	00	00	Associate Professor		01/12/2023	Regular





## UG

No. of UG Programs in the Department 1

B.Pharm						
Year of Study	CAY		CAYm1		CAYm2	
	(2023-24)		(2022-23)		(2021-22)	
	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students
1st Year	100	0	100	0	100	0
2nd Year	100	10	100	10	100	10
3rd Year	100	10	100	10	100	10
4th Year	100	10	100	10	100	10
<b>Sub-Total</b>	<b>400</b>	<b>30</b>	<b>400</b>	<b>30</b>	<b>400</b>	<b>30</b>
<b>Total</b>	<b>430</b>		<b>430</b>		<b>430</b>	
Grand Total	430		430		430	

## PG

No. of PG Programs in the Department 3

M.Pharm (Pharmaceutical Chemistry)			
Year of Study	CAY(2023-24)	CAYm1(2022-23)	CAYm2 (2021-22)
	Sanction Intake	Sanction Intake	Sanction Intake
1st Year	15	15	15
2nd Year	15	15	15
<b>Total</b>	<b>30</b>	<b>30</b>	<b>30</b>
M.Pharm (Pharmaceutics)			
Year of Study	CAY(2023-24)	CAYm1(2022-23)	CAYm2 (2021-22)
	Sanction Intake	Sanction Intake	Sanction Intake
1st Year	15	15	15
2nd Year	15	15	15
<b>Total</b>	<b>30</b>	<b>30</b>	<b>30</b>
M.Pharm (Pharmacology)			
Year of Study	CAY(2023-24)	CAYm1(2022-23)	CAYm2 (2021-22)
	Sanction Intake	Sanction Intake	Sanction Intake
1st Year	15	15	15
2nd Year	15	15	15
<b>Total</b>	<b>30</b>	<b>30</b>	<b>30</b>
Grand Total	90	90	90

## SFR

No. of UG Programs in the Department 1

No. of PG Programs in the Department 3

Description	CAY(2023-24)	CAYm1 (2022-23)	CAYm2 (2021-22)
Total No. of Students in the Department(S)	520 Sum total of all (UG+PG) students	520 Sum total of all (UG+PG) students	520 Sum total of all (UG+PG) students
No. of Faculty in the Department(F)	35 F1	38 F2	36 F3
Student Faculty Ratio(SFR)	14.86 SFR1=S1/F1	14.44 SFR2=S2/F2	13.68 SFR3=S3/F3
Average SFR	14.33 SFR=(SFR1+SFR2+SFR3)/3		
F=Total Number of Faculty Members in the Department (excluding first year faculty)			

**Note:** 75% should be Regular/full time faculty and the remaining shall be Contractual Faculty/Adjust Faculty/Resource persons from industry as per AICTE norms and standards. The contractual faculty will be considered for assessment only if a faculty is drawing a salary as prescribed by the concerned State Government for the contractual faculty in the respective cadre.

5.1.1. Provide the information about the regular and contractual faculty as per the format mentioned below:

	Total number of regular faculty in the department	Total number of contractual faculty in the department
CAY(2023-24)	35	0
CAYm1(2022-23)	38	0
CAYm2(2021-22)	36	0

Average SFR for three assessment years : 14.33

Assessment SFR : 20

## 5.2 Faculty Cadre Proportion (20)

Total Marks 20.00

Institute Marks : 20.00

Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
CAY(2023-24)	3.00	8.00	7.00	0.00	23.00	30.00
CAYm1(2022-23)	3.00	9.00	7.00	0.00	23.00	30.00
CAYm2(2021-22)	3.00	8.00	7.00	1.00	23.00	28.00
Average Numbers	3.00	8.33	7.00	0.33	23.00	29.33

Cadre Ratio Marks  $[(AF1 / RF1) + [(AF2 / RF2) * 0.6] + [(AF3 / RF3) * 0.4]] * 10$  : 20.00

## 5.3 Faculty Qualification (20)

Total Marks 14.86

Institute Marks : 14.86

	X	Y	F	$FQ = 2.0 \times [(10X + 6Y) / F]$
2023-24(CAY)	8	29	34.00	14.94
2022-23(CAYm1)	9	28	34.00	15.18
2021-22(CAYm2)	9	26	34.00	14.47

Average Assessment : 14.86

## 5.4 Faculty Retention (20)

Total Marks 20.00

Institute Marks : 20.00

Description	2022-23	2023-24
No of Faculty Retained	30	25
Total No of Faculty	26	26
% of Faculty Retained	115	96

Average : 106.00

Assessment Marks : 20.00

## 5.5 Innovations by the Faculty in Teaching and Learning (15)

Total Marks 15.00

Innovations by the Faculty in teaching and learning shall be summarized as per the following description

#### **Innovation by the Faculty in Teaching and Learning**

Traditional educational methodology is complemented by innovative, updated techniques for the benefit of the learners. Several activities are included which contribute towards enhancement of learning, at the same time facilitating ease of understanding in students with variegated learning styles. These activities involve innovative use of trending technologies, customized instruction module and techniques, Online/Offline, assessment, evaluation and inclusive class rooms that lead to effectiveness of instruction delivery.

1. Various diagrams, flow charts are used for facilitating better understanding.
2. **Webinars** Google meet is being extensively used by the students to interact with experts and alumni to update with latest information from professional world concerning their career.
3. **Group assignments** are provided in labs and in classes also to ensure healthy competition, team work and new, improved outcomes of the existing problem while promoting peer to peer learning.
4. **Simulation and computer animation tools** Faculty members deliver lectures with the help of Videos and Animations in class room. This practical approach for demonstrating complex procedures/topics ensures student can visualize and follow the content with ease.
5. Research papers are used to teach student latest technologies to bridge research gap and help students to gain knowledge of trends and advanced techniques as well to select a viable project for the final terms.

#### **6. Institute Academic Portal**

This academic portal is a rich source of self learning material. It contains following resources:

- Course material for all subjects in curriculum.
- Question bank for preparation of different exams.
- Self-study materials for campus drive.
- Lecture notes
- Notes for extra topics that are beyond syllabus
- Solved university question papers.

#### **7. In house Lab Manuals Design and Development**

Lab manuals for all the courses from first to eight semesters have been in house designed and developed. The lab manuals are being used by the students as a record for logging all the readings of the experiments and doing the needful calculations. The calculations serve as the basis for necessary inferences for the said experiment. Important diagrams, tables, formulae as well as viva voce questions have been incorporated in the manuals for the better learning of the students.

9. **Regular practice:** Technical Quizzes Online and offline test, Expert lectures and Workshops are adopted to support assessment process regularly.

#### **5.6 Faculty as participants in Faculty Development/Training Activities (15)**

Total Marks 15.00



Name of the faculty	Max 5 Per Faculty		
	2023-24	2022-23	2021-22
Dr Balkrishna Dubey	5.00	5.00	3.00
Dr. Sahadev Kumar Yadav	0.00	5.00	3.00
Dr. Deepak Kumar Basedia	5.00	3.00	5.00
Dr. Mukesh Kumar Patel	5.00	5.00	3.00
Dr. Mahendra Jain	3.00	3.00	3.00
Dr. Amarjit Singh	0.00	0.00	3.00
Mr. Abhijeet Raghuwanshi	3.00	3.00	0.00
Mr. Shailendra Prasad Tiwari	3.00	3.00	3.00
Ms. Kiran Satnami	3.00	3.00	5.00
Ms. Ritu Kushwaha	3.00	0.00	3.00
Ms. Saby Saudagar	3.00	3.00	3.00
Mr. Bhushan Kumar Korde	3.00	3.00	0.00
Ms. Najmus Sehar	3.00	3.00	0.00
Mr. Anandi Lal Narolia	3.00	3.00	3.00
Ms. Sandra Gautam	5.00	3.00	3.00
Mr. Suresh Dhakar	3.00	5.00	0.00
Ms. Neelmani Chauhan	5.00	3.00	3.00
Mr. Prashant Uchadia	3.00	0.00	3.00
Mr. Mahendra Jaiswal	3.00	3.00	0.00
Mr. Neeraj Sharma	3.00	0.00	0.00
Ms. Pushpa Simaiya	3.00	0.00	3.00
Ms. Rajshree Deshmukh	0.00	3.00	3.00
Mr. Pawan Dubey	3.00	3.00	0.00
Mohd Adil Khan	0.00	0.00	3.00
Dr. Ashok Kumar Budhwani	3.00	3.00	3.00
Mr. Gopal Krishna Sharma	3.00	3.00	0.00
Ms. Chandra Chaurasia	3.00	0.00	3.00
Mr. Yogendra Rathore	0.00	3.00	0.00
Dr. Manmeet Singh Saluja	3.00	3.00	0.00
Mr Rijwan Arif	0.00	3.00	0.00
Mr. Shubham Mishra	0.00	0.00	3.00
Mr. Amit Arya	0.00	3.00	0.00
Mr. Brijesh Jhalawa	3.00	0.00	0.00
Dr. Prabhat Kumar Jain	5.00	0.00	3.00

Dr. Jagdish Chandra	3.00	0.00	0.00
Ms. Deepali Lariya	3.00	3.00	3.00
Dr. Dileep Bharti	0.00	3.00	0.00
Dr. Ameeta Argal	0.00	3.00	3.00
Mr. Wasim Raza Ali	0.00	0.00	3.00
Ms. Ritu Mishra	0.00	0.00	3.00
Mr. Abhijit Sonje	0.00	0.00	3.00
Ms. Sakshi Singhai	0.00	0.00	3.00
Ms. Farheen Ansari	0.00	0.00	3.00
Sum	96.00	91.00	88.00
RF = Number of Faculty required to comply with 15:1 Student Faculty Ratios per 5.1	34.67	34.67	34.67
Assessment [ $3 \times (\text{Sum} / 0.5\text{RF})$ ]	16.61	15.75	15.23

Average assessment over 3 years: 15.86

## 5.7 Research and Development (40)

Total Marks 15.00



**RESEARCH PAPER PUBLICATIONS OF FACULTIES:-**

*Academic research includes research paper publications, Ph.D. guidance, and faculty receiving Ph.D. during the assessment period.*

- *Number of quality publications in refereed/ SCI Journals, citations, Books/ Book Chapters etc.*
- *Ph.D. guided / Ph.D. awarded during the assessment period while working in the institute*

*All relevant details shall be mentioned.*

S.No	Author	Title of paper	Journal/Conference	ISSN / DOI	Publication Year
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1	Dr. B.K .Dubey	Phytochemical and Antimicrobial Screening of Entada Seed Extract For The Treatment of Acne	Asian Journal of Pharmaceutical Education and Research	<a href="https://dx.doi.org/10.38164/AJPER/12.2.2023.9-19">https://dx.doi.org/10.38164/AJPER/12.2.2023.9-19</a> ( <a href="https://dx.doi.org/10.38164/AJPER/12.2.2023.9-19">https://dx.doi.org/10.38164/AJPER/12.2.2023.9-19</a> )	June, 2023
2		Investigation Of Antinflammatory Action Of Methanolic Extract Of Portulacaria Afra Leaf.	European Journal of Biomedical AND Pharmaceutical sciences	<a href="http://www.ejbps.com">http://www.ejbps.com</a>	Mar,2023
3		Synthesis Characterization And Biological Activity Of 1, 2, 3- Triazine Derivatives	Aegaeum Journal	ISSN NO: 0776-3808	July, 2023
4		Topical Delivery of Cape through Microsphere Loaded Gel	International Journal of Pharmaceutical Research	S0928493121005245	2023
5		Formulation and Evaluation of Silver Nanoparticles for Effective Treatment of Topical Fungal Disease	The Pharmaceutical and Chemical Journal	<a href="https://link.springer.com/article/10.1007/s00604-021-05127-y">https://link.springer.com/article/10.1007/s00604-021-05127-y</a> ( <a href="https://link.springer.com/article/10.1007/s00604-021-05127-y">https://link.springer.com/article/10.1007/s00604-021-05127-y</a> )	2023
6		Development and characterization of Transdermal patches of febuxostat for Transdermal delivery	Indo American Journal of Pharmaceutical Sciences	<a href="https://doi.org/10.5281/zenodo.5550271">https://doi.org/10.5281/zenodo.5550271</a> ( <a href="https://doi.org/10.5281/zenodo.5550271">https://doi.org/10.5281/zenodo.5550271</a> )	Oct,2021
7		Formulation and Evaluation of Ethosomal Nanoparticles of Avobenzone for Improved Sunscreen Efficacy	International Journal of Pharmaceutical Sciences Review and Research	ISSN 0976 – 044X	Sep,2021
8		Advances in Noble-Metal Nanoparticle-Based Fluorescence 2 Detection of Organo phosphorus Chemical Warfare Agents	International Journal of Pharmaceutical Research and Applications	ISSN: 2249-7781	July,2021
9		Formulation and Performance Evaluation of Transdermal Patch of Luteolin Research	International Journal of Pharmaceutical Research and Applications	ISSN: 2249-7781	Oct,2021
10		Phytochemical And Antimicrobial Screening of Entada Phaseoloides Seed Extract For The Treatment of Acne	Asian Journal of Pharmaceutical Education and Research	<a href="https://dx.doi.org/10.38164/AJPER/12.2.2023.9-19">https://dx.doi.org/10.38164/AJPER/12.2.2023.9-19</a> ( <a href="https://dx.doi.org/10.38164/AJPER/12.2.2023.9-19">https://dx.doi.org/10.38164/AJPER/12.2.2023.9-19</a> )	jun. 2023
11		Formulation of SDS Aided and Ethosomal Fluconazole Topical Gel for Improved Antifungal Effect	The Pharmaceutical and Chemical Journal	ISSN: 2349-7092	2023
12		Evaluation of anti-inflammatory activity of Hydroalcoholic extract of brassica oleracea	Journal of the Maharaja Sayajirao University of Baroda	ISSN :0025-0422	2023
13		Ormulation and Evaluation of Silver Nanoparticles for Effective Treatment of Topical Fungal Disease	The pharmaceutical and chemical journal	ISSN :2349-7092	Apl-2023
14.		Synthesis, characterization and biological evaluation of 4-{1-aza-2-[(ary) amino]}-3-methyl-2-pyrazolin-5-ones derivatives	RJPT Journal	SSN 0974-3618 <a href="http://www.rjptonline.org">www.rjptonline.org</a>	Dec,2021

15	Topical Delivery Of Cape Through Microsphere Loaded Gel.	International Journal of Pharmaceutical Research	Vol 15   Issue 3 ISSN 0975-2366	Sep,2023
16	Analgesic & anti inflammatory screening of crude isolates of Annona squamosa leaf extract	European Journal of Biomedical And Pharmaceutical sciences	<a href="http://www.ejbps.com">http://www.ejbps.com</a>	Mar,2023
17	Synthesis and characterization and anti-inflammatory activity of 1,3,4 oxadiazole derivative	International journal of current research in Biology and medicine	ISSN: 2455-944X	Feb,2022

18	In vitro & in vivo antioxidant activity of <i>tinospora cordifolia</i>	International Journal of Pharmaceutics & Drug Research	ISSN: 2347-6346 <a href="http://ijpdr.com">http://ijpdr.com</a> ( <a href="http://ijpdr.com/">http://ijpdr.com/</a> )	Feb,2023
19	Validation of hydrotropic solubilization based rp-hplc method for estimation of amiodarone	European Journal of Biomedical and Pharmaceutical sciences	<a href="http://www.ejbps.com">http://www.ejbps.com</a> ( <a href="http://www.ejbps.com/">http://www.ejbps.com/</a> ) ISSN 2349-8870	Apr,2022
20	Study of Synergistic Anti-inflammatory action of <i>Ocimum Sanctum</i> and <i>Mangifera Indica</i> leaf extract	American journal of pharmacy and health research	<a href="http://www.ajphr.com">www.ajphr.com</a> ISSN: 2321–3647	Apr,2022
21	Evaluation of antioxidant and antiinflammatory effect of Resveratrol and BioPerine combination	American journal of pharmacy and health research	<a href="http://www.ajphr.com">www.ajphr.com</a> ( <a href="http://www.ajphr.com/">http://www.ajphr.com/</a> ) ISSN: 2321–3647	Apr,2022
22	Phytochemical screening and in-vivo screening of Antiulcer activity on foeniculum vulgare seeds.	Panacea Journal of Pharmacy and Pharmaceutical Sciences	ISSN: 2349–7025	Dec,2022
23	Investigation of antiinflammatory action of methanolic extract of <i>portulacaria afra</i> leaf	European Journal of Biomedical And Pharmaceutical sciences	<a href="http://www.ejbps.com">http://www.ejbps.com</a> ISSN 2349-8870	Mar,2023
24	Development and Validation of RP-HPLC based Analytical method for Simultaneous Estimation of Montelukast and Bilastine in Tablet Dosage Form.	Current Research in Pharmaceutical Sciences	ISSN: 2250 – 2688	June,2022
25	Synthesis, Characterization and Biological evaluation of Novel 2,4,6-trisubstituted-1,3,5-triazine derivatives.	International journal of current research in Biology and medicine	ISSN: 2455-944X	2022
26	Evaluation of Antidepressant Effect of Shogaol in Animal Models.	Current Research in Pharmaceutical Sciences	ISSN: 2250 – 2688	April,2022
27	Formulation, development and evaluation Of colon targeting microspheres for Effective treatment of colitis.	Archana Pachore et al, International Journal of Pharmaceutical Sciences & Medicine	ISSN: 2519-9889 <a href="https://ijpsm.com/">https://ijpsm.com/</a>	Dec,2022
28	Synthesis, characterization and antimicrobial evaluation of Schiff base 4-thiazolidinones of aminosalicic acid derivatives	European Journal of Biomedical AND Pharmaceutical sciences	<a href="http://www.ejbps.com">http://www.ejbps.com</a> ( <a href="http://www.ejbps.com/">http://www.ejbps.com/</a> ) ISSN 2349-8870	Sep,2022
29	Phytochemical screening & antifungal activity of Stem of <i>lantana camara</i> .	World journal of pharmacy and pharmaceutical sciences	ISSN 2278 – 4357 <a href="http://www.wjpps.com">www.wjpps.com</a> ( <a href="http://www.wjpps.com/">http://www.wjpps.com/</a> )	Jan,2024
30	Evaluation of CNS stimulation of asparagus racemosus extract.	International Journal of Pharmaceutics and Drug Research.	<a href="http://ijpdr.com">http://ijpdr.com</a> ( <a href="http://ijpdr.com/">http://ijpdr.com/</a> ) ISSN: 2347-6346	Nov,2023

1	Dr. Deepak Kumar Basedia	Phytochemical and antimicrobial screening of entada seed extract for the treatment of acne.	Asian Journal of Pharmaceutical Education and Research	<a href="https://dx.doi.org/10.38164/AJPER/12.2.2023.9-19">https://dx.doi.org/10.38164/AJPER/12.2.2023.9-19</a> ( <a href="https://dx.doi.org/10.38164/AJPER/12.2.2023.9-19">https://dx.doi.org/10.38164/AJPER/12.2.2023.9-19</a> )	June, 2023
2		Investigation of anti-inflammatory action of methanolic extract of portulacaria afra leaf.	European Journal of Biomedical AND Pharmaceutical sciences	<a href="http://www.ejbps.com">http://www.ejbps.com</a>	Mar,2023
3		Synthesis characterization and biological activity of 1, 2, 3- triazine derivatives.	Aegaeum Journal.	ISSN NO: 0776-3808	July, 2023
4		Development and characterization of Transdermal patches of febuxostat for Transdermal delivery	Indo american journal of pharmaceutical sciences	<a href="https://doi.org/10.5281/zenodo.5550271">https://doi.org/10.5281/zenodo.5550271</a> ( <a href="https://doi.org/10.5281/zenodo.5550271">https://doi.org/10.5281/zenodo.5550271</a> )	Oct,2021
5		Formulation and Evaluation of Ethosomal Nanoparticles of Avobenzone for Improved Sunscreen Efficacy.	<a href="https://dx.doi.org/10.38164/AJPER/12.2.2023.9-19">https://dx.doi.org/10.38164/AJPER/12.2.2023.9-19</a>	ISSN 0976 – 044X/ <a href="http://dx.doi.org/10.47583/ijpsrr.2021.v70i01.023">http://dx.doi.org/10.47583/ijpsrr.2021.v70i01.023</a> ( <a href="http://dx.doi.org/10.47583/ijpsrr.2021.v70i01.023">http://dx.doi.org/10.47583/ijpsrr.2021.v70i01.023</a> )	Sep,2021
6		Advances in Noble-Metal Nanoparticle-Based Fluorescence 2 Detection of Organo phosphorus Chemical Warfare Agents	International Journal of Pharmaceutical Research and Applications	ISSN: 2249-7781	July,2021
7		Formulation and Performance Evaluation of Transdermal Patch of Luteolin Research	International Journal of Pharmaceutical Research and Applications	ISSN: 2249-7781	Oct,2021
8		Phytochemical And Antimicrobial Screening of Entada Phaseoloides Seed Extract For The Treatment Of Acne.	Asian Journal of Pharmaceutical Education and Research	<a href="https://dx.doi.org/10.38164/AJPER/12.2.2023.9-19">https://dx.doi.org/10.38164/AJPER/12.2.2023.9-19</a> ( <a href="https://dx.doi.org/10.38164/AJPER/12.2.2023.9-19">https://dx.doi.org/10.38164/AJPER/12.2.2023.9-19</a> )	jun. 2023
9		Formulation of SDS Aided and Ethosomal Fluconazole Topical Gel for Improved Antifungal Effect.	The Pharmaceutical and Chemical Journal	ISSN: 2349-7092	2023
10		Evaluation of anti-inflammatory activity of Hydroalcoholic extract of brassica oleracea.	Journal of the Maharaja Sayajirao University of Baroda	ISSN :0025-0422	2023
11		Synthesis, characterization and biological evaluation of 4-{1-aza-2-[(aryl)amino]}-3-methyl-2-pyrazolin-5-ones derivatives.	RJPT Journal	SSN 0974-3618 <a href="http://www.rjptonline.org">www.rjptonline.org</a>	Dec,2021
12		Ormulation and Evaluation of Silver Nanoparticles for Effective Treatment of Topical 2Fungal Disease.	The pharmaceutical and chemical journal	ISSN :2349-7092	Apl-2023
13		Topical Delivery Of Cape Through Microsphere Loaded Gel.	International Journal of Pharmaceutical Research	Vol 15   Issue 3 ISSN 0975-2366	Sep,2023
14		Analgesic & anti inflammatory screening of crude isolates of Annona squamosa leaf extract.	European Journal of Biomedical AND Pharmaceutical sciences	<a href="http://www.ejbps.com">http://www.ejbps.com</a>	Mar,2023

15	Synthesis and characterization and anti-inflammatory activity of 1,3,4 oxadiazole derivative.	International journal of current research in Biology and medicine	ISSN: 2455-944X	Feb,2022
16	In vitro & in vivo antioxidant activity of tinospora cordifolia.	International Journal of Pharmaceutics & Drug Research	ISSN: 2347-6346 <a href="http://ijpdr.com">http://ijpdr.com</a> ( <a href="http://ijpdr.com/">http://ijpdr.com/</a> )	Feb,2023
17	Validation of hydrotropic solubilization based rp-hplc method For estimation of amiodarone.	European Journal of Biomedical And Pharmaceutical sciences	ISSN 2349-8870	Apr,2022
18	Study of Synergistic Anti-inflammatory action of Ocimum Sanctum and Mangifera Indica leaf extract.	American journal of pharmacy and health research	<a href="http://www.ajphr.com">www.ajphr.com</a> ISSN: 2321-3647	2022
19	Evaluation of antioxidant and anti-inflammatory effect of Resveratrol and Bio Perine combination.	American journal of pharmacy and health research	<a href="http://www.ajphr.com">www.ajphr.com</a> ( <a href="http://www.ajphr.com/">http://www.ajphr.com/</a> ) ISSN: 2321-3647	Apr,2022
20	Phytochemical screening and in-vivo screening of Antiulcer activity on foeniculum vulgare seeds.	Panacea Journal of Pharmacy and Pharmaceutical Sciences	ISSN: 2349-7025	Dec,2022
21	Investigation of antiinflammatory action of methanolic extract of portulacaria afra leaf.	European Journal of Biomedical AND Pharmaceutical 22sciences	<a href="http://www.ejbps.com">http://www.ejbps.com</a> ( <a href="http://www.ejbps.com/">http://www.ejbps.com/</a> ) ISSN 2349-8870	Mar,2023
22	Development and Validation of RP-HPLC based Analytical method for Simultaneous Estimation of Montelukast and Bilastine in Tablet Dosage Form.	Current Research in Pharmaceutical Sciences	SSN: 2250 – 2688	June,2022
23	Synthesis, Characterization and Biological evaluation of Novel 2,4,6-trisubstituted-1,3,5-triazine derivatives.	International journal of current research in Biology and medicine.	ISSN: 2455-944X	2022
24	Evaluation of Antidepressant Effect of 6-Shogaol in Animal Models.	Current Research in Pharmaceutical Sciences	ISSN: 2250 – 2688	April,2022
25	Formulation, development and evaluation Of colon targeting microspheres for Effective treatment of colontitis.	Archana Pachore et al, International Journal of Pharmaceutical Sciences & Medicine	ISSN: 2519-988 <a href="https://ijpsm.com/">https://ijpsm.com/</a>	Dec,2022
26	Synthesis, characterization and antimicrobialevaluation of Schiff base 4-thaizolidinones of aminosaliclyic acid derivatives.	European Journal of Biomedical AND Pharmaceutical sciences	<a href="http://www.ejbps.com">http://www.ejbps.com</a> ( <a href="http://www.ejbps.com/">http://www.ejbps.com/</a> ) ISSN 2349-8870	Sep,2022
27	Phytochemical screening & antifungal activity of stem of lantana camara.	World journal of pharmacy and pharmaceutical sciences	ISSN 2278 – 4357 <a href="http://www.wjpps.com">www.wjpps.com</a> ( <a href="http://www.wjpps.com/">http://www.wjpps.com/</a> )	Jan,2024
28	Evaluation of cns stimulation of asparagus recemosus extract.	International Journal of Pharmaceutics and Drug Research	<a href="http://ijpdr.com">http://ijpdr.com</a> ( <a href="http://ijpdr.com/">http://ijpdr.com/</a> ) ISSN: 2347-6346	Nov,2023

1.	Sandra Gautam	Phytochemical and antimicrobial screening of entada seed extract for the treatment of acne.	Asian Journal of Pharmaceutical Education and Research	European Journal of Biomedical & Pharmaceutical sciences	June, 2023
2.		Investigation of anti-inflammatory action of methanolic extract of portulacaria afra leaf.	Aegaeum Journal.	<a href="http://www.ejbps.com">http://www.ejbps.com</a>	Mar,2023
3.		Synthesis characterization and biological activity of 1, 2, 3- triazine derivatives.	A multifaceted peer reviewed journal in the field of Pharmacy	ISSN NO: 0776-3808	July, 2023
4.		Synthesis and characterization and anti-inflammatory activity of 1,3,4 oxadiazole derivative.	International journal of current research in Biology and medicine.	ISSN: 2455-944X <a href="https://darshanpublishers.com/ijcrbm/ijcrbmindex.html">https://darshanpublishers.com/ijcrbm/ijcrbmindex.html</a> ( <a href="https://darshanpublishers.com/ijcrbm/ijcrbmindex.html">https://darshanpublishers.com/ijcrbm/ijcrbmindex.html</a> )	Feb,2022
5.		Evaluation of antioxidant and anti-inflammatory effect of Resveratrol and Bio Perine combination.	American journal of pharmacy and health research.	<a href="http://www.ajphr.com">www.ajphr.com</a> ( <a href="http://www.ajphr.com/">http://www.ajphr.com/</a> ) ISSN: 2321–3647	Apr,2022
6.		Investigation of antinflammatory action of methanolic extract of portulacaria afra leaf.	European Journal of Biomedical and Pharmaceutical sciences.	<a href="http://www.ejbps.com">http://www.ejbps.com</a> ISSN 2349-8870	Mar,2023
7.		Investigation of antinflammatory action of methanolic extract of portulacaria afra leaf.	Aegaeum Journal.	<a href="http://www.ejbps.com">http://www.ejbps.com</a>	Mar,2023
1.		Evaluation of CNS stimulation of asparagus recemosus extract.	International Journal of Pharmaceutics and Drug Research	<a href="http://ijpdr.com">http://ijpdr.com</a> ( <a href="http://ijpdr.com/">http://ijpdr.com/</a> ) ISSN: 2347-6346	Nov,2023
2.	Mr. Bhushan Korde	Anti -microbial Evaluation of twigs of Butea monosperma Lam.	Drugs and cell therapies in hematology	<a href="https://www.dcth.org/index.php/journal/issue/view/11">https://www.dcth.org/index.php/journal/issue/view/11</a> ( <a href="https://www.dcth.org/index.php/journal/issue/view/11">https://www.dcth.org/index.php/journal/issue/view/11</a> )	2021
3.		Development and Charaterization of Niosomal gel of aceclofenac for the treatment of Arthritis	International Journal of Pharmaceutical Research	<a href="https://www.dcth.org/index.php/journal/issue/view/1">https://www.dcth.org/index.php/journal/issue/view/1</a> ( <a href="https://www.dcth.org/index.php/journal/issue/view/1">https://www.dcth.org/index.php/journal/issue/view/1</a> )	2021
1.		Development of polyherbal Gel of Alhagi camelorum, Scaphium affine, Barringtonia acutangula for treatment of skin disease	International Journal of Pharmaceutical Research	<a href="https://doi.org/10.5897/AJB2015.14495">https://doi.org/10.5897/AJB2015.14495</a> ( <a href="https://doi.org/10.5897/AJB2015.14495">https://doi.org/10.5897/AJB2015.14495</a> )	Feb, 2021
2.	Dr. Mukesh Kumar Patel	Topical Delivery of Cape through Microsphere Loaded Gel	The Pharmaceutical and Chemical Journal	<a href="https://doi.org/10.1111/jfbc.13290">https://doi.org/10.1111/jfbc.13290</a> ( <a href="https://doi.org/10.1111/jfbc.13290">https://doi.org/10.1111/jfbc.13290</a> )	2023
3.		Formulation and Evaluation of Silver Nanoparticles for Effective Treatment of Topical Fungal Disease	MDPI	<a href="https://doi.org/10.2174/2215083804666181012123333">https://doi.org/10.2174/2215083804666181012123333</a> ( <a href="https://doi.org/10.2174/2215083804666181012123333">https://doi.org/10.2174/2215083804666181012123333</a> )	2023
4.		Topical Delivery Of Cape Through Microsphere Loaded Gel.	International Journal of Pharmaceutical Research	Vol 15   Issue 3 ISSN 0975-2366	Sep,2023

1.	Evaluation of antioxidant and anti-inflammatory effect of Resveratrol and BioPerine combination.	American journal of pharmacy and health research	www.ajphr.com (http://www.ajphr.com/) ISSN: 2321-3647	Apl,2022
2.	"Formulation and development of gastro retentive tablet of captopril using maize stem pith powder as a novel polymer"	NVEO	ISSN13035150	Set, 2022
3.	Neelmani Chauhan Anti -microbial Evaluation of twigs of Butea monosperma Lam.	Turkish Online Journal of Qualitative Inquiry	2021,8(5)2883-2894	2021
4.	Stability indicating Rp-Hplc method for the estimation of drug in Marketed Formulation		3890-3904	2021
5.	InsilicoSynthesisand Biological Evaluation of some Novel Quinoline Derivatives.	Journal of Population Therapeutics and Clinical Pharmacology	International ISSN: 1710-6222	Aug.2023
6.	Antidiabetic Potential of Flavanoid Included Diabetic Rats.	World Journal of Pharmaceutical Reaserch	International	Sept.2023
7.	Evaluation of Anti-Arthritic Activity of Ethanolic Extract of Aconitum Hetrophyllumb Roots.	Journal of the Maharaja Sayajirao University Of Baroda.	ISSN:0025-0422 Volume-57,No.1(I):2023	2023
8.	Isolation and Evaluation of leaves of seabain as a potential anti-TB agent.	European chemical bullein	Volume12 Issue04 international	2023
9.	Phytochemical Investigation and Cox inhibitory activity of Sileni Vulgaris.	European chemical bullein	Volume12 Issue04 international	2023
10.	Phytochemical Screening & Antifungal activity of stem of lantana camara.	World journal of pharmacy and pharmaceutical science	ISSN2278-4357 Volume 12 Issue 02	Jan.2024
1..	Antidiabetic Potential of Flavanoid Included Diabetic Rats	World Journal of Pharmaceutical Reaserch	International	Sept.2023
2.	Evaluation of Anti-Arthritic Activity of Ethanolic Extract of Aconitum Hetrophyllumb Roots.	Journal of the Maharaja Sayajirao University Of Baroda.	ISSN:0025-0422 Volume-57,No.1(I):2023	2023
3.	Pushpa Simaiya Ethanolic Extract of MUSA Sapientum spotted peel,treatment for better ameliorates carbon Tetrachloride Nephrotoxicity	WJPR	ISSN 2277-7105 Volume, issue 1	2022
4.	Preliminary Investigation of Phytoconstituents and antipyretic Activity of Cordla Sinesis leaves.	Journal of the maharaja Sayajirao university of baroda	ISSN : 0025-0422 Volume 57	2023
1.	To Develop simple, Accurate and precise Method for Analysis of Drug in the Blood Plasma and Validate them for Trazodone Hydrochloride.	Najmus Sehar International Journal of Drug Discovery and Herbal Rerearch (JDDHR)	ISSN : 2231-6078	April 2024

RECENT PUBLICATIONS OF FACULTIES:

S. No (http://s.no/)	Academic Year	Name of the Faculty	Application Number	Topic
1.	2021-2022	Dr. Deepak Kumar Basedia	202221015019 A	Microwave Meaiated Synethesis and Cytotoxic Evaluation of Novel Substituted Derivatives.
2.	2021-2022	Dr. Balkrishna Dubey	202221015019 A	Microwave Meaiated Synethesis and Cytotoxic Evaluation of Novel Substituted Derivatives
3.	2021-2022	Dr. Deepak Kumar Basedia	202211020408 A	Phytochemical Screeing, Antimicrobial and Antioxident free Radical Scavenging Activity of orthosiphon Pallidus.
4.	2022-2023	Shailendra Prasad Tiwari	202221037429 A	Phyllanthus Emblica Extract Based Ethosome and Preparation Thereof.
5.	2022-2023	Mr. Kailash Pathak	202221037429 A	Phyllanthus Emblica Extract Based Ethosome and Preparation Thereof.
	2023-2024	Ms. Neelmani Chouhan	202341018341	Green Synthesis of Nanometals Using Plant Extracts
	2022-2023	Ms. Neelmani Chouhan	202311011575	Analyzing the Interaction involving Streptomycine Sulphate and Bovine Serum Albumin using Flurorescent Probes.
	2023-2024	Ms. Neelmani Chouhan	202311005200	QSAR modelling to forecast the health effects of Nano crystalline metal oxides from a toxicological perspective.

#### BOOK PUBLICATIONS OF FACULTIES:

Name of Faculty	Academic Year's	Name of Book/ Published By)6	ISBN
Ms. Neelmani Chauhan	2022-2023	Biopharmaceutics and Pharmacokinetics (JEC Publication)	978-81-19025-90-9

Ph.D. guided during the assessment period while working in the  
institute

Ph.D. guided:

S.NO.	Name of Faculty	Number of students /Faculty Academic Year's		
		2023-2024	2022-2023	2021-2022
1.	Nil			

Ph.D. awarded during the assessment period while working in the institute

S. No.	Name of Faculty	Ph.D. Awarded Year
1.	Dr. Mukesh Kumar Patel	2022-2023
2.	Dr. Kailash Pathak	2022-2023



2023-24

Project Title	Duration	Funding Agency	Amount (in Rupees)
Nil	Nil	Nil	0.00
			Total Amount(X): 0.00

2022-23

Project Title	Duration	Funding Agency	Amount (in Rupees)
Nil	Nil	Nil	0.00
			Total Amount(Y): 0.00

2021-22

Project Title	Duration	Funding Agency	Amount (in Rupees)
Development of topical cream/gel bearing Benzoyl peroxide dispersed in self-assembled pseudo aqueous environment of nano carriers	1 Year	All India Council for Technical Education (AICTE), New Delhi	300000.00
			Total Amount(Z): 300000.00

Cumulative Amount(X + Y + Z) = 300000.00

5.7.3 Consultancy (from Industry) (10)

Institute Marks : 0

2023-24

Project Title	Duration	Funding Agency	Amount (in Rupees)
Enhancing solubility of poorly water soluble drugs	One Year	Sponsors India Laboratories 14 industrial estate subhash nagar Sagar (M.P) 470002	45000.00
			Total Amount(X): 45000.00

2022-23

Project Title	Duration	Funding Agency	Amount (in Rupees)
Development of topical cream/gel bearing Benzoyl peroxide dispersed in self-assembled pseudo aqueous environment of nano carriers	One Year	All India Council for Technical Education (AICTE), New Delhi	300000.00
			Total Amount(Y): 300000.00

2021-22

Project Title	Duration	Funding Agency	Amount (in Rupees)

Cumulative Amount(X + Y + Z) = 345000.00

5.7.4 Honorary Consultancy from Central/State/Local Government Organizations (5)

Institute Marks :

5.7.5 Development activities (5)

Institute Marks : 5.00

**7.5 Development activities:**

- Product Development
- Research laboratories
- Instructional materials
- Working models/charts/monograms etc.

**Product Development:****Academic Year (2023-2024)**

S. No.	Faculty Name	Title of Product Development
1	Dr. Deepak kumar Basedia	Rose Perfume
2	Mr. Shailendra Prasad Tiwari	Gilloe Tablet
3	Dr. Mukesh Kumar Patel	Turmeric Cream
4	Mr. Abhijeet Raghuwanshi	Herbal Shampoo
5	Ms. Ritu Kushwaha	Herbal Oil
6	Mr. Bhushan Kumar Korde	Herbal Face Pack
7	Ms. Kiran Satnami	Herbal Cold Cream

**Academic Year (2022-2023)**

Sr. No.	Faculty Name	Title of Product Development
1	Ms. Najmus Sehar	Aloe vera Lotion
2	Ms. Sandra Gautam	Aloe vera Suspension
3	Mr. Anandi Lal Narolia	Ibuprofen Syrup
4	Ms. Pushpa Simaiya	Herbal Vanishing Cream

**Academic Year (2021-2022)**

S. No.	Faculty Name	Title of Product Development
1	Dr Bal krishna Dubey	Paracetamol Elixir
2	Mr. Mukesh Kumar Patel	Suppository
3	Mr. Mayur Chourey	Camphor Powder

**Research Laboratories:**

Central Instrumentation Laboratory has been developed for

S. No	Object
1	Extraction and Isolation of active constituents from several plant extracts
2	Formulation and Development of various herbal products.

**Instructional materials:**

S. No	Laboratory manual
1	Laboratory manual of medicinal chemistry (in house)
2	Laboratory manual of pharmacology (in house)
3	3) Laboratory manual of organic chemistry (in house)
4	Laboratory manual of pharmaceuticals. (in house)

- Power Point Presentation
- Handouts Subject notes
- Video Lecturers

**Working models/charts/ monograms:****Charts:**

- Anatomical structures of different systems of body like circulatory system, excretory system, respiratory system, digestive system, human brain, human eye, human ear, human skin, lymphatic System, Female Reproductive system etc.
- Transverse section of various crude drugs.

**Models:** Models for various organ of the human body - Urinary system, Human Skin, Heart, Kidney.



**Faculty Performance Appraisal and Development System (FPADS):**

The Institution has introduced Self-Appraisal report for teachers which have to be submitted at the end of each academic year by both the teaching and non teaching faculty members. Performance Appraisal for teaching Faculty members: Institute has a very transparent self appraisal system. The appraisal system covers all the aspects of academic, administrative, and research activities of the staff. The factors for appraisal are listed below:

- Ø Teaching Assignment
- Ø Mentoring & Guidance
- Ø Journal Publication
- Ø Conference Publication
- Ø Research Project
- Ø Award / Honors / Recognition
- Ø Professional Membership
- Ø Administration Support Services
- Ø Organizing Events
- Ø Accreditation Activities

**System for Faculty Appraisal**

The institute follows a performance appraisal system for the evaluation of the staff. The appraisal is based upon the following parameters:

- Ø Projects undertaken
- Ø Results of the courses taught in the previous semesters
- Ø Research papers published/presented
- Ø Seminars, conferences and summer schools attended
- Ø Organisation of the seminars, conferences and summer schools
- Ø Participation/involvement in any other activity concerning the benefit of the institute etc. during that academic session.

The performance of the faculty members are judged and mapped to a 100 point scale. The appraisal form is designed in such a way that it covers all aspect of a teacher and a detailed record of the contributions and participation in various spheres of academic activities. The proforma used is given below:

**Performa for Appraisal****Faculty Appraisal Criteria**

Title	Verification Authority	Marking Scheme	Obtained Marks	Signature of Verified Authority
<b>Students Aggregate Attendance (20)</b>	Director	< 40%=0 < 40 to 50%=5 < 50 to 65%=10 < 65 to 75%=15 >75=20		
<b>Results of Previous Semester Subjects Taught (15)</b>	Director	No. of students in A+ and grade A If total A+/A > 30%then15 if A/A+ > 20% then 8 A/A+ > 10% then 5		
<b>Research Papers/ Book Published (05)</b>	Director	If 1 book published award - 5 1 SCI/Scopus Paper Published = 5 3 Papers with ISSN = 5 if Published up to 2 papers = 2 NIL = 0		
<b>Grant received from PCI/UGC/MAPCOST (05)</b>	Director	YES=5 NO=0		
<b>Students Projects (05)</b>	Director	If among best project=05 Otherwise if guided =02 Not Guided=0		
<b>Students Feedback (10)</b>	Director	Excellent= 10 Very Good=08 Good=07 Average= 05 Satisfactory=0		
<b>Extra-Curricular involvement (05)</b>	Director	Yes(Actively involved)= 05 Participated=02 NO=0		

<b>New Lab Establishment / Lab Maintenance (5)</b>	Director	If YES=5 NO=0		
<b>M. Pharm Thesis Guided (5)</b>	Director	1 Mark/Thesis if completed within time, Maximum mark=05		
<b>Responsibility (Exam Control Room/TG/Anti Ragging/ Monitoring (05)</b>	Director	If doing with full cooperation then 05 doing without cooperation then 3 Refusing=0		
<b>Presence during Academic Session (No. of days present/No. of working day) (20)</b>	Director	During regular teaching days If > 90% then 20 If > 85% then 17 If > 80% then 10		
<b>Forwarded by HOD</b>		<b>Signature of Faculty</b>		<b>Director</b>

**Faculty Appraisal Performance**  
**(Information Sheet)**

1	Name of the Faculty Member									
2	Designation									
3	Department									
4	Qualification									
5	Subjects taught in last Session									

S. No.	Name of Subject	Branch	Semester	Sub. With code	% of result	Result		HOD Verification
						No. of students passed with A+	No. of students passed with A	
1								
2								
3								
4								
5								
6								
7								
8								
<b>TOTAL</b>								
7	<b>Research Paper/Book Published:</b>							
	1							
	2							
	3							
8	<b>Grant Received if any:</b>							
	1	Title						
	2	Amount						
	3	Funding Agency						
9	<b>Students Project:</b>	B. Pharm			<b>No. of Project</b>			
		M. Pharm			<b>No. of Thesis</b>			
10	<b>Extra Curricular Duties Performed:</b>							
		1						
		2						
		3						
11	<b>Administration Duties of TG/Anti Ragging/Monitoring Duties: (Excluding Counselling)</b>			1				

				2					
				3					
12	Laboratory Setup/ Lab manual Designed etc.:								
						(Name .....)			
						Date:			

#### Implementation and Effectiveness:

The performance appraisal is analyzed in detail by the committee designated by the Director. After review of the appraisal reports Director takes the appropriate action as per details given below:

1. Faculty members performing consistently are given benefits financially, promotions as well as professionally and new responsibilities are given to them.
2. Retention of faculty in the same level is also decided based on the level of performance and this is communicated to each faculty in person by the Director.
3. Faculty members are not performing this year but had performed better in previous years is called for a personal discussion and the appraisal.
4. Faculty members who have consistently been sub-standard in their performance are notified for improvement and if fail to do so then notice issued to leave.
5. All Faculty members are satisfied as all aspects of their performances e.g. academic, administrative and other contributions are taken into consideration in appraisal.
6. No grievances have been reported in the recent years from the faculty regarding performance appraisal.
7. Retention of faculty has improved.
8. This system improves performance of faculty

#### 5.9 Visiting/Adjunct Faculty (5)

Total Marks 5.00

Institute Marks : 5.00

#### 5.9 Visiting/Adjunct Faculty

##### Academic Year 2021-22

S. No	Name of the adjunct faculty	Parent organization	Subject	Duration and number of classes	Target audience
1.	Dr. Ashish Agrawal	Glenmark Generic Ltd. Industrial Estate, Kolval, Goa 403513	Pharmacy	(4 hrs/week) 35 hrs per semester	B Pharm

##### Academic Year 2022-23

S. No	Name of the adjunct faculty	Parent organization	Subject	Duration and number of classes	Target audience
1.	Mr. Devendra Saraf	Wilcure Remedies Private LimitedRajaswagram, Chhatribagh, Indore, Madhya Pradesh 452002	Pharmacy	(4 hrs/week) 35 hrs per semester	B Pharm

##### Academic Year 2023-24

S. No	Name of the adjunct faculty	Parent organization	Subject	Duration and number of classes	Target audience
1.	Mr. Devendra Saraf	Wilcure Remedies Private LimitedRajaswagram, Chhatribagh, Indore, Madhya Pradesh 452002	Pharmacy	(4 hrs/week) 35 hrs per semester	B Pharm

#### 6 FACILITIES (120)

Total Marks 120.00

##### 6.1 Availability of adequate, well-equipped classrooms to meet the curriculum requirements (20)

Total Marks 20.00

The institute provides smart teaching rooms with state of art facility. The norms and regulations assigned by regulatory bodies are strictly adhered includes every environment student are provided with independent class rooms with adequate sitting arrangements.

The institute has:

- Facilities as per requirements for conducting lectures and tutorials from first to final year students are adequate.
- Class rooms have capacity to accommodate upto 60 students; they are well ventilated and equipped.
- Tutorial rooms are available with all the necessary facilities to conduct remedial classes for students having backlogs as well.
- A seminar hall and a Board room are available to conduct seminars, guest lectures and workshops and staff meeting.
- Teaching aids – Green boards, Projectors equipped with LAN facility, and adequate numbers of tube lights, fans are available.

The details of the classrooms along with the facilities available are provided in the table below.

**Table 6.1 Details of the Classrooms**

S.No	Floor	Room No	Room Type (Classroom/Lab/ Seminar Hall)	Carpet Area (In Sq M.)
1	Ground Floor	Room No 6	Class Room-1	75
2	Ground Floor	Room No 12	Class Room-2	75
3	Ground Floor	Room No 14	Class Room-3	75
4	First Floor	Room No 15	Class Room-4	75
5	First floor	Room No 16	Class Room-5	75
6	Second Floor	Room No 19	Class Room-6	75
7	Second Floor	Room No 20	Class Room-7	75
8	Second Floor	Room No	Class Room-8	75
9	Ground Floor	Room No	Class Room-9	75
10	Second Floor	Room No 23	Seminar Hall	100
11	Second Floor	Room No 25	Girl's Common Room	60
12	Second floor	Room No 17	Boy's Common Room	60
13	Ground floor	Room No 18	Museum	50

## 6.2 Faculty rooms (10)

Total Marks 10.00

Institute Marks : 10.00

The faculty rooms allotted accordingly to norms of regulatory bodies, with sufficient infrastructure includes computers, printers and internet facilities. The details of the faculty rooms along with the facilities available are given in the table below.

- Adequate rooms and cabins are available to accommodate all faculty members.
- Faculty members have been provided with computer and internet facility.
- The staff rooms and staff cabins are well furnished.

**Table 6.2 Details of the Faculty Rooms**

S. No.	Rooms	Location	Number	Carpet area (Sqm)
1	Principal Office	First Floor	1	40
2	HOD Room-1	Ground Floor	1	25
3	HOD Room-2	First Floor	1	25
4	HOD Room-3	First Floor	1	25
5	HOD Room-4	First Floor	1	25
6	Faculty Rooms-1	First Floor	1	10
7	Faculty Rooms-2	First Floor	1	10
8	Faculty Rooms-3	First Floor	1	10
9	Faculty Rooms-4	First Floor	1	10
10	Faculty Rooms-5	First Floor	1	10
11	Faculty Rooms-6	First Floor	1	10
12	Faculty Rooms-7	First Floor	1	10
13	Faculty Rooms-8	First Floor	1	10
14	Faculty Rooms-9	First Floor	1	10
15	Faculty Rooms-10	First Floor	1	10

## 6.3 Laboratories including preparation room (wherever applicable), instrument/machine room and computer labs along with equipment and relevant facilities (60)

Total Marks 60.00





- **Adequacy of Laboratory:** The adequate well-equipped laboratories are available to run the entire program specific curriculum.
- **Equipment of Laboratory:** The lab has all the required equipment as per the curricular. The maintenance of the laboratory equipment's are excellent with best services and laboratories are well equipped with air ventilation, good ambience with adequate lighting facility, fan facility, power supply to run the machine.
- **Adequacy of Man Power:** The students are also allowed to do lab experiments after their lab hours within working hours with technical support after getting the permission from the staff in charge of the respective lab. Beyond working hours, the laboratories are available for the students to do their projects. Faculty and technicians use to support the project works during late hours too.

**6.3.1 Details of Laboratories:** Table format given in SAR itself and filled below.

### 6.3.2 Details of the List of Instruments and Equipment Available:

Central Instrument Room: The instrument laboratory equipped with advanced analytical instruments like HPLC, U.V. spectrophotometer, Brookfield viscometer, Disintegration Test Apparatus etc. Students performing experiments as per university syllabus. The list of instruments/equipment in central instrument room is given in table 6.4

**Table 6.4 Instrument Room**

Name of the Equipment	Minimum required	Available	Working	Make & Model	SOPs
Auto Kart fischer titrimeter Model 761	1	1	Working	E1	Available
Digital photo Colorimeter	1	1	Working	E1	Available
Digital pH meter model III E	1	1	Working	E1	Available
Ro water purification	1	1	Working	Aqua solution	Available
Water Distillation	1	1	Working		Available
Dissolution test machine	1	1	Working	Lab Hosp	Available
Rotary Evaporator	1	1	Working	Jyoti	Available
Horizontal electrophoresis	1	1	Working	Jyoti	Available
Rotary Vacuum Evaporator (Buchi type)	1	1	Working	Jyoti	Available
Fluorometer	1	1	Working	ELICO	Available
Ultrasonic cell crusher Noise isotating Chamber	1	1	Working	Lark	Available
Digital conductivity meter)	1	1	Working	model 611E E1	Available
Digital Nephelo-turbidity Meter 132	1	1	Working	Systronics	Available
Paper Strip Horizontal (Electrophoresis)	1	1	Working	Blue-tech	Available
Auto Cook	1	1	Working	LG	Available
BOD incubator	1	1	Working	Jyoti	Available
Electronic voltage corrector may (sturdy, elegant reliable)	1	1	Working	Blue-tech	Available
Digital photo colorimeter	1	1	Working	MAX	Available
Cooling Centrifuge	1	1	Working	REMI	Available
Shaking water Bath (sturdy, elegant)	1	1	Working	EIE Instruments	Available
Freeze	1	1	Working	Siemens	Available
Nephelometer	1	1	Working	Labtronix (Bio technics India)	Available
Heating mantle	1	1	Working		Available
UV-Visible Spectrophotometer UV (-1900)	1	1	Working	Shimadzu	Available
Freezer (horizontal)	1	1	Working	Blue star	Available
UFLC	1	1	Working	Shimadzu	Available
Nephelometer	1	1	Working	Jyoti	Available
Ultrasonic Cleaner	1	1	Working	Lark	Available

Machine Room: The machine room equipped with equipments used in formulation and development of various dosage forms viz. tablets, capsule and liquid orals. The major equipment includes Tablet Compression Machine, Capsule filling machine, Bottle filling machine etc. Table indicates the list of equipment available in machine room

**Table 6.5 Machine Room**

Name of the Equipment	Minimum required	Available	Working	Make & Model	SOPs
Tablet Compression Machine	1	1	Yes	Popular India	Available
Reynolds App	1	1	Yes		Available
Wrist Action Shaker	1	1	Yes	Lab Tech	Available
Venturimeter	1	1	Yes	Science World	Available
Capsule Filling and Sealing Machine	1	1	Yes	Mark	Available
Double Cone Blender	1	1	Yes	Science World	Available
Ball Mill	1	1	Yes	Jyoti	Available

Tincture press	1	1	Yes		Available
Bottle Filling Machine	1	1	Yes	Jyoti	Available
Cutter Mill	1	1	Yes	Jyoti	Available
Clarity Test Apparatus	1	1	Yes	Science World	Available
Tablet Coating and Polishing Pan	1	1	Yes	Mark	Available
Vacuum Pump	1	1	Yes	GE Motors India Ltd	Available
Mechanical Stirrer with speed controller	1	1	Yes	Jyoti and Bio Lab	Available
Hot Air Oven	1	1	Yes	Jyoti	Available
BOD Incubator	1	1	Yes	Jyoti	Available
Humidity Chamber	1	1	Yes	Jyoti	Available
AC Induction Motor	1	1	Yes	Jagdamba	Available
Single Pan Balance	1	1	Yes	Jyoti	Available
Tube sealing Machine	1	1	Yes	Jyoti	Available
Bottle Washing Machine	1	1	Yes	GE Motors India Ltd	Available
Sieve Shaker Machine	1	1	Yes	BEST	Available
Fully Auto. Double Rotary Tablet Comp.	1	1	Yes	Karnavati Engineering	Available

**Table 6.6: B. Pharmacy – Pharmaceutics**

S. No	Name of the Equipment	Working Condition	SOP
1.	Friability apparatus	Working	Available
2.	Disintegration apparatus	Working	Available
3.	Microscopes	Working	Available
4.	Desiccator	Working	Available
5.	Vacuum pump	Working	Available
8.	Homogenizer	Working	Available
9.	Mechanical stirrer	Working	Available
10.	Multi heating mantle	Working	Available
12.	Moisture balance	Working	Available
13.	Magnetic stirrer	Working	Available
14.	Dissolution apparatus	Working	Available
15.	Anderson pipettes	Working	Available
16.	Distillation Assembly	Working	Available
18.	Analytical balance	Working	Available
19.	Hot air oven	Working	Available
20.	Digital balance	Working	Available
23.	UV spectrophotometer	Working	Available
25.	TLC chamber	Working	Available
26.	TLC plate chamber	Working	Available
29.	Digital melting point	Working	Available
30.	Water bath	Working	Available
31.	Digital PH meter	Working	Available
32.	Potentiometer	Working	Available
33.	Bottle washing machine	Working	Available
34.	Weighing balance	Working	Available
35.	Single punching machine	Working	Available
36.	Centrifuge	Working	Available
39.	Capsule filling machine	Working	Available
40.	Tray dryer	Working	Available
41.	Digital ultra-sonic cleaner	Working	Available
42.	Sieve shaker	Working	Available
43.	Black and white background	Working	Available
44.	Bulk density apparatus	Working	Available
45.	Ointment filling machine	Working	Available
46.	Ball mill	Working	Available
47.	Percolator	Working	Available
48.	Abbes refractor meter	Working	Available
49.	Digital tablet disintegration test machine	Working	Available
50.	Dissolution apparatus	Working	Available
51.	Autoclave	Working	Available
52.	Ampoule sealing and filling machine	Working	Available

Table 6.7B. Pharmacy – Pharmaceutical Biotechnology

S. No	Name of the Equipment	Working Condition	SOP
1.	Digital colony counter	Working	Available
2.	Antibiotic zone reader	Working	Available
3.	Centrifuge with head	Working	Available
4.	Orbital water bath shaker	Working	Available
5.	Hot air oven	Working	Available
6.	BOD incubator	Working	Available
7.	Autoclave	Working	Available
8.	Centrifuge	Working	Available
9.	Analytical balance	Working	Available
10.	Heating mantle	Working	Available
11.	Laminar air flow	Working	Available
12.	Microscope	Working	Available
13.	Centrifuge	Working	Available
14.	Desiccator	Working	Available
15.	Sonicator	Working	Available
16.	Filtration assembly	Working	Available
17.	Micro pipette	Working	Available
18.	Digital balance	Working	Available

Table 6.8B. Pharmacy – Pharmaceutical Chemistry and Pharmaceutical Analysis

S. No	Name of the Equipment	Working Condition	SOP
1.	Hot plate	Working	Available
2.	Heating mantle	Working	Available
3.	Analytical balance	Working	Available
4.	Hot air oven	Working	Available
5.	Water bath	Working	Available
6.	Electric water bath	Working	Available
7.	Vacuum pump	Working	Available
8.	Digital Colorimeter	Working	Available
9.	Fume hood	Working	Available
10.	Digital balance	Working	Available
11.	Magnetic stirrer	Working	Available
12.	Digital melting point Apparatus	Working	Available
13.	Muffle furnace	Working	Available
14.	Oven	Working	Available
15.	Six hole heating mantle	Working	Available
16.	Digital PH meter	Working	Available
17.	Balance	Working	Available
18.	Suction pump	Working	Available

Table 6.9: B. Pharmacy – Pharmacognosy and Phytochemistry

S. No	Name of the Equipment	Working Condition	SOP
1.	Projection microscope	Working	Available
2.	Electrical water bath	Working	Available
3.	Autoclave	Working	Available
4.	Digital colony counter	Working	Available
5.	Analytical balance	Working	Available
6.	Heating mantle (small)	Working	Available
7.	Heating mantle (six hole)	Working	Available
8.	Digital balance	Working	Available
9.	BOD incubator	Working	Available
10.	Tissue culture station	Working	Available
11.	Camera lucida	Working	Available
12.	Microscopes Projection	Working	Available
13.	Vacuum pump	Working	Available
14.	Stop clock	Working	Available
15.	Moisture Balance	Working	Available
16.	Compound Microscopes	Working	Available
17.	Homogenizer	Working	Available
18.	Grinder	Working	Available

B. Pharmacy simulation experiments are also conducted in the computer laboratory (systems). Simulation software experiments are demonstrated. It is aimed at helping the students to understand and remember the principles of bioassays.

Table 6.10: B.Pharmacy–Pharmacology

S. No	Name of the Equipment	Working Condition	SOP
1.	Spirometer	Working	Available
2.	Water bath	Working	Available
3.	Heating mantle	Working	Available
4.	Electronic balance	Working	Available
5.	Microscope	Working	Available

6.	Stethoscope	Working	Available
7.	Haemocytometer	Working	Available
8.	Haemometer	Working	Available
9.	Stop clock	Working	Available
10.	Sphygmomanometer	Working	Available
11.	Weighing balance	Working	Available
12.	Plethysmometer	Working	Available
13.	Electroconvulsimeter	Working	Available
14.	Analgesimeter	Working	Available
15.	Student organ bath	Working	Available
16.	Actophotometer	Working	Available
17.	Heating mantle	Working	Available
18.	Kymography drum	Working	Available
19.	Aerators	Working	Available
20.	Rota rod	Working	Available
21.	Temperature controller	Working	Available

### 6.3.3 Additional Facilities Created for Improving the Quality of Learning Experience

**Table 6.11: Additional Facilities**

S. N.	Facility Name	Details	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs
1.	Smart Class Room	<ul style="list-style-type: none"> <li>E-board &amp; projector facility with the seating capacity of 60.</li> <li>Fully equipped with furniture and teaching aids.</li> </ul>	<ul style="list-style-type: none"> <li>Smart class room is used for animated visuals and video lectures.</li> <li>These visually attractive methods of teaching are sometimes more interesting as compared to teaching in a classroom.</li> </ul>	Throughout the semester	The graphs, design, models, simulation and fabrication of difficult subjects can be easily analyzed and visualized	All PO's
2.	Seminar Hall	Fully equipped shared seminar hall with Computer, Projector, Student Desk, White Board, Air conditioner, Fan, microphone and speaker with capacity of 400.	<ul style="list-style-type: none"> <li>To present technical talk/project seminars/research papers/workshops/ industry interaction/ presentation.</li> </ul>	12hrs per semester	<ul style="list-style-type: none"> <li>To overcome the gap between curriculum and industries.</li> <li>To improve students' personality according to industry standard.</li> </ul>	All PO's
3.	Lab Manuals along with instruction materials for all the labs	Manuals are provided to students for all practical subjects of program.	<ul style="list-style-type: none"> <li>To create an understanding about the experiment and to inform the need of conducting the same.</li> <li>Students can understand concept of the experiment better in a manner.</li> <li>To maintain the practical lab record using the lab manual.</li> </ul>	Throughout the semester	<ul style="list-style-type: none"> <li>Testing, performance and analysis of different pharmacy lab</li> <li>Better usage of hardware and software tools.</li> </ul>	PO-1, PO-2, PO3, PO5,
4.	Library	Departmental library has a collection of text books, reference books, project / seminar report and NPTEL lecture.	<ul style="list-style-type: none"> <li>To provide academic support to students.</li> <li>To provide advanced information of the seminars and projects.</li> </ul>	Throughout the semester	Student learning process	All PO's
5.	NPTEL material available	Providing to the students through the central and departmental library.	<ul style="list-style-type: none"> <li>Understand teaching and learning about the new technology in the field of pharmacy</li> </ul>	Throughout the semester	To understand important concept of various subjects and modern tools used in pharmacy	All PO's
6	Internet Facility	Bandwidth of 50 Mbps and Wi-Fi of 50 Mbps	Self-learning / Seminars / Presentations / Solve assignments, documentation	Unlimited	Courses specified in Curriculum	All PO's
7	Training and placement classes	Training on reasoning, group discussion, and technical skill by experts.	Job oriented training and to improve logical reasoning and technical skills.	As needed	Employability and entrepreneurship	PO4,

Lab Description	BatchSize	Availability of manuals	Quality of Instrument	Safety Measures	Remarks
Pharmacology Lab-I	25	Available	Working/State of the Art	First Aid & Fire Extinguisher	Present and working
Pharmacology Lab-II	25	Available	Working/State of the Art	First Aid & Fire Extinguisher	Present and working
Pharmacognosy Lab-I	25	Available	Working/State of the Art	Safety Measure (Chart)	Present and working
Pharmacology Lab-III	25	Available	Working/State of the Art	First Aid & Fire Extinguisher	Present and working
Pharmaceutics Lab-I	25	Available	Working/State of the Art	Safety Measure (Chart)	Present and working
Pharmaceutics Lab-II	25	Available	Working/State of the Art	First Aid & Fire Extinguisher	Present and working
Pharmaceutics Lab-III	25	Available	Working/State of the Art	First Aid & Fire Extinguisher	Present and working
Pharmaceutics Lab (PG-I)	15	Available	Working/State of the Art	First Aid & Fire Extinguisher	Present and working
Pharmaceutics Lab (PG-II)	15	Available	Working/State of the Art	Safety Measure (Chart)	Present and working
Pharmacology Lab (PG-I)	15	Available	Working/State of the Art	First Aid & Fire Extinguisher	Present and working
Pharmacology Lab (PG-II)	15	Available	Working/State of the Art	First Aid & Fire Extinguisher	Present and working
Pharmaceutical Chemistry Lab-(PG-I)	15	Available	Working/State of the Art	First Aid & Fire Extinguisher	Present and working
Pharmaceutical Chemistry Lab (PG-II)	15	Available	Working/State of the Art	Safety Measure (Chart)	Present and working
Pharmaceutical Chemistry Lab-I	25	Available	Working/State of the Art	First Aid & Fire Extinguisher	Present and working
Pharmaceutical Chemistry Lab-II	25	Available	Working/State of the Art	Safety Measure (Chart)	Present and working
Pharmaceutical Analysis Lab	25	Available	Working/State of the Art	First Aid & Fire Extinguisher	Present and working
Pharmaceutical Chemistry Lab-III	25	Available	Working/State of the Art	Safety Measure (Chart)	Present and working
Machine Room	25	Available	Working/State of the Art	First Aid & Fire Extinguisher	Present and working
Central Instrument Room	25	Available	Working/State of the Art	Safety Measure (Chart)	Present and working
Computer Lab.	25	Available	Working/State of the Art	First Aid & Fire Extinguisher	Present and working
Social Pharmacy Lab	25	Available	Working/State of the Art	Safety Measure (Chart)	Present and working
Pharmacy Practice Lab	25	Available	Working/State of the Art	Safety Measure (Chart)	Present and working

#### 6.4 Drug Museum (5)

Total Marks 5.00



The institute is established a well equipped and separated area for the museum and display of the modern and traditional drugs in the corridor at ground floor. It contains specimens of important species of medicinal plants collected from different places. The main purpose is to promote education on the herbal drugs by providing the information of authentication and standardization of the traditional natural medicines in light of scientific methods. To fulfill this purpose, the crude drug samples have been collected directly from ethnic people and local markets. The museums aim is to enhance the experience of students and staff at the institute. It is promoted as a resource for teaching and research. The museum is designed to provide separate sections for various categories of products. The museum keeps and displays crude drug samples, herbal specimens, various pharmaceutical preparations and dosage forms including tablets, injections, blister packs, cosmetics, strips, bandages and so on. Regular cleaning schedule is followed for the museum. The products are updated from time to time with latest developments in the market. Most of the items including crude drugs have significant educational, scientific and historical value.

**Table 6.12: Drug Museum**

S. No.	Name of the Product		
	<b>Natural Drugs:</b> Natural drugs are the treasure for pharmaceutical formulation And they are used to evaluate the Pharmacognostical, Phytochemical and pharmacological activities.		
I	Drugs Specimen	S. No.	Drugs Specimen
1.	Cinnamon	17	Aswagandha
2.	Jalap	18	Senna
3.	Nirgundi	19	Rauwolfia
4.	Acacia	20	Cumin
5.	Turmeric	21	Ginger
6.	Ajowan	22	Psoralea
7.	Lemon	23	Solanum khasianum
8.	Balsam of tolu	24	Coriander
9.	Nux-vamoica	25	Benzoin
10.	Cardmom	26	Asafoetida
11.	Amla	27	Terminalia chebula
12.	Fennel	28	Arjuna bark
13.	Vasaka	29	Asparagus
14.	Isabgol	30	Gambir
15.	Kurchi bark		
16.	Rhubarb		
II.	<b>Anatomical Specimen:</b> They are useful to understand the shape, structure and orientation of different body organs, especially useful as a study design in Anatomy and Physiology lab.		
1.	Brain		
2.	Kidney		
3.	Heart		
4.	Human reproductive system male and female		
5.	Human tongue		
6.	Ear		
7.	Teeth with lower jaw		
8.	Eye		
III	<b>Dosage Form:</b> Useful for study about the marketed available formulation in different dosage form, different routes of administration and different packing materials used for packing of different dosage form.		
Solid Dosage Form		S.No	Liquid Dosage forms
1.	Gut-xt	1	Altherocin drops
2.	Limcee	2	Kontum mouthwash
3.	Sporlac powder	3	NCH-cold suspension
4.	Maxpure	4	Wikoryl suspension
5.	Fourts-b-z-plus	5	Xpect-b suspension
6.	Etilaam-MD-0.5	6	Brozeet syrup
7.	Glyciphage-G1	7	Oricitral syrup
8.	Panex-CR 12.5	8	Cofaid-D
9.	Moxikind-CV-625	9	Voxy-P
10.	Metsmallvx-500	10	Wikorylaf
11.	Rosuvagold-20	11	Nazomac

12.	Rabepoz-I	12	Kona-vit -12
13.	Acenac-MR	13	Levolin
14.	Rabiex-DSR	<b>Semisolid Dosage Form</b>	
15.	race-sp	1	Clenorush
16.	ORS (electrical)	2	Cipladine
17.	3x cold and flu	3	Laliconazole cream
18.	Histafree	4	Cutimax
19.	Oxidox	5	Lalifresh
20.	Mefta-forte	6	Skinbrite
		7	Cindane lotion
		8	Zincoderm
		9	Lupiderm
		10	Gem



(Area, demarcation, temporary/permanent arrangement, planting of plants under the shade in demarcated areas, adequacy of the plants)

(5)

(Area, demarcation, temporary/permanent arrangement, planting of plants under the shade in demarcated areas, adequacy of the plants)

A well maintained medicinal garden is located at Technocrats Institute of Technology Pharmacy, Technocrats Institute of Technology Pharmacy with more than 90 varieties and around 300 plants having medicinal properties. The garden is located near the main building of Technocrats Institute of Technology Pharmacy. The institute is maintaining the medicinal plant garden which includes several types of herbs, shrubs and trees. Total area of the garden 1200 square meter with boundary of the garden properly demarcated. Two gardeners are taking care for water pouring, cleaning and providing the pesticides from time to time. Two faculty members are made in-charges of the medicinal plant garden and overall maintenance is under the supervision of these faculty members. The plantation has made appropriately under the shade of demarcated areas (shadows of tree). All the plants are provided with name plates. The plant density of the medicinal plants is maintained properly.

The purpose of the Medicinal Plant Garden is to demonstrate some of the plants that have been the source of medicines in the past and present and to share interesting historical information to students. Majority of plants are having traditional uses and it is important for students to get knowledge about these. The plants available in medicinal garden are from different Family named. The details of Botanical Name with, Vernacular name and uses thereof are mentioned in following table.

**Table 6.13: List of Medicinal Plants available at Medicinal Garden**

S. No.	Common Name	Botanical Name	Family	Uses
1	Shankhpuspi	Covolvuluspluricaulis	Convolvulaceae	Arthritis, rheumatic pain
2	Dambel	Tylophoraindica	Asclepiadaceae	Asthma, sinusitis
3	Kapoor kachri	Hedychium spicatum	Zingiberaceae	Asthma, cough
4	Coleus	Plectranthuscutellarioides	Lamiaceae	Angina, epilepsy
5	Patharchata	Bryophyllumpinnatum	Crassulaceae	Burns, bloating
6	Bach	Acoruscalamus	Acoraceae	Ulcer, gas
7	Sudarshan	Crinum asiaticum	Amaryllidaceae	Ear pain, scabies
8	Akarkara	Anacyclus pyrethrum	Asteraceae	Arthritis, inflammation
9	Ulatkambal	AbromaAugusta	Malvaceae	Arthritis, sinus
10	Neel brahmi	Bacopaemonnieri	Plantaginaceae	Anticancer, anxiety
11	Harjod	Cissusquandrangularis	Vitaceae	Asthma, piles
12	Rasna	Alpiniaacalcarata	Zingiberaceae	Inflammation, asthma
13	Plash	Butea monosperma	Fabaceae	Antifertility, aphrodisiac
14	Nagarmotha	Cyperusscariosus	Cyperaceae	Diarrhea, sore throat,
15	Gulabkhawali	Hedychiumcoronarum	Zingiberaceae	Anti-rheumatic, anthelmintic
16	Ashwagandha	Withaniasomnifera	Solanaceae	Reduce swelling
17	Kasoud	Cassia occidentalis	Fabaceae	Cough, asthma
18	Somballi	Sarcostemmaabrevistigma	Asclepiadaceae	Diabetes, soar throat
19	Mithi neem	Murrayakoenigii L	Rutaceae	Digestive Disorder, Skin Disorder
20	baheda	Terminalia belerica	Combretaceae	Anthelmintic, Dysentery, Blood Purifier
21	adusa	Adhatodavasica	Acanthaceae	Treating bronchitis, asthma
22	nirgundi	Vitexnegunda	Lamiaceae	Fever, toothache
23	Bhuiamla	Phyllanthumniruri	Phyllanthaceae	Leprosy, phlegm
24	Bhatkataiya	Solanumvrginianum	Solanaceae	Sputum, gripe
25	Saunfultsi	Ocimumtenuiflorum Linn	Lamiaceae	Herbal tea cancer, Skin disease
26	Bhrangraj	EcliptaprostrataLinn	Asteraceae	Ulcer, swelling
27	Mogra	JasminumsambacAiton.	Oleaceae	Asthma, Skin Disease
28	Apamarg	AchyranthesasperaLinn	Amaranthaceae	Asthma, Snake bite, Jaundice
29	Sarpokha	Tephrosiapurpurea	Fabaceae	Leprosy, ulcers, asthma, and tumors
30	Makoy	Solanumnigrum	Solanaceae	Pneumonia, aching teeth, stomach ache
31	Gokhru	Tribulusterrestris	Zygophyllaceae	Urinary Disorders,
32	Dhatura kala	Dhaturametel	Solanaceae	Improves Kidney Functions
33	Van tulsi	Ocimumtenuiflorum	Lamiaceae	Bronchitis, malaria, diarrhea, dysentery
34	Mehndi	LawsoniainermisLinn	Lythraceae	Hair Die, analgesic, anti-Inflammatory, hepatoprotective
35	Raatrani	Cestrum nocturnum	Solanaceae	Antioxidant, anti-hyperlipidemic, hepatoprotective
36	Dhatura kala	DaturastramoniumLinn	Solanaceae	Anti-spasmodic, analgesic, sleep-inducing
37	Kharenti	SidacordifoliaLinn	Malvaceae	Asthma, tuberculosis
38	Putrajiwa	PutranjivaroxbrghiiWall	Putranjivaceae	Fever, arthritis,
39	Khirmi	Mimusopsalexandra	Sapotaceae	Ulcer
40	Vidhara	Argyrea nervosa	Convolvulaceae	Treat cuts, wounds, internal bleeding, rheumatism
41	Mandookparni	CentelliaasiaticaLinn	Apiaceae	Blood Disorder,
42	Champa	Magnolia champaca	Magnoliaceae	Diarrhea, cough, bronchitis, hypertension,
43	Sadabahar	Catharanthorseus	Apocynaceae	Anti Cancer, Diabetes
44	Pan	Piper bettle	Piperaceae	Vit C, anticancer, anti-allergic, anti-malaria
45	Bhimavasi	Artemisia vulgaris Linn	Asteraceae	diarrhea, constipation, cramps
46	Bharangi	Clerodendrum serratum	Lamiaceae	Common cold, chronic sinusitis, allergic rhinitis
47	Marhuadona	Origanummajorana Linn.	Lamiaceae	Running nose, cough, common cold
48	Guggal	CommiphoramukulHook	Burseraceae	Acne, eczema, psoriasis, and arthritis
49	Ashok bhed	PolyalthialongifoliaThiu	Annonaceae	Heart Disease, Blood Pressure, Respiratory Disease
50	Rajnigandha	Agave amica	Asparagaceae	Manage anxiety, stress, anger, confusion,
51	Chitrak	PlumbagozeylenicaLinn	Plumbaginaceae	Fever, Leprosy
52	Achar	BuchananianlzanSperng	Anacardiaceae	General Weakness, Stomach Disease
53	Stevia	Stevia rebaudianaBertoni	Asteraceae	Diabetes, Headache, Weight loss
54	Insulin	Costusigneus	Asteraceae	Diabetes, Headache, Weight loss
55	Pipli	Piper longumLinn	Piperaceae	Soar throat, Respiratory Disease
56	Lahsun	Allium sativum	Amaryllidaceae	High blood pressure, high levels of cholesterol
57	Gudmar	Hibiscus rosasinensisLinn.	Malvaceae	Heart disease, Diabetes, Hair tonic
58	Punarnava	BoerhaviadiffusaLinn	Nyctaginaceae	Asthma, Heart Disease, Jaundice
59	Anjir	FicuscaricaLinn	Moraceae	Heart disease, Diabetes, Respiratory disease
60	Harsringar	Nyctanthes arbor-tristisLinn.	Oleaceae	Fever, Bone disorder, Anthelmintic
61	Amla	EmbelicaofficinalisGaertn.	Euphorbeaceae	Heart Disease Respiratory Disease
62	Aprajita	Clitoria ternateaLinn	Fabaceae	Eye Disorder, headache, Stomachic
63	Aam	Magnifera indica	Anacardiaceae	Dentifrice, antiseptic, astringent
64	Lemon grass	Cymbopogon citratus Stapf	Poaceae	White discharge, urine Infection
65	Kalmegh	Andrographis paniculata	Acanthaceae	Blood disorder, Fever, Skin disease
66	Gular	Ficus glomerata Roxb.	Moraceae	Blood disorder, Diabetes

67	Ajwain	Coleus amboinicusLinn	Lamiaceae	Pain, Urine disorder, Paralysis
68	Satawar	Asparagus racemosusWilld	Asparagaceae	Diarrhea, Energy tonic
69	Lajwanti	MomosapudicaLinn.	Mimosoideae	Asthma, Constipation
70	Gorakhmudi	SphaeranthusindicusLinn	Asteraceae	Indigestion, piles, Intestinal worms
71	Arandi	RicinuscommunisLinn.	Euphorbiaceae	Headache, Body pain, Nausea
72	Mahua	Madhucaindica	Sapotaceae	Arthritis, Headache, Piles, Ulcer
73	Harad	Terminalia chebula	Combretaceae	Asthma, Soarthroat, piles
74	Sitaashok	SaracaindicaRoxb	Fabaceae	Headache, Skin Disease, Urine Infection
75	Shivnak	OroxylumindicumBenth	Bignoniaceae	Diarrhea, Stomach pain
76	Sindoor	Bixaorellana	Bixaceae	Poisoning, Nasal bleeding, Anthelmintic
77	Gandhpratar	Paderiafoetida	Rubiaceae	Aphrodisiac, Strength and Immunity
78	Arjun	Terminalia arjuna	Combretaceae	Cardiotonic, atherosclerosis, blood disorders
79	Bakayan neem	Melia azedarach	Meliaceae	acne, burns
80	Jamun	Syzygiumcumini	Myrtaceae	Diarrhea, Diabetes
81	Saptarni	Alstoniascholaris	Apocynaceae	Diarrhea, Fever, Soar throat
82	Tiyubia	Monsteraadubia	Meliaceae	Arthritis, insect or snake bites
83	Imli	TamarandusIndicaLinn	Leguminosae	Soar throat, Col Cough, Fever
84	Shisham	DalbergiasissooRoxb.	Fabaceae	Non healing wounds, ulcers, intestinal parasites
85	Karanj	PongamiapinnataLinn.	Fabaceae	Skin Disease, Pils, Joint pain
86	August	Sesbaniaglandiflora	Fabaceae	Stomachache, Liver and spleen disorders
87	Dudhi	Euphorbia hirtaLinn.	Euphorbiaceae	Digestive disorder, Diabetes, Acne and Pimples
88	Kewda	Bryophyllumpinnatum	Crassulaceae	Ear pain, gout
89	Latakaranj	Caesalpinia crista Linn.	Caesalpinaceae	Antimalarial, Antispasmodic, Fever
90	Badam	Terminalia catappa	Combretaceae	Skin disease, Digestive Disorder
91	Nibo	Citrus medicaLinn.	Rutaceae	Vit C Source, Digestive
92	Dhainphool	Woodfordiafruticosa	Lythraceae	Piles, Leukoria, Blood Disease
93	Din ka raja	Cestrum dirurnumLinn	Solanaceae	Skin disease, Joint pain
94	Kapok	Ceibapentandra	Malvaceae	Absorbent cotton in surgery, fever, spasms, and bleeding
95	Agni mantha	Premnaintegrifolia	Lamiaceae	Anemia, Swelling, slow digestion, Constipation
96	Sarpghandha	RauwolfiaserpentinaBenth	Apocynaceae	Fever, Poison, anthelmintic
97	Bajyanti	Sesbaniasesbanilinn.	Fabaceae	Ulcer, diarrhea
98	Chameli	Jasminummultiflorum	Oleaceae	Urine disorders, indigestion



Name of the Technical Staff	Designation	Date Of Joining	Qualification		Other Technical Skill Gained	Responsibility
			AT joining	Now		
Mrs.Savita Tiwari	Librarian	15/04/2008	M. Lib	M. Lib	Expert in classification systems	• Maintaining of all records (purchase of invoices and issue of books). • Requesting the Quotations from • Suppliers and forwarding to the purchase department. • Follow up of purchase order, receiving the items and arranging them in a specified manner. Proper maintenance of books and journals including binding process. Issue of book sets and books to the students and maintaining their records.
Mrs. Uma Mishra	Assistant Librarian	04/08/2007	M. Lib	M. Lib	Computer knowledge	• Proper maintenance of books and journals including binding process. Issue of book sets and books to the students and maintaining their records.
Mr. Ratnesh Malviya	Accountant	01/04/2021	M.Com	M.Com	Well versed with computer	• Preparing and entry of day-to-day expenses. • Collecting the college fees, exam fees, caution deposits etc. • Dispatch and depositing the cheques. • Collecting account statements for verification from time to time. Involved in preparation of records for fees fixation.
Mr. Gajendra Raghuvanshi	Office Asst. Cum Computer Operator	04/01/2017	M. Sc in Computer Science	M. Sc in Computer Science	Well versed with computer	• Maintaining all the systems computers, laptops, scanners, printers) and updating periodically. Maintaining records (purchase orders, delivery of items and Processing of invoices)
Mr. Ajay Tiwari	Lab Technician	07/04/2022	B. Pharm	B. Pharm	Computer Knowledge	• Assist the faculties during practical classes and involve in the experiment designing Arranging the Chemicals and issuing the glass ware to the students for their lab work and maintaining records. • Proper maintenance of instruments. • Assisting the activities of central store in charge. Receiving the items from the central stores as per the approve indent and storing them.
Mr. Man Singh	Lab Technician	03/02/2015	D. Pharm	D. Pharm	Computer Knowledge	• Assist the faculties during practical classes and involve in the experiment designing Arranging the Chemicals and issuing the glass ware to the students for their lab work and maintaining records. • Proper maintenance of instruments. • Assisting the activities of central store in charge. Receiving the items from the central stores as per the approve indent and storing them.
Ms. Mossrat Fatima	Lab Technician	07/04/2022	B. Pharm	B. Pharm	Computer Knowledge	• Assist the faculties during practical classes and involve in the experiment designing Arranging the chemicals and issuing the glass ware to the students for their lab work and maintaining records. • Proper maintenance of instruments. • Assisting the activities of central store in charge. Receiving the items from the central stores as per the approve indent and storing them.
Ms. Yukta Jharbade	Lab Technician	07/10/2023	B. Pharm	B. Pharm	Computer Knowledge	• Assist the faculties during practical classes and involve in the experiment designing Arranging the Chemicals and issuing the glass ware to the students for their lab work and maintaining records. • Proper maintenance of instruments. • Assisting the activities of central store in charge. Receiving the items from the central stores as per the approve indent and storing them.
Mr. Amit Sahu	Lab Technician	07/10/2023	B. Pharm	B. Pharm	Computer Knowledge	• Assist the faculties during practical classes and involve in the experiment designing Arranging the Chemicals and issuing the glass ware to the students for their lab work and maintaining records. • Proper maintenance of instruments. • Assisting the activities of central store in charge. Receiving the items from the central stores as per the approve indent and storing them.
Mr. Ashok Prajapati	Lab Technician	07/06/2015	B. Pharm	B. Pharm	Computer Knowledge	• Assist the faculties during practical classes and involve in the experiment designing Arranging the Chemicals and issuing the glass ware to the students for their lab work and maintaining records. • Proper maintenance of instruments. • Assisting the activities of central store in charge. Receiving the items from the central stores as per the approve indent and storing them.
Ms. Varsha Sable	Lab Attendant	07/09/2018	B.Sc (Microbiology)	B.Sc (Microbiology)	Computer Knowledge	• Assist the faculties during practical classes and involve in the experiment designing Arranging the Chemicals and issuing the glass ware to the students for their lab work and maintaining records. • Proper maintenance of instruments. • Assisting the activities of central store in charge. Receiving the items from the central stores as per the approve indent and storing them.

Ms. Sushma Rajpoot	Lab Technician	07/09/2018	B. Sc	B. Sc	Computer Knowledge	• Assist the faculties during practical classes and involve in the experiment designing Arranging the Chemicals and issuing the glass ware to the students for their lab work and maintaining records. • Proper maintenance of instruments. • Assisting the activities of central store incharge. Receiving the items from the central stores as per the approve indent and storing them.
Ms. Ankita Chourasia	Lab Attendant	09/10/2018	D.Pharm	D.Pharm	Computer Knowledge	• Arranging the Chemicals and issuing the glass ware to the students for their lab work and maintaining records. • Proper maintenance of instruments. • Assisting the activities of central store incharge. Receiving the items from the central stores as per the approve indent and storing them.

#### 6.6.1 Availability of adequate and qualified technical supporting staff for program specific laboratories (10)

Institute Marks : 10.00

**Table 6.15: Details of Technical Supporting Staff**

Name of the Technical Staff	Designation	Date of joining	Qualification		Other technicals skills gained
			At Joining	Now	
Mr. Man Singh	Lab Tech.	03/02/2015	D. Pharm	D. Pharm	Computer Knowledge and communication
Mr. Ashok Prajapati	Lab Tech.	07/06/2015	B. Pharm	B. Pharm	Computer Knowledge
Mr. Amit Sahu	Lab Tech.	07/10/2023	B. Pharm	B. Pharm	Computer Knowledge
Ms. Ajay Tiwari	Lab Tech.	07/04/2022	B. Pharm	B. Pharm	Computer Knowledge and subject knowledge and communication
Ms. Yukta Jharbade	Lab Tech.	07/10/2023	B. Pharm	B. Pharm	Computer Knowledge
Ms. Mossrat Fatima	Lab Tech.	07/04/2022	B. Pharm	B. Pharm	Computer Knowledge
Ms. Archana Rai	Store Keeper	06/07/2022	B. Pharm	B. Pharm	Computer Knowledge
Ms. Ankita Chourasia	Lab Attendant	09/10/2018	D.Pharm	D.Pharm	Computer Knowledge
Ms. Sushma Rajpoot	Lab Attendant	07/09/2018	B. Sc	B. Sc	Computer Knowledge
Ms. Kratishri Rawat	Lab Attendant	09/04/2022	B. Sc	B. Sc	Computer Knowledge and communication
Ms. Varsha Sable	Lab Attendant	07/09/2018	B. Sc (Microbiology)	B. Sc (Microbiology)	Computer Knowledge

- In addition, adequate menial staffs are working for general maintenance and up keeping of the college premises clean.
- Security of the premises is taken care by Security staff.
- Vehicles maintenance, drivers and cleaners are available.
- The building is taken care by centralized fire safety personnel, in addition to fire extinguishers in individual labs and stores.
- The electrical and plumbing works are taken care by general maintenance department people.

#### 6.6.2 Incentives, skill upgrade, and professional advancement (10)

Institute Marks : 10.00

- The Institute provides incentives and cash prizes to the staff along with increments to motivate and encourage the staff.
- Technical staff members are encouraged and supported to upgrade their skills by sponsoring the faculty to attend workshops.
- Sponsored to attend training outside the institution for professional advancement.
- Training program is organized by the college for imparting the necessary skills to non-teaching staff.

**Table 6.16: Details of skill Upgrade and Professional Advancement**

Academic Year: 2022-23	
Date	Title
10-02-2023	Demonstration and training for "Animal handling and various tissue preparation required in pharmacology laboratory".
08-10-2022	Workshop On Laboratory Safety
28-10-2022	Demonstration and training for Laboratory reagent preparation
02-07-2022	Effective communication and soft skills for better carrier.
Academic Year: 2021-22	
04-12-2021	Workshop on handling of analytical instruments
14-08-2021	FireSafety Demonstration and Basic FireFighting Training
Academic Year: 2020-21	
07-11-2020	Session on Safe Drug Disposal Awareness
31-10-2020	Awareness of NAAC/NBA accreditation in Improving Quality Education
03-03-2021	Entrepreneurship Awareness camp

## 7 CONTINUOUS IMPROVEMENT (75)

Total Marks 72.44

### 7.1 Improvement in Success Index of Students without the backlog (15)

Total Marks 15.00

Institute Marks : 15.00

Items	2019-20 (LYG)	2018-19 (LYGm1)	2017-18 (LYGm2)
Success Index (from 4.2.1)	0.36	0.35	0.42

### 7.2 Improvement in Placement and Higher Studies (15)

Total Marks 15.00

Institute Marks : 15.00

Items	2019-20 (LYG)	2018-19 (LYGm1)	2017-18 (LYGm2)
Placement Index (from 4.7)	0.69	0.64	0.61

### 7.3 Improvement in the API of the Final Year Students (10)

Total Marks 7.44

Institute Marks : 7.44

Academic Performance	2019-20 (LYG)	2018-19 (LYGm1)	2017-18 (LYGm2)
Mean of CGPA or mean percentage of all successful students(X)	8.07	7.96	7.67
Total number of successful students(Y)	72.00	97.00	87.00
Total number of students appeared in the examination(Z)	85.00	99.00	87.00
API [ $X \cdot (Y/Z)$ ]:	6.84	7.80	7.67

Average API [  $(AP1 + AP2 + AP3)/3$  ] : 7.44

Academic Performance = Average API = [  $(AP1 + AP2 + AP3)/3$  ] : 7.44

### 7.4 Improvement in the quality of students admitted to the program (15)

Total Marks 15.00

Item		2022-23(CAYm1)	2021-22(CAYm2)	2020-21 (CAYm3)
National Level Entrance Examination  NA	No of students admitted	0	0	0
	Opening Score/Rank	0	0	0
	Closing Score/Rank	0	0	0
State/ University/ Level Entrance Examination/ Others  on the basis of 12th merit through centralized DTE counselling by MP Govt.	No of students admitted	0	0	0
	Opening Score/Rank	115	102	101
	Closing Score/Rank	220	142	94
Name of the Entrance Examination for Lateral Entry or lateral entry details  on the basis of D Pharm exam	No of students admitted	3029	6396	764
	Opening Score/Rank	16	15	10
	Closing Score/Rank	15	20	883
Average CBSE/Any other board result of admitted students(Physics, Chemistry&Maths)		35	156	962

7.5 Actions taken based on the results of evaluation of each of the POs (20)

Total Marks 20.00





**POs Attainment Levels and Actions for Improvement- (2022-23)**

POs	Target Level	Attainment Level	Observations
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#### PO 1 : Pharmacy Knowledge

PO 1	2.4	2.08	Target level is not attained. Deals with fundamental knowledge of Pharmacy respect with subject code BP101T BP102T, BP103T, BP104T, BP207T, BP208P, BP209P,
1. In BP101T (HAP-I), Expert lectures of Human Anatomy and Physiology were held 2. In BP102T (Pharmaceutical Analysis-I), Tutorial classes for different techniques of analysis, errors and limit test were held. 3. In BP103T (Pharmaceutics I), Expert lectures on fundamental knowledge on the preparatory pharmacy were held. 4. In BP104T (P' Inorganic Chemistry), Extra classes on various topic Impurities, acid base and buffers were held			

#### PO 2 : Planning abilities

PO 2	2.4	2.16	Target level is not attained The attainment level indicated that students have required better Planning Abilities for understanding of the Pharmacy subjects through
1. In BP101T (HAP-I), Expert lecture is arrange for basic knowledge required to understand different types of organs of each system. were held in BP101 (HAP-I) 2. In BP102T (Pharmaceutical Analysis-I), tutorial classes for Develop of analytical skills. 3. In BP103T (Pharmaceutics I), expert lectures were held on to understand the professional way of handling the prescription on. 4. In BP104T (P'inorganic Chemistry), Extra classes held on medicinal and Pharmaceutical importance of inorganic compounds.			

#### PO 3 : Problem Analysis

PO 3	2.4	2.19	Target level is not attained Students were to understand the basic knowledge on the assay of single and multi component pharmaceuticals by using various
1. In BP101T (HAP-I), Extra tutorial classes are held on tissues and organs of different system of human body. 2. In BP103T (Pharmaceutics I), Extra lectures on solving problems and making decisions during daily practice to developing new designs and dosage forms. 3. In BP104T (P'Organic Chemistry), Extra classes on various understand the medicinal and pharmaceutical importance of inorganic compound. 4. In BP207P (HAP-II), Extra Practical lab are conducted for recording body temperature, total blood count etc.			

#### PO 4 : Modern tool usage

PO 4	2.4	2.25	Target level is not attained Should be more emphasis on latest tool and technology. Should be increase frequency of industrial interaction program with
1. In BP101T (HAP-I), Guest lecturer of various homeostatic mechanisms and their imbalances. were held 2. In BP102T (Pharmaceutical Analysis I), tutorial classes for numerical problems on carryout various volumetric and electrochemical titrations were held. 3. In BP103T (Pharmaceutics I), Expert lectures on modern tools using with respect Preparation of various conventional dosage forms were held. 4. In BP104T (P'Organic Chemistry), Extra classes of understand the medicinal and pharmaceutical importance of inorganic compounds were held.			

#### PO 5 : Leadership skills

PO 5	2.4	2.16	Target level is not attained Students were trained by the personality development tutors to gain
1. In BP101T (HAP-I), Morphology, structure and functions of various organs of the human body guided NPTEL Video lectures were held 2. In BP103T (Pharmaceutics I), Expert lectures on Different techniques of analysis of drugs were held. 3. In BP207P (HAP-II), Demonstrate by video lecture of various organ tissues were held 4. In BP208P (P'Organic Chemistry-I), Lab for assay of organic compound were held			

#### PO 6 : Professional identity

PO 6	2.4	2.12	Target level is not attained Student are week to understand analyze and their role of professional in society related to health care listed subject code need to improved
1. In BP101T (HAP-I), Video lectures were held in HAP. 2. In BP102T (Pharmaceutical Analysis-I), tutorial classes for numerical problems Drug analysis were held. 3. In BP103T (Pharmaceutics I), Expert lectures were held. 4. In BP104T (P' Organic Chemistry), extra classes on various surveying and levelling were held			

#### PO 7 : Pharmaceutical Ethics

PO 7	2.4	2.25	Target level is not attained Some of the studentare less understand the Pharmaceutical Ethics, were organizing frequency of Professional ethics session should be
1. In BP102T (Pharmaceutical Analysis-I), Tutorial classes of Pharmaceutical Ethics to solving analytical problems were held 2. In BP103T (Pharmaceutics I), expert lectures on ethical principles in Product development were held. 3. In BP207P (HAP-II), Demonstrate to implement the ethical issue in lab performance were held. 4. InBP208P (P'organic chemistry-I), Repeated lab were organized on deal ethical issue and demonstrate behavior that recognizes cultural and personal variability			

#### PO 8 : Communication

PO 8	2.4	2.16	Target level is not attained Some of the student are less understand pharmacy community and with society at large, such as, being able to comprehend and write
1. In BP102T (Pharmaceutical Analysis-I), Effectively implemented in tutorial classes for fundamental knowledge on the structure and functions of the various systems of the human body were held. 2. In BP103T (Pharmaceutics I), lectures on documentation different techniques of analysis were held. 3. In BP208P (P'Organic Chemistry-I), Remedial classes on preparation and reaction of organic compound were held			

#### PO 9 : The pharmacist and society

PO 9	2.4	2.13	Target level is not attained Improve frequency of conducting events related to safety, legal and legal issues with respect listed subject as BP102T, BP103T, BP104T,
1. In BP102T (Pharmaceutical Analysis-I), tutorial classes on legal issues and the consequent responsibilities relevant to the professional pharmacy practice were held. 2. In BP103T (Pharmaceutics I), Student motivated to participated in seminar and guest lecture 3. In BP104T (P'Organic Chemistry), extra classes on various surveying and levelling were held			

#### PO 10 : Environment and Sustainability

PO 10	2.4	2.14	Target level is not attained The issues of global and environmental awareness among the student should be improved of following subject code BP102T, BP103T,
1. In BP102T (Pharmaceutical Analysis I), Tutorial classes for understand the impact of the professional pharmacy solutions in societal and environmental contexts were held. 2. In BP103T (Pharmaceutics I), Expert lecture on preparing the different conventional dosage forms in context impact of the professional pharmacy solutions in societal and environmental contexts were held.			

#### PO 11 : Life-long Learning

PO 11	2.4	2.07	Target level is not attained Life-long learning to ability to engage is a modern tool which is used in many fields of science but the topic is new to students so they were
1. In BP101T (HAP-I), Video lectures were held on human anatomy and physiology. 2. In BP102T (Pharmaceutical AnalysisI), Extra lecture on develop analytical skills ability to engage in independent and life-long learning in the broadest context of technological change were held. 3. In BP103T (Pharmaceutics I), Expert tutorial class are held on skills ability to engage in independent and life-long learning in the broadest context of			

#### POs Attainment Levels and Actions for Improvement- (2021-22)

POs	Target Level	Attainment Level	Observations
<b>PO 1 : Pharmacy Knowledge</b>			
PO 1	2.4	2.04	Target level is not attained. Deals with fundamental knowledge of Pharmacy respect with subject code
1. BP101T (HAP-I), Expert lectures of Human Anatomy and Physiology were held. 2. BP102T (Pharmaceutical AnalysisI),-Tutorial classes for different techniques of analysis, errors and limit test were held. 3. BP103T (Pharmaceutics I)-Expert lectures on fundamental knowledge on the preparatory pharmacy were held. 4. BP104T (P'Organic Chemistry)- Extra classes on various topic Impurities, acid base and buffers were held			
<b>PO 2 : Planning abilities</b>			
PO 2	2.4	2.11	Target level is not attained Some of the students are less able to Demonstrate effective planning abilities including time management, resource management, delegation
1. BP101T (HAP-I), Special classes were conducted through video demonstration on various topics 2. BP102T (Pharmaceutical Analysis I)-Tutorial classes for different techniques of analysis, errors and limit test were held to expand the knowledge of analytical skills. 3. BP103T (Pharmaceutics I)-Expert assisment for the knowledge on fundamentalsskills in preparation of various dosage preparations in pharmacy were held.			
<b>PO 3 : Problem Analysis</b>			
PO 3	2.4	2.05	Target level is not attained Some of students are week to understand Problem analysis of listed following subject code
1. BP101T (HAP-I) Extra classes were held 2. BP103T (Pharmaceutics I), expert lectures were held. 3. BP104T (P'Organic Chemistry), extra classes were held 1. BP105T Communication skills Expert lecture were conducted			
<b>PO 4 : Modern tool usage</b>			
PO 4	2.4	2.14	Target level is not attained Some of students are week to understand Modern tool usage listed following subject code
1. BP101T (HAP-I), extra lectures were held. 2. BP103T (Pharmaceutics I), extra lectures were held. 3. BP104T (P'Organic Chemistry), extra classes were held. 4. BP105T Communication skills Tutorial classes were held.			
<b>PO 5 : Leadership skills</b>			
PO 5	2.4	2.12	Target level is not attained Some of student are less Understand and consider the human reaction to change, motivation issues, leadership and team-building when
1. BP101T (HAP-I)— Extra lectures were held. 2. BP103T (Pharmaceutics I), – Extra lectures were held. 3. BP107P Human Anatomyand Physiology– Video lectures were held. 4. BP109P Pharmaceutics I – Extra lab were conducted			
<b>PO 6 : Professional identity</b>			
PO 6	2.4	2.02	Target level is not attained. Some of the student weak Understand, analyze and communicate the value of their professional roles in society respect with subject code
1. BP101T (HAP-I)- extra classes were done on function of cells 2. BP102T (Pharmaceutical AnalysisI), tutorial classes were held on different techniques of analysis. 3. BP103T (Pharmaceutics I), expert lectures were held on history of pharmacy. 4. BP104T (P'Organic Chemistry), extra classes on history of pharmacopiea			
<b>PO 7 : Pharmaceutical Ethics</b>			
PO 7	2.4	2.14	Target level is not attained. Some of the students less Deals with ethical principles in professional and social contexts. Demonstrate behavior that recognizes cultural and
1. BP102T (Pharmaceutical AnalysisI), tutorial classes for methods of expressing concentration 2. BP105T Communication skills– extra classes held on the communication process 3. BP106TRemedialBiology/ Mathematic-extra classes held on Resolving in partial fraction 4. BP108P Pharmaceutical AnalysisI – Extra lab were conducted on limit test for sulphate			
<b>PO 8 : Communication</b>			

PO 8	2.4	1.93	Target level is not attained Some of students are less Communicate effectively with the pharmacy community and with society at large, such as, being able to
1. BP102T (Pharmaceutical AnalysisI)– extra classes held on complexometric titration 2. BP103T (Pharmaceutics I)-extra classes held on pharmacopia 3. BP105T Communication skills– extra classes held on perspective of communication 4. BP106T Remedial Biology/ Mathematic– extra classes held on morphology on Flowering plant/matrics			
<b>PO 9 : The pharmacist and society</b>			
PO 9	2.4	2.12	Target level is not attained Some of the students are less apply reasoning informed by the contextual knowledge to assess societal, health, safety and legal
1. BP101T (HAP-I), Extra class conducted through video lectures 2. BP102T (Pharmaceutical AnalysisI), tutorial classes for calculations involved in various types of volumetric and electro chemical titration methods were held 3. BP103T (Pharmaceutics I), expert lectures were held. 4. BP104T (P'Organic Chemistry), , extra classes on important inorganic pharmaceutical compounds were held			
<b>PO 10 : Environment and Sustainability</b>			
PO 10	2.4	2.07	Target level is not attained Some of students less understand that the impact of the professional pharmacy solutions in societal and environmental contexts, and
1. BP101T (HAP-I), guided through video lectures by experts from AIIMS 2. BP102T (Pharmaceutical AnalysisI), tutorial classes for calculations involved in various types of volumetric and electro chemical titration methods were held 3. BP103T (Pharmaceutics I), expert lectures were held on Solubility of drugs 4. BP104T (P'Organic Chemistry), extra classes on important inorganic pharmaceutical compounds were held			
<b>PO 11 : Life-long Learning</b>			
PO 11	2.4	2.0	Target level is not attained Some of the students having lack of implemented on life-long learning following listed subject code
1. BP101T (HAP-I), guided through video lectures by experts from AIIMS 2. BP102T (Pharmaceutical AnalysisI), tutorial classes for calculations involved in various types of volumetric and electro chemical titration methods were held. 3. BP103T (Pharmaceutics I), expert lectures on pharmaceutical calculations were held. 4. BP104T (P'Organic Chemistry), extra classes on important inorganic pharmaceutical compounds were held			

#### POs Attainment Levels and Actions for Improvement- (2020-21)

POs	Target Level	Attainment Level	Observations
<b>PO 1 : Pharmacy Knowledge</b>			
PO 1	2.4	1.88	Target level is not attained. Deals with fundamental knowledge of Pharmacy respect with subject code
1. In BP101T (HAP-I), Expert lectures of Human Anatomy and Physiology were held. 2. In BP102T (Pharmaceutical Analysis-I), Tutorial classes for different techniques of analysis, errors and limit test were held. 3. In BP103T (Pharmaceutics I), Expert lectures on fundamental knowledge on the preparatory pharmacy were held. 4. In BP104T (P'Inorganic Chemistry), Extra classes on various topic Impurities, acid base and buffers were held			
<b>PO 2 : Planning abilities</b>			
PO 2	2.4	1.94	Target level is not attained The indicated that students have required better Planning Abilities for understanding of the Pharmacy subjects through various resources of
1. In BP101T (HAP-I), Expert lectures and classes were provided to assist and enhance the challenges and the need of knowledge for students in Human Anatomy and Physiology. 2. In BP102T (Pharmaceutical Analysis-I), Tutorial classes for different techniques of analysis, errors and limit test were held to expand the knowledge of analytical skills.			
<b>PO 3 : Problem Analysis</b>			
PO 3	2.4	1.92	Target level is not attained students were encouraged to apply the knowledge learned in solving problems with following subject BP101T,BP103T,BP104T,BP109P,BP110P,BP205T,BP207P,BP208P,BP
1. In BP101T (HAP-I), Expert lectures and classes were provided to understand the various disciplines of pharmacy . 2. In BP103T (Pharmaceutics I), Expert lectures was conducted for to gain the knowledge on the topic of Prescription in pharmacy. 3. In BP104T (P'Inorganic Chemistry), Extra class was organized on general methods of preparation of inorganic compounds that were used in pharmaceutical preparation.			
<b>PO 4 : Modern tool usage</b>			
PO 4	2.4	1.94	Target level is not attained Should be more emphasis on latest tool and technology in following subject BP101T,BP103T,BP104T,BP109P,BP110P,BP205T,BP207P,BP208P,BP
1. In BP101T (HAP-I), Expert lectures and classes were provided to understand the coordinate working pattern of different organs of each system in Human Anatomy and Physiology. 2. In BP103T (Pharmaceutics I), expert lectures on preparation of various conventional dosage forms were held. 3. In BP104T (P'Inorganic Chemistry), extra class were held to study the ideal properties of gastrointestinal agents.			
<b>PO 5 : Leadership skills</b>			
PO 5	2.4	1.98	Target level is not attained Motivate students to participate more in National/State/inter and intra college tech fest sports meet, technical and cultural activities to generate the feeling of leadership and working
1. In BP101T (HAP-I), Expert lectures and classes were arranged to understand the basic life processes in Human Anatomy and Physiology. 2. In BP103T (Pharmaceutics I), expert lectures on pharmacy as a career opportunity were held as per concerned for the future aspects. 3. BP109P Pharmaceutics I – Extra Practical lab are arranged for the preparation of different pharmaceutical solutions. 4. BP205T Computer Applications in Pharmacy – Theory* Conducted extra class on the concept of input and output designing in information systems and in			
<b>PO 6 : Professional identity</b>			
PO 6	2.4	1.85	Target level is not attained their role of professional in society related to health care in following subject. BP101T,BP102T,BP103T,BP104T,BP108P,BP109P,BP110P,BP205T,BP
1. In BP101T (HAP-I), Expert lectures and classes were arranged to understand the basic cellular organization process in Human Anatomy and Physiology. 2. In BP102T (Pharmaceutical AnalysisI), Tutorial classes for complexometric titration were held for achieving the goal for understanding. 3. In BP103T (Pharmaceutics I), expert lectures on psology and pediatric dosage calculations were held. 4. In BP104T (P'Inorganic Chemistry), extra class were held to study the radiopharmaceuticals and their applications. For better skill improvement in inorganic			
<b>PO 7 : Pharmaceutical Ethics</b>			
PO 7	2.4	1.93	Target level is not attained in the following subject Deals with fundamental knowledge of Pharmacy respect with subject code
1. In BP102T (Pharmaceutical AnalysisI), Tutorial classes for precipitation titration were held for achieving the goal for understanding. 2. BP108P Pharmaceutical AnalysisI – Assisment of Practicals and repeated extra lab work arranged for the determination of assasy for acid-base titration. 3. BP205T Computer Applications in Pharmacy – Theory* Conducted extra class on the concept pharmacy drug database in web technologies. 4. BP206T Environmental sciences – Theory* Extra class were arranged on the study of concept of air pollution for better understanding.			
<b>PO 8 : Communication</b>			

PO 8	2.4	1.89	Target level is not attained in following subject BP102T,BP103T,BP108P,BP109P,BP110P,BP205T,BP206T,BP208P,BP306P,BP307P,BP308P,BP403T,BP407P,BP502T,BP503T,P705PN22,B
1. In BP102T (Pharmaceutical AnalysisI), Tutorial extra class on gravimetric titration were held for achieving the goal for understanding. 2. In BP103T (Pharmaceutics I), expert lectures on geometric dilutions were held for better skill improvement in the field of pharmacy. 3. BP108P Pharmaceutical AnalysisI – Assisment of Practicals and repeated extra lab work arranged for the determination of assasy for conductometric titration. 4. BP109P Pharmaceutics I – Extra Practical lab are arranged for the preparation of gargles and mouthwashes for better understanding.			
<b>PO 9 : The pharmacist and society</b>			
PO 9	2.4	1.97	Target level is not attained Some of the student are less understand pharmacy community and with society at large, such as, being able to comprehend and write effective reports session should be improved on
1. In BP101T (HAP-I), Expert lectures and classes were arranged to understand the tissue level of organization process in Human Anatomy and Physiology. 2. In BP102T (Pharmaceutical AnalysisI), Tutorial classes for the study of methods and applications used in diazotisation titration were held for achieving the goal for understanding. 3. In BP103T (Pharmaceutics I), expert lectures on different types of conventional dosage forms and thier applications in pharmacy were held for better			
<b>PO 10 : Environment and Sustainability</b>			
PO 10	2.4	1.89	Target level is not attained in following subject BP101T,BP102T,BP103T,BP104T,BP108P,BP109P,BP110P,BP205T,BP206T,BP208P,BP305P,BP306P,BP307P,BP308P,BP401T,BP403T,BP40
1. In BP101T (HAP-I), Expert lectures and classes were arranged to understand general principles of cell communication in Human Anatomy and Physiology. 2. In BP102T (Pharmaceutical AnalysisI), Tutorial classes for the study of methods and applications used in alkalimetry titration were held for achieving the goal for understanding. 3. In BP103T (Pharmaceutics I), expert lectures on classification of powders and thier applications in pharmacy were held for better understanding.			
<b>PO 11 : Life-long Learning</b>			
PO 11	2.4	1.84	Target level is not attained in following subject BP101T,BP102T,BP103T,BP104T,BP108P,BP109P,BP110P,BP205T,BP207P,BP208P,BP209P,BP210P,BP305P,BP306P,BP307P,BP308P,BP40
1. In BP101T (HAP-I), Expert lectures and classes were arranged to understand structure and functions of skin in Human Anatomy and Physiology. 2. In BP102T (Pharmaceutical AnalysisI), Tutorial classes for the study of precision and significant figures were studied for achieving the goal for understanding. 3. In BP103T (Pharmaceutics I), expert lectures on classification of imperial and metric system and thier applications in pharmacy were held for better understanding.			

## 8 STUDENT SUPPORT SYSTEMS (50)

Total Marks 50.00

### 8.1 Mentoring system to help at individual levels (5)

Total Marks 5.00





## **8.1. Mentoring system to help at Individual level (5)**

### **8.1.1 Details of the mentoring system that has been developed for the student for various purposes and also state the efficacy of such system**

Institute has developed Tutor Guardian (TG) system for mentoring and support students at both professional and personal level by focusing on areas such as

- Acculturation
- Career planning
- Counseling related to individual students
- And also to identify the goals and guide them in advancement of their field.

Mentoring staff regularly monitor and counsels the students in field of academics, training research interests and encourages participating in extra and co-curricular activities.

Student mentoring system starts during the first year immediately after the student gets an admission into college. Faculties who are teaching first year students are allotted with a number of students (1: 25) as their mentees.

The mentor acts as local student counselor and takes the responsibility of mentoring their student until completion of the course.

Interaction with newly joined students regarding any personal information strength/weakness and information on mentoring is given during the orientation program itself.

A record book is maintained by faculty for each student which includes:

#### **v. Backgrounds:**

- Personal information
- Academic information
- Interests
- Efforts
- Subject teacher suggestions
- Observations and
- Remarks by the mentor.

The mentor might discuss individually or in a group to all the students and rectify their problems. Each periodic status of academic and performance related issues are discussed with the students and is informed to their parents / guardians.

Mentors encourage the mentee to develop and improve their skills and talent in appropriate fields and aim for an overall development of the students. This will continued till the student completes his/her graduation.

#### **Slow learners and advanced learners are identified based on their:**

- Based on student's family conditions.
- Based on student's health condition.
- Based on student's mental status
- Based on Marks of Qualifying examination at the time of admission.
- Internal exam.
- Class Interactions.
- Learning and problem-solving abilities of the student.
- Communication abilities and Personality of the student.

#### **Steps taken for Slow Learners**

- Early screening and identification of special needs of students.
- Involvement in co-curricular and extra-curricular activities.
- Involving students in social responsibility initiatives outside the campus.
- Peer tutoring is encouraged for easier understanding of the text and material.
- Counseling sessions are organized for special students.
- Open book assignments are given.
- Schedule for extra classes is prepared for remedial sessions.
- Regular meetings with mentors are organized to document progress.
- Special sessions on empowerment are organized for students.

#### **Steps taken for Advanced Learners**

Students who have been identified as advanced learners are provided special help and assistance in their academic progress so that they achieve higher goals.

- Special training for entrance examination is organized.
- MOOCs are offered to students so that their existing knowledge may be enhanced.
- Hands-on and activity based workshops are organized
- Field trips and industry visits are planned for students.
- Additional mentoring sessions are organized university examinations.
- Special sessions by industry experts are organized.
- Mentoring for students looking at entrepreneurial ventures.
- Scholarship of high achievers.
- Encouragement for attending/ conducting/organizing workshops related to the interest area of student.
- Encouragement to write research papers based on experiential learning.
- Assistance/guidance for participation in national level competitions.

#### **Mentor Details**

Academic Year	Number of Faculty Mentors	Number of students per mentor	Frequency of meeting
2021-22	20	25	Every 15 days or On SOS Basis
2022-23	20	25	Every 15 days or On SOS Basis
2023-24	20	25	Every 15 days or On SOS Basis

**Table 8.1: List of Mentors 2021-22**

S. No	Name of the Mentor	No. of Student	S. No	Name of the Mentor	No. of Student
1.	Dr Ashok Kumar Budhwani	25	2.	Dr Deepak Kumar Basedia	25
3.	Dr. Mahendra Jain	25	4.	Dr Manmeet Singh Saluja	25
5.	Dr. Ameeta Argal	25	6.	Mr. Mukesh Kumar Patel	25
7.	Mr. Suresh Dhakar	25	8.	Mr. Prithwish Nandi	25
9.	Mr. Mayur Chourey	25	10.	Miss. Mansi Gupta	25
11.	Mr. Shailendra Prasad Tiwari	25	12.	Mr. Bhushan Kumar Korde	25
13.	Mr. Abhijeet Raghuwanshi	25	14.	Miss. Sakshi Singhai	25
15.	Mrs. Pushpa Simaiya	25	16.	Mr. Neeraj Sharma	25
17.	Miss. Chandra chourasiya	25	18.	Mohd Adil Khan	25
19.	Mr. Prashant Uchadia	25	20.	Mr. Rijwan Arif	25

**Table 8.2: List of 2022-23**

S. No	Name of the Mentor	No. of Student	S. No	Name of the Mentor	No. of Student
1.	Dr. Deepak Kumar Basedia	25	2.	Dr. Ameeta Argal	25
3.	Dr Amarjit Singh	25	4.	Mr. Mukesh Kumar Patel	25
5.	Mr. Bhushan Kumar Korde	25	6.	Mr. Mahendra Jaiswal	25
7.	Miss. Rajshree Deshmukh	25	8.	Mr. Mahendra Jain	25
9.	Mohd Adil Khan	25	10.	Mr. Pawan Dubey	25
11.	Mr. Neeraj Sharma	25	12.	Mrs. Pushpa Simaiya	25
13.	Mr. Abhijeet Raghuwanshi	25	14.	Mr. Shailendra Prasad Tiwari	25
15.	Miss. Neelmani Chauhan	25	16.	Miss. Kiran Satnami	25
17.	Miss. Ritu Kushwaha	25	18.	Miss. Sandra Gautam	25
19.	Miss. Najmus Sehar	25	20.	Mr. Prashant Uchadia	25

**Table 8.3: List of Mentors 2023-24**

S. No	Name of the Mentor	No. of Student	S. No	Name of the Mentor	No. of Student
1.	Dr. Deepak Basedia	25	2.	Dr. Ameeta Argal	25
3.	Dr. Mukesh Kumar Patel	25	4.	Dr. Amarjit Singh	25
5.	Dr Mahendra Jain	25	6.	Mr. Bhushan Kumar Korde	25
7.	Mr. Suresh Dhakad	25	8.	Miss Neelmani Chouhan	25
9.	Mrs. Pushpa Simaiya	25	10.	Mr. Shailendra Prasad Tiwari	25
11.	Miss. Najmus Sehar	25	12.	Miss. Kiran Satnami	25
13.	Mr. Anandi Lal Naroliya	25	14.	Mrs. Sandra Gautam	25
15.	Mohd. Adil Khan	25	16.	Mrs. Saby Saudagar	25
17.	Mr. Neeraj Sharma	25	18.	Mr. Pawan Dubey	25
19.	Mr. Farheen Ansari	25	20.	Mr. Prashant Uchadia	25

#### **Outcome of the Mentoring System**

The above steps are showing positive results by way of an improvement in the overall performance and confidence level of students who need special help and assistance. Their overall SGPA and the overall performance is surely paying off.

The student mentoring system mainly focuses on the following aspects:

- a) Academic progress
- b) Co-curricular progress
- c) Extra-curricular progress
- d) Career progress

Academic progress:

- All students will be mentored by the respective mentors after every internal Assessment test and after every end semester examination results.
- This enables the mentors to monitor the progress of each student.
- During this regular mentoring, the students are mentored based on their performance.
- Students who have scored good marks are encouraged to perform better.
- Good performers are advised to help the slow learners whenever possible, which enables peer learning among the students.
- Toppers are motivated to score good GPAs in all the semester and secure university ranks.
- Slow learners are advised to attend coaching classes for better understanding of the subjects.
- Scholarships and certificates are given to class toppers/meritorious students.
- College toppers are awarded based on academic performance.
- Best outgoing student award is also presented to motivate the students.

Efficacy:

Through this effective mentoring system

- The performance of the students in the internal assessment tests has improved and the students who perform better are motivated to do well in the upcoming tests.
- Slow learners have also shown improvement in their test performance because of peer learning.
- They are motivated to perform better in the ensuing tests.
- 5 students of first batch and 15 students of second batch have shown improvement and have secured university ranks.
- Slow learning who attends coaching classes performs better in internal test and have shown great improvement.

Co-curricular progress:

- Student's participation in co-curricular activities is periodically monitored.
- Suitable events are identified by the mentors and intimated to the students.
- Students are motivated to participate in multiple activities to enhance their technical and life skills.
- Students are encouraged to do inter-departmental projects.
- Students are involved in various value added courses based on their interest, various state and national level symposiums, seminars, conferences & competition, training programmes, workshops etc.
- Students of our institute participate in various co-curricular activities across India.

Efficacy:

- Students have actively participated in several co-curricular events inside and outside the college.
- Students have participated in a wide range of best events suggested by the faculty.
- Students have improved their technical and life skills.
- Many inter-departmental projects, value added courses, symposiums, conference & competitions, training programmes, workshops have made them industry-ready.
- Students have travelled to many institutions in Bhopal and across the country to participate in events/competitions and have also won prizes.

Extra-curricular progress:

- With the support of culturer committee, extra-curricular clubs, NCC, mentors identify the potential talents among the students and encourage them to participate in various extra-curricular activities like sports, NCC, photography, dancing, singing and social activities.
- Participation in extra-curricular activities moulds their character and personality.
- Students emerge physically and mentally strong. Such participation increases the confidence of the students too.

Efficacy:

- Students have participated in various zonal, district, state and national level events and have also won prizes.
- Students have involved in many village welfare activities, cleanliness drives, health & hygiene programmes in and around tit group.
- Multiple tree plantation programmes have been conducted by the extra-curricular committee.
- Students have exhibited their skills in photography, acting, elocution, aptitude etc. in several in-house & external events and have also won prizes.

Career progress:

- Mentors through the training & placement cell, higher education cell and entrepreneurship Development cell, guide the student's it achieve their aim by following practices like:
- GPAT Coaching.
- Foreign and additional language coaching.
- Entrepreneurial skill development programme.
- Value added courses/placement training programmes/skill development programmes.

Efficacy:

- Students have cleared GPAT exam.
- Students have learned foreign language of their interests.
- Students have developed many skills that helped him/her in their respective carrier fields.

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8.2 Feedback analysis and reward /corrective measures taken, if any (10)



## 8.2 Feedback analysis and reward/corrective measures taken, if any (10)

### 8.2.1 Methodology being followed for analysis of feedback and its effectiveness

Institute follows the practice of mandatorily collect feedback from stakeholders- students, teachers, employers and alumni. This is done manually, but shifting the institute on technology, it has been made system supported & online.

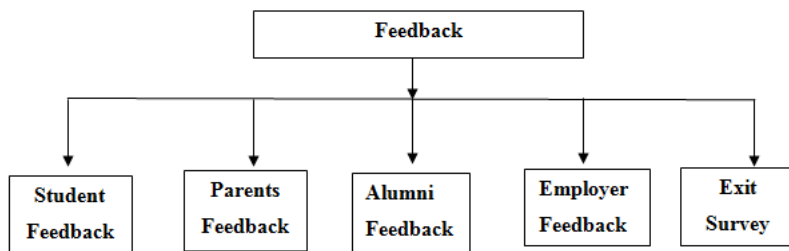
#### Objective:

The objective of the exercise is to correctly gauge the impact of all the efforts taken by the institution at all levels on the student performance. This feedback is collected and

#### Reasons of Feedback Analysis:-

- Feedback provides the practitioner and learner with evidence about current knowledge and skill development.
- Understanding the learners progress and level of achievement enables the practitioner to make decisions about the next steps to plan in the learning program.
- It enables the learner to reflect on their learning strategies to confirm them or make changes to improve their learning.

#### Various Feedbacks Collected



### Methodology being followed:

The entire process is executed in following three stages:

- Feedback collection
- Feedback analysis
- Reward /corrective measures

#### Feedback Collection Process:

- Feedback about the course faculty would be obtained from students through offline/online, twice in a semester.
- Feedback I am to be taken after 10 days of the commencement of the semester.
- Final feedback is taken after the internal assessment II exam.
- This feedback contains questions which assess the planning and organization, presentation and communication, class management and student's interaction with faculty members.
- The feedback also surveys the students' opinions on teachers evaluation capacity (i.e., ability to set or conduct different assignment/seminars/quiz/tests etc.), approach towards teaching.
- The feedback provides opportunity for the course teacher to make initial corrections in the
- The ongoing teaching-learning process to make it more effective.
- Feedback is obtained from students on 20 parameters stipulated in the structured form in 1-5 point scale with 5 indicating maximum point and 1 indicating minimum point.
- The average student participation in the feedback process must be around 75%.
- Suggestion box has been kept at appropriate places in college campus.
- The complain/suggestions can be made anonymously.
- The Department would constitute Quality Circle with faculty and student members for each class.
- Quality Circle meeting should be conducted twice in a semester.
- Student members would be invited to express their views on the subjects, academic environment of the Department and the discussion points would be considered for further improvement.
- It helps to know the students opinion about Department activities, academic progress like syllabus coverage, teaching methodology of faculty members, teaching learning process.

### Effective Feedback questionnaire for students:-

#### FEEDBACK FORM FOR TEACHER EVALUATION BY STUDENT

#### Technocrats Institute of Technology-Pharmacy

Class..... Session.....

Semester..... Name of teacher: .....

Name of Subject & Course No.....

Percentage of classes attended by the student .....

(If the student filling the form has less than 75% attendance he/she is requested not to fill the form.)

IN THE FOLLOWING TABLE TICK (✓) THE APPROPRIATE CHOICE FOR EACH POINT

Item		(Below Avg.) 1	(Avg.) 2	(Good) 3	(Very Good) 4	(Excellent) 5
1	Punctuality in the Class					
2	Regularity in taking Classes					
3	Completes syllabus of the course in time					
4	Schedule the assignments, class test, quizzes and seminars as per schedule					
5	Makes alternate arrangement of class in his/her absence					
6	Communication skills					
7	Conducting the classroom discussions					
8	Teaching the subject matter					
9	Delivery of structured lecture					
10	Skill of linking subject to life experience & creating interest in the subject					
11	Refers to latest developments in the field					
12	Uses of teaching aids (ICT)					
13	Uses of innovative teaching methods					
14	Shares the answers of class tests or sessional test questions after the conduct of the class tests/sessional tests.					
15	Shows the evaluated answer books of class tests to the students					
16	Helps student in providing study material which is not readily available in the text books say through e-resources, e-journals, reference books, open course wares etc.					
17	Helps students irrespective of ethnicity and culture/background					
18	Helps students irrespective of gender					
19	Helps students facing physical, emotional and learning challenges					
20	Tendency of inviting opinion and question on subject matter from students					
21	Enhances learning by judicious reinforcement mechanism					
E.	LABORATORY INTERACTION (Only for Laboratory Courses) seminars					
22	Regular checking of laboratory log books/ note books					
23	Availability of teacher in the laboratory for whole duration of laboratory hours					
24	Helping the students in conducting experiments through set of instructions or demonstrations					
25	Helps students in exploring the area of study involved in the experiment					



26	Follows open ended approach for conducting the experiments					
27	Takes interests in conduct of Laboratory seminars, group discussions etc.					

Additional Remarks (If any):.....  
 .....

Name of the Institute.....

Name of the Institute.....

Name of the Teacher who has been evaluated.....

Title of the course and course no. taught by the teacher.....

Session.....Class.....Semester.....

Roll No. ....

Date.....

Signature of the student

Feedback from Alumni:

·Alumni fill feedback forms whenever they visit the Institute or the institute.

·Alumni feedback collected during Alumni meet which held annually in the month of December/January of every year.

·Feedback received through e-mail or hard copy.

**Feedback analysis process used to assess quality of teaching and learning**

TECHNOCR/

Subject: BP2I

Total Student

Faculty Avera

Points for Imp

Question Nur

Question Nur

QNo	1	2	3	4	5	6	7	8	
1	1	1	1	1	1	1	0	1	
2	1	1	1	0	1	1	1	0	
3	1	1	1	1	1	0	1	1	
4	1	1	1	1	1	0	1	1	
5	1	0	1	1	1	1	0	0	
6	1	0	1	1	1	1	0	0	
7	1	1	1	1	0	1	1	1	
8	1	1	1	1	1	1	1	0	
9	1	1	1	1	1	0	1	0	
10	1	0	1	1	1	1	1	1	
11	1	0	1	1	1	1	1	0	
12	1	1	1	1	1	1	1	1	
13	1	1	1	1	1	1	1	1	
14	1	1	1	1	1	1	1	0	
15	1	0	1	1	1	1	1	1	
16	1	0	1	1	1	1	1	1	
17	1	1	1	1	1	1	1	0	
18	1	1	1	1	1	1	1	1	
19	1	1	1	1	1	1	1	0	
20	1	1	1	0	1	1	1	0	
21	1	0	1	1	1	1	1	1	
22	1	1	1	1	1	1	1	0	
23	1	0	1	1	1	1	0	0	
24	1	0	1	1	0	1	0	1	

QNo	1	2	3	4	5	6	7	8	
25	1	1	0	1	1	1	1	0	
26	1	1	1	1	1	0	1	1	
27	1	1	1	1	1	0	1	0	
28	1	1	1	1	1	1	0	1	
29	1	1	1	1	1	1	0	0	
30	1	0	1	1	1	1	1	1	
31	1	1	1	1	1	0	1	0	
32	1	0	1	1	1	0	1	1	
33	1	1	1	1	1	1	1	1	
34	1	1	0	1	1	1	1	1	
35	1	1	1	1	0	1	1	0	
36	1	1	1	1	1	1	1	1	
37	1	1	1	1	1	1	1	0	
38	1	1	1	1	1	1	0	1	
39	1	1	1	1	1	0	1	1	
40	1	1	1	1	1	1	1	0	
41	1	1	1	1	1	1	1	1	
Total Y	41	30	39	39	38	33	33	22	
Total N	0	11	2	2	3	8	8	19	
% yes for each Q.	100	73.17	95.12	95.12	92.68	80.49	80.49	53.66	70
Points for improvement								YES	

## Alumni Feedback Survey Form

Name of the Alumni:

Branch:

Enrolment Number:

Batch:

How would you rate the extent to which the objectives/outcomes of your Pharmacy program helped you in developing the following knowledge, abilities and skills? Please tick

S.no.	Program Outcomes (POs)	E	G	P
1	Technical Knowledge :(Basic knowledge in Pharmacy)			
2	Planning Abilities: (Planning for resource management to achieve goal in time )			
3	Problem analysis:(solving problems with clear analytical thinking using principles of scientific enquiry)			
4	Modern tool usage: (Learn, select & apply methods and procedures, resources & related computing tools in pharmaceutical practice)			
5	Leadership skills: (Understand and consider the human reaction to change, motivation issues, leadership and team-building)			
6	Professional Identity: (Understand, analyze and communicate the value of their professional roles to stakeholders)			

7	Pharmaceutical Ethics: (Honor personal values and apply ethical principles in professional and social contexts. Apply ethical principles in making decisions with responsibility of outcomes)			
8	Communication: (Communicate effectively with the pharmacy community and with society)			
9	The Pharmacist and society: (Use contextual knowledge and find reasoning to assess societal, health, safety and legal issues)			
10	Environment and sustainability: ( Understand the impact of the professional solutions in social and environmental contexts, and demonstrate the knowledge of, and need for sustainable development)			
11	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.)			

**Question: How would you rate the following?**

S. No.	Particulars	Excellent	Good	Poor
1	Classroom resources			
2	Laboratories & Equipments			
3	Library			
4	Computing resources			
5	Scholarship assistance			
6	Career counseling , guidance and placement services			
7	Sports			
8	Food services			

**Question: How would you rate the following academic initiatives taken by the college to improve technical knowledge of the students?**

S. No.	Academic Initiatives	Excellent	Good	Poor
1 2	Seminar & Workshop Special coaching classes for GPAT			
3	Special Lecture for bringing Industry-Academic gap			
4	Activities organized by the college for your overall development			

**Question: Please select the option that best describes your opinion with regard to the following statements on the faculties (SA: Strongly agree; A: Agree & D: Disagree)**

S. No.	Statements	SA	A	D
1	The faculties had up to date knowledge and skills.			
2	The faculties were perceptive and understood the individual needs of the students			
3	The faculties demonstrated enthusiasm for their subjects as well as for teaching.			

4	The faculties took a keen interest in the professional development of the students			
5	The faculties were accessible outside of the classroom.			
6	The faculties evaluated assignments regularly and gave feedback on students performance at regular intervals			

Any suggestions for improvement

Date

(Signature of Alumni)

## Feedback from Parents:

Parent feedback form is given before vacation and collected at the time of registration.

Feedback is collected in hard- copy provided by the TGs to the mentees to get it filled by the parents and submit it back to TG.

Name:

Address:

Mobile No: .....

E-mail Address (If available).....

Name of the student:

Enrolment No:

Name of the degree completed:

Branch:

Year of Graduation:

1. How do you rate the education provided by the institute? (PO1)

☐ Poor ☐ Good ☐ Very Good ☐ Excellent

2. How do you rate the timely feedback provided by the institute about your ward?

☐ Poor ☐ Good ☐ Very Good ☐ Excellent

3. How do you rate the faculty members in terms of their knowledge, teaching skills and behavior? ( PSO 1)

☐ Poor ☐ Good ☐ Very Good ☐ Excellent

4. How do you rate the counseling and mentoring facilities provided by the institute for the overall development of students?

☐ Poor ☐ Good ☐ Very Good ☐ Excellent

5. How do you rate the infrastructural facilities like Library, Computer Centre, Canteen and other Campus facilities of the Institute?

☐ Poor ☐ Good ☐ Very Good ☐ Excellent

6. How you rate your ward in terms of his/her abilities of analyzing and giving proper scientific reasons of day to day technical and routine problems? (PO2)

☐ Poor ☐ Good ☐ Very Good ☐ Excellent

7. How you rate your ward in providing solution of day to day problems acceptable in family and society on health and environmental grounds? (PO3)

☐ Poor ☐ Good ☐ Very Good ☐ Excellent

8. How you rate your ward in terms of his/her abilities of taking challenges of solving sudden problems arises in day to day life and which do not have a known solutions?

☐ Poor ☐ Good ☐ Very Good ☐ Excellent

9. How you feel your ward is capable of quickly learning and adapting new technologies? (PO 5)

☐ Poor ☐ Good ☐ Very Good ☐ Excellent

10. How you rate your ward in terms of his/her active involvement in assessing and sorting out problems related to societal, health, safety and cultural and his/her awareness

☐ Poor ☐ Good ☐ Very Good ☐ Excellent

11. How you rate your ward in terms of his/her awareness towards conservation of environment? (PO7)

☐ Poor ☐ Good ☐ Very Good ☐ Excellent

12. How you rate your ward in terms of his/her commitments towards ethics, responsibilities and moral values? (PO8)

☐ Poor ☐ Good ☐ Very Good ☐ Excellent

13. How you rate your ward in terms of his/her leadership qualities and as a member of team? (PO9)

☐ Poor ☐ Good ☐ Very Good ☐ Excellent

14. How you rate your ward in terms of his/her abilities to express him /her? (PO10)

☐ Poor ☐ Good ☐ Very Good ☐ Excellent

15. How you feel your ward is capable of managing critical situations and events? (PO11)

☐ Poor ☐ Good ☐ Very Good ☐ Excellent

16. To what extent are you satisfied with the overall professional development of your ward with respect to industry readiness? (PSO 3)

☐ Poor ☐ Good ☐ Very Good ☐ Excellent

17. How you feel your ward is inclined towards learning new things? (PO 12)

☐ Poor ☐ Good ☐ Very Good ☐ Excellent

18. How do you rate the efforts put in by the department to enhance employability and providing employment opportunities to your ward? (PSO 2)

☐ Poor ☐ Good ☐ Very Good ☐ Excellent

Any other feedback / suggestions you want to give to the college:

.....

(Signature of parent/ Guardian of student)

## From Industry/Employers:

- During on campus placements drive from the Industry.
- From industry where TIT Pharmacy alumni is/are working.
- From TIT Pharmacy alumnus who have turned entrepreneurs.
- From industry during academic alliance meets.
- From industry and academic expert during seminar, workshop organized by institute.

### EMPLOYER FEEDBACK FORM

Name of the Alumni	
Name & Address of the Organization	
E-mail (Organization)	
Phone no. of the Organization	
Present Designation	

Total Experience (Years)	
Experience in the present Organization	

To be filled by Employer:

(Please tick (✓) appropriate options for each Parameter)

S.no.	Parameters	Excellent	Very Good	Good	Average
1	Performance of our Graduate				
2	Inclination to adopt new Technology				
3	Communication Skills				
4	Independent thinking & Problem solving ability				
5	Leadership skills				
6	Professional Attitude				
7	Ethics				
8	Inclination to Identify Problems in Society				

Signature:

**Name and designation of the Authority:**

**Seal of the organization:**

"Thank you for providing information regarding our alumni"

**Note: Please send the scanned copy of filled Employers Feedback form with seal of Organization to the following email.**

**Phone:** .....

**E-mail:** .....

## Feedback in the form of Exit Survey:

\*Feedback from the passing out students is filled in the final semester by TGs in the form of Exit Survey. The report is submitted to the Principal for necessary action.

### Student Exit Survey

*Dear students,*

*We would be grateful if you could fill out and submit the following Exit Survey. We assure you that your feedback will be treated confidentially for our continuous improvemer*

**Name of the Student:** \_\_\_\_\_ **Branch:** \_\_\_\_\_

**Mobile No.:** \_\_\_\_\_ **E-mail Id:** \_\_\_\_\_

Questionnaire	Excellent (5)	Very Good (4)	Good (3)	Satisfactory (2)	Poor (1)
<b>Teaching Learning</b>					
Teaching & learning methods adopted were					
Overall quality of teaching and learning activities in the college is					
The learning materials and resources provided were					
<b>Facilities / Activities</b>					
Infrastructure and lab facility / Library					
Student's counseling and guidance					
Internet / Wi-Fi facility					
Extracurricular activities and sports					
Safety & Security					
<b>Curriculum</b>					

The curriculum of the program is well designed and promotes learning experience of the students.					
Employability is given focus in the curriculum design					
The curriculum incorporates recent technological developments in the area.					
<b>Career Guidance / Employability</b>					
The guidance received for employment / higher studies / entrepreneurship was					

**Date:**

**Signature:**

## Feedback Analysis Process:

- The feedback report represents average points scored by the faculty in each parameters and cumulative average point for the particular course.
- Based on this cumulative average for the course, the teachers performance is rated as Excellent (> 4.5), Very good (4.00 - 4.5), Good (3.5 - 3.99), Satisfactory (3.00 - 3.49)
- Head of the Department analyzes all the feedback reports. The positive comments are appreciated and any lapses mentioned, will be communicated to the concerned faculty.
- The student's feedback on the performance of course faculty would also influence the scoring in the computation of Faculty Performance Index in the Performance Appraisal.

## Record of Corrective Measures:

- The corrective measures are taken based on the findings and the same are recorded.
- The strength and weakness identified from the feedback would be reported to the respective faculty to enhance their teaching efficiency.
- The HOD arrange meeting with faculty members who have scored less points and enquire about reasons for the lower score in appraisal.
- Based on the explanation received, HOD offers advice for improving their teaching learning initiatives.
- Students' feedback would also be considered as a parameter for calculating the Faculty Performance Index in the appraisal form.
- Any ambiguity in matching the pace of the deliverables as per the students' requirements would be compensated by arranging the extra lecture hours.
- Result analysis on internal assessments for all the subjects would be done to guide the concerned faculty members for taking necessary actions for improvement.
- Remedial classes for the slow learners should be scheduled and conducted to improve their performance.
- Faculty members are insisted to attend FDP / workshops / seminars to improve their teaching skills.
  - In extreme cases, where the faculty member is unable to improve up to the minimum desired standard, action is taken accordingly.
  - The feedback is considered part of Annual Performance Appraisal of the faculty member.
  - Faculty members will be rewarded by motivating them in weekly meetings or issuing Certificate of Appreciation for each course.

### Actions taken:

The following actions are taken on basis of the feedback collected.

### **Commendatory actions:**

1. Best teacher award.
2. Letters of appreciation for faculty members receiving more than 90% in their feedback.

### **Corrective actions:**

1. Teachers receiving between 50-60% in their feedback would be counseled.
2. Strict action would be taken against teachers with less than 50% in their feedback.
3. Continuing education programs are conducted for the faculty.
4. The faculty members are deputed for FDPs and workshops for wholesome training.





### 8.3. Feedback on Facility:

Direct facility feedback taken through feedback form in online/offline mode from all the stake holders such as the, students, alumni, parents and employers. Indirect feedback on facility is also taken through Complaint registers by the students, faculties, parents and alumni.

Online/offline feedback about all the facilities provided by the college is collected once every semester. The feedback is kept anonymous and the concerned department, committee or individuals are counseled and steps are taken to implement changes. A periodic review is conducted by the principal along with vice principal to check the changes made and if they continued. A repeat feedback is taken verbally from a representative audience directly by the principal wherein the students can voice their view in a confidential environment

#### TECHNOCRATS INSTITUTE OF TECHNOLOGY PHARMACY, BHOPAL

#### FEED BACK FORM (Available Facilities)

Session:

Semester:

Branch:

S. No.	Question	Excellent	Very Good	Good	Poor	Remarks if Any
01.	How do you rate the Campus?					
02.	How are the classrooms maintained?					
03.	How do you rate the maintenance of laboratories and workshops?					
04.	How do you rate the library facility for your program of study?					
05.	How do you rate the computer facilities available in the department?					
06.	Are the washrooms properly cleaned?					
07.	How do you rate the facility of drinking water?					
08.	How do you rate the medical facilities?					
09.	How do you rate the sports facilities?					
10.	How do you rate the Canteen facilities?					
11.	How do you rate the transport facility of the institution?					
12.	How do you rate the online fee submission facility?					

Any other problem please specify:

.....

.....

.....



Figure 8.4: Lab Facility

## Facilities Feedback Analysis:

- Students are the most important stakeholders of Higher Education System.
- The interest and participation of students at all levels in both internal Quality Assurance and External Quality Assurance have to play a central role.
- With regard to that our college is imparting learning experiences to the students in both curriculum and co-curriculum platform.
- To assess our attempts, feedback forms have been collected from student by online/offline mode

### 8.3.1 Feedback collection, analysis and corrective actions

#### Corrective measures taken based on students feedback during 2021-22

S.No.	Problem / Deficiency	Corrective Action	Date of Implementation	Remark
1	Fees updating of students from account section	Axis Bank was instructed to send the details of fee submission within two days of fee deposition.	Aug 2021	Resolved
2	Delay in finalization of Branch change and college transfer of the students 2 <sup>nd</sup> year and 3 <sup>rd</sup> year	Request made to Controller RGPV for fast processing	Aug 2021	Under consideration
3	Students were unable to fill their online scholarship form because of multiple ID's of the institute on the Scholarship portal	Mr. Gajendra Raghuwanshi was instructed to contact respective Govt. Scholarship Departments and resolved the problem	Sep 2021	Resolved
4	Indecent behaviour of bus staff with student of Vidisha Bus Route	Faculty Bus incharge Prof. Deepak Gour instructed to resolve the matter as and when required	Feb 2022	Resolved
5	Issues of Toilet cleaning	House Keeping Incharge instructed to maintain proper cleaning	March 2022	Resolved

## Impact Analysis:

Feedback system has a very good impact on the improving the facilities in the institute. Some of the outcomes of corrective measures taken in the past are:

- Transparency and Clarity in fee dues of students.
- Students were able to fill their scholarship forms within given time frame.
- Behaviour of bus staff improved with students and since then no new complaint has been registered
- Toilet cleaning was improved

#### Corrective measures taken based on students feedback during 2020-21

S.No.	Problem / Deficiency	Corrective Action	Date of Implementation	Remark
1	Overloading in MP Nagar and Ashok Garden buses (Q No 11)	1 Bus each on route number 27 (Jyoti Talkies) and 64 (Ashoka Garden) have been increased each by one.	12.10.2020	Resolved
2	Shortage of water cooler in Block C (Q No 7)	One New Water Cooler has been installed in C Block.	06.07.2020	Resolved

3	Complaint of water contamination by students (Q No 7)	Frequency of Overhead water tank cleaning is increased.	10.8.2021	Resolved
4	Students complained of long queue on fee counter (Q No 12)	One Additional Fee counter is made available during examination time.	10.2.2021	Resolved
5	Incidents of stale food items in the canteen (Q No 10)	Frequency of random checking of food quality is increase.	08.03.2021	Resolved

**Table 8.5: corrective actions taken**

## **Impact Analysis**

Feedback system has a very good impact on the improving the facilities in the institute. Some of the outcomes of corrective measures taken in the past are:

- Bus facility is improved.
- Quality of eatables in canteen and mess is improved
- Students are relaxed during examination to clear dues.



## 8.4 SELF - LEARNING(5):

Self-learning is promoted in the institute by generating facilities under various modes. The faculty members encourage the students to use these facilities. The various facilities and modes created for self-learning include Library resources including books and journals, a variety of internet-based e-resources, as well as guest lectures and seminars arranged to expose the students to topics beyond the syllabus. The institute also takes into consideration the laboratory experiments aspects of self-learning and includes some experiments beyond the syllabus and promotes self-learning enabled through projects.

### Facilities for self – learning:-

- Library facility available beyond working hours
- The opportunity to do mini-projects during the course is promoted
- Learning and implementing concepts beyond the syllabus based on student's interests has been greatly encouraged
- Adapting to industrial needs through in-plant training
- Acquiring managerial skills and information through symposiums conducted annually
- Participation in activities through Professional bodies and R&D cells
- Availability of a centralized computer facility with the internet even beyond working hours

The above facility has enabled the overall development of our students which is seen with

Respect to improved placements, participation, and success in both curricular and curricular activities.

### Scope for self learning

The following methods are used for self learning:

- Web based learning (Teaching-Learning Course online NPTEL, SWAYAM, Webinars etc.)
- Central Library and Digital Library
- Learning through projects, internships, summer trainings etc.
- Assignments
- Professional bodies
- E-Books and Journals
- Special Assembly

In addition to these,

•Self learning assignments are given to the students.

•Morning presentation: 10 minutes self-interested topics are presented by all the students every morning 9:45 AM to 9:55 AM

•Seminar presentation are given on technical topic

### 1.Webinar:

Webinar on technical topics are conducted for both faculty and students. The details of webinar are as follows:

**Table: webinar topics & providers/institutions**

S.NO.	WEBINAR/TRAINING/CONFERENCE TOPICS	INSTITUTION/PROVIDER
1.	Advancements in pharmaceutical research and development	Scan Lab Bhopal
2.	Seminar on Handling of UV-Visible spectroscopy	Scan Lab Bhopal
3.	MPCST Supported National Conference on "Current Trends, Challenges and Opportunities in Pharmaceutical Industries and Research"	Technocrats Institute of Technology Pharmacy Bhopal
4.	Practical Training on " Chemical & Instrumental Methods of Analysis of Drugs"	Food & Drug Administration Drug Testing Laboratory Bhopal
5.	Training on Basic Analytical Techniques	R B Science Lab Bhopal
6.	Training on Preformulation studies, colorimetric, Thin Layer chromatography, Extraction of herbal drug, Phytochemical Screening of extracts, UV Spectroscopy, HPLC, In process quality control of Tablets and microbiological techniques.	R B Science Lab Bhopal
7.	ISP First Trainings Contest Webinar	Internshala Student Partner Team
8.	Training of "Application of Electronics Components in Artificial Intelligence	Technocrats Institute of Technology-Computer Science and Engineering in association with Robonauts India
9.	webinar entitled, "AB5 Toxin: Biological toxin and weapons"	Technocrats Institute of Technology Pharmacy Bhopal

10.	Introduction to Psychology an online non-credit course	Yale University and offered through Coursera
11.	COVID-19: What You Need to Know (CME Eligible) an online non-credit course	Osmosis and offered through Coursera
12.	Sleep: Neurobiology, Medicine, and Society an online non-credit course	University of Michigan and offered through Coursera
13.	Drug Development an online non-credit course	University of California San Diego and offered through Coursera
14.	ISP First Trainings Contest Webinar	Internshala Student Partner Team
15.	REPORTING AND PUBLIC VIEWING OF INDIVIDUAL CASE SAFETY REPORTS (ICSRS)	Food & Drug Administration Drug Testing Laboratory Bhopal
16.	TCS ion Career Edge - Young Professional	TCS ion Career Edge
17.	ICD 10 & Medical Coding and Billing	Udemy Vision Training Systems Technology Institute Online dba
18.	The Simplest Guide"" to Clinical Data Analysis with SAS	Infosys Navigate Your next
19.	IMUN Online Conference 53.0	International Model United nations
20.	2nd Training Contest-EOSS	Internshala Student Partner Program
21.	Free Boot camp on Create face book login using HTML & CSS – May 2023	DevTown
22.	Drug Repositioning : A Novel approaches to drug discovery	R B Science Lab Bhopal

## 2. Institutional Level Facilities for Improvement of Learning Skills of The Students:

1. Newspaper Distribution: The newspaper clippings are provided to the students for improving communication skill and general awareness.
2. 'Book Bank' in library: Institute provides Book Bank facility for the students, which is very helpful in fulfilling student requirements for prescribed books on semester basis. Book Bank functions as one section of the library.
  - Distribution of books and magazines
  - Book bank facilities are available for students
  - E-book facility is also available in the library
  - Technical magazines are also available in the library
3. E-notes for all subjects: e-notes are provided regularly by faculties to supplement teaching-learning process.
4. Access to Journals: Students can also access the online free journals and get beneficial for publication of research papers and projects. They can access the DELNE Digital library.

### **Efficacy of Self-learning Practices:**

- Improve prospects of internship.
- Enriches student knowledge.
- Students are able to perform better in competitive examinations and get placed in suitable companies.
- Promotes professional development of students.
- Students are able to scan through the reading material available to them.
- Promotes technology enriched learning.
- Help in improving collaborative learning, team work, group dynamics etc.
- Helps students search and locate information relevant to their areas of interest and gain the ability to gather information.



## **8.5 career guidance, Training, Placement(10):**

Institute has Training & Placement Cell for career counseling and higher learning in pharmaceutical fields.

It has been set up for conducting value added training programs and enhances employability of students.

The cell has been set up in the institute to give training and guidance to students on career related matters and assist them in exploring new opportunities.

The student's abilities are evaluated individually and are advised the way forward accordingly. The cell organizes training sessions that prepares the students to compete with the challenges in the industry.

Career counseling programs are undertaken periodically by the placement cell to guide the students.

Interactive sessions by the eminent persons with rich industry experience in respective fields are conducted regularly.

The Institute Placement and Career Guidance cell is constituted as under the following faculty members to carry out various activities regarding the student career development and campus placement activities:

S.no.	Members	Designation
1.	Dr. Ashok Kumar Budhwani	Professor
2.	Dr. Deepak Kumar Basedia	Professor
3.	Dr. Mukesh Kumar Patel	Professor
4.	Mr. Shailendra Prasad Tiwari	Associate Professor
5.	Ms. Kiran Satnami	Assistant Professor
6.	Ms. Neelmani Chouhan	Associate Professor
7.	Mrs. Pushpa Simaiya	Assistant Professor

### **OBJECTIVES:**

- To co-ordinate industrial training.
- To arrange campus interviews for B. Pharmacy students.
- To coordinate training of students in various topics (Academics & soft skills).
- To arrange and conduct personality development programs.

### **Duties and Responsibilities**

- This cell will look after various activities related to Student development like Personality development, industrial visit, industrial training, campus placement and higher
- Preparation of placement Brochure.
- Pre-placement visit to the companies
- Communication, networking and relationship building with potential
- Invitation and arrangement of campus drive with Potential
- Continuation of placement activities until all the students gets.
- To familiarize and update the students with soft skills and practices required.
- To provide scope for over all personality development.
- To provide mock trials and guidance to students for short listing in specific area of recruitment.
- To provide industry perspective and market need.
- Arrange **campus interviews**.

The tenure of this cell shall be for the period of three years i.e. 26 January 2019.

### **1.Availability of Career Guidance Facilities:**

1. Prepare the students for placement and organize pre-placement training for them as well as guide for higher education.
2. Organize seminar for students to provide information about Career/Education related opportunities (current trends of industries, emerging areas, scholarship for higher studies India or abroad).
3. Help in building the self confidence of students and develop aptitude solving ability.
4. Help to the students in career selection.
5. Conduct motivational address time to time for students and faculty those who are involved with students for the purpose of guiding.
6. Online tests of students and on the basis of their results guide them for corrective measure.
7. The necessary infrastructure provided is given below:

### **2. Counseling for the Higher Studies**

The training and placement cell also does counseling of the students for the professional goals, selection of career and higher education. It also provides guidance for various competitions. The cell motivates and guides the students for the higher studies as per their area of interest, and also arranges the in house training classes on aptitude, and general knowledge

### **3. Pre-placement Training:**

Training and placement cell organizes in-house training classes, conduct various contest and interactive sessions on pre-placement training from outside trainers. The cell conducts the training classes on communication skill, aptitude and reasoning, technical subjects, programming languages and others.

### **4. Industry Institute Interaction:**

The main objective is to as a liaison between industries and Technocrats Institute of Technology Pharmacy.



The following are the major activities:

- Maintenance, coordination & promotion of consultancy services with proper link, with the department in the college.
- Maintain and distribute funds from consultancy strengthening of the various departments in the college.
- Encourage industry to collaborate in industry study programme (ISTP) internship programme & placements of the students.
- Assist industries in obtaining tax incentives from GOI by supporting R&D programmes in the college, promote sponsored and join R&D projects.
- Organize industrial training and industrial visits for students.
- Organize industrial exhibition to highlights research facilities and expertise available with college.
- Training of industrial personnel in Technocrats institute of Technology pharmacy exchange of personnel between industries and Tit Pharmacy by way of involving industry personnel in delivering lectures on the latest technological development; evaluation of projects, development of curricula as per industry etc.
- Signing of MOU between Tit Pharmacy & the institution.
- Generate funds from industry/other agencies for maintenance & development of the cell.

## 5. Placement Process and Support:

The training and placement cell is functioning in the institute; it is responsible for campus placement (including off campus). This cell provides various training of students which can improve technical, aptitude, communication, and personality development skills. It also provides the infra-structural facility to conduct group discussion, mock test, online/offline tests, and interviews besides catering to other logistics.

- The institute interacts with beneficiaries through Career guidance cell, Academic council and Industry- Institute Partnership Cell.
- The Training and Placement Cell maintains professional relations with the representatives of industry.
- It assists development of graduates with balanced set of communication, technical and interpersonal skills with positive attitude towards life.
- HR managers of various companies are invited to the college campus to interact with the students.
- The cells invites companies for campus interviews and provides them necessary facilities for conducting written test, Group discussion, Technical and HR interview etc. as well as arrange industrial visit and training for final year and pre-final year students.

## Pharmaceutical companies visits:

- Amneal Pharmaceuticals Limited
- Himalaya Well Company
- FDC Limited
- Novmgum Limited
- Macleods Pharmaceutical Limited
- Zydus Pharmaceutical Pvt. Ltd.
- Alembic Limited
- Intas Pharmaceutical Ltd.
- Flowrich Pharma
- Unichem Laboratories
- Innova Captab Limited
- Alkem Laboratories
- MedPlus Health Services Limited



## 8.6 Entrepreneurship Cell

8.6.1 Entrepreneurship development cell is dedicated to promote the spirit of entrepreneurship among students. It is responsible for initiatives which would foster an environment which is conducive for entrepreneurship. Sincere efforts are made to ensure that original and innovative ideas get the right direction, molding these ideas into successful ventures.

We believe that entrepreneurship is a developmental process. Entrepreneurship education activities are real-life vehicles for developing academic skills.

We recognize the importance of nurturing the entrepreneurial spirit from college level, and continuing it right through all upcoming levels. We prefer infusing entrepreneurship in classes where it provides the context for learning other basic skills and motivating students to want to learn.

In our college EDC is started with the object of promoting specialized knowledge in the field of entrepreneurship development. EDC is being promoted in Technocrats Institute of Technology Pharmacy Bhopal to create the entrepreneur and to foster techno-entrepreneurship for generation of Pharma business and employment of Pharma students. Cell plans to organize various programmes regarding entrepreneurship development.

### Vision

To prepare next generation of Entrepreneurs who would contribute to the Economic and Social Development of India.

### Mission

- To develop Entrepreneurial Culture
- Foster the Spirit of Entrepreneurship
- To coordinate the Entrepreneurial Activities
- To develop Enterprising Attitude

### Objectives:

§To promote growth of innovation and entrepreneurship among the student.

§To create the awareness among the students of institution regarding entrepreneurship as a career option.

§To inculcate a culture of innovation driven entrepreneurship through student projects.

§To promote the entrepreneurs in the thirst areas.

The functions of EDC:

- Organize entrepreneurship awareness camps, entrepreneurship development programmes, skill development programmes.
- Organize the guest lecturers with special emphasis on pharma business.
- Organize sessions and face to face interaction with successful entrepreneurs.
- Mentor students who have business ideas by placing them under the supervision of entrepreneurs, under a mentorship scheme.
- To conduct industry-institute interaction via workshops, guest lectures, webinars and Industrial training/visits.

### Constitution:

S. No.	Name	Designation	Role
1.	Dr. Deepak Kumar Basedia	Head of Department Department of Pharmaceutical Chemistry	Chairman
2.	Dr. Mukesh Patel	Professor Department of Pharmaceutics	Member
3.	Mr. Bhushan Korde	Associate Professor Department of Pharmaceutical Chemistry	Member
4.	Ms. Neelmani Chouhan	Associate Professor Department of Pharmacognosy	Member
5.	Ms. Pushpa Simaiya	Assistant Professor Department of Pharmacology	Member

The ED cell include the training modules are developed to describe employer requirements, behavior and environment of different industries. This module covers the following skills:

- Leadership Skills
- Business Development skills
- Marketing skills
- Managerial skills
- Communication /Soft skills

·Team- building skill.

### Facilities provided by Entrepreneurship cell:

- The EDC also assists all the aspirants with mentoring, planning and execution of their start up idea into a real business.
- The Cell also organizes different activities and events from time to time to train and motivate the students on entrepreneurship.
- From the position of job seekers, they get ordained as job givers.
- Sensitizing students about entrepreneurship
- Developing students' initiatives into the frame of E Cell
- Organize skill development activities
- Arrange specialized expert sessions to motivate aspiring students.
- Supporting E-Cell participation at various Activities inside or outside the campus

### Events Organized by Entrepreneurship cell:

S. No.	Title of the Programme	Resource Person(s)	Target Students
1.	Orientation & Awareness on Entrepreneurship	Internal / External	III Years
2.	Drug Discovery, Drug Development to IND and To Market	External	II,III,IV Years
3.	Initiating PCD Pharma Franchise and other Nutraceutical Start Ups	External	IV Years
4.	Marketing and sales strategies for Pharmaceutical Product	Internal	IV Years
5.	Case studies of successful pharmaceutical start-ups and their growth stories.	External	III Years
6.	Networking and connecting with industry experts and potential collaborators.	Alumni session	III & IV Years
7.	Building a team and managing human resources in a pharmaceutical start-up.	Alumni session	III & IV Years
8.	Reel & Fire side chat by student Entrepreneurs	Student entrepreneur (Alumni)	II,III & IV Years
9.	Motivational talk and interactive session with Entrepreneurs	External	II,III,IV Years
10.	Pharmaceutical Marketing Management and Entrepreneurial Marketing	External	IV Years

### Technocrats Institute of Technology Pharmacy, Bhopal

#### Student Success stories: Entrepreneur

#### 1. Success story of:

Name: Shashi Raj

Education: B.Pharm

Batch: 2019-2023

- Myself Shashi Raj from Bihar, Barh Patna. I was a student of TIT Pharmacy batch 2019-23.
- My academy session was very good with the help of college faculties. During my academy session I started working for the knowledge compatibility.
- During my second years end I joined one of the research centers in Bhopal named RB Science Research Lab this is the one of the best Research Lab in MP.
- By this flow the academic session ends with 8.9 CGPA.
- As soon as I completed college I applied to one of the best industries among pharmaceutical industries, Zydus life science, Ahmadabad as a Trainee officer (Apprentice) with the blessing of Guru and Guardians.
- I Got confirmation within 2 months with the knowledge obtained from TIT College After working for a year I thought to become an entrepreneur and by the flow I left my job and i have started my own Hospital (Address:- Mahi hospital, Barh, Gopinath, Aside Krishna Memorial, Near Krishna Mandir Barh, Patna) with the help of MBBS, MD/MS & pharmacists .
- In the end I would like to thank the Technocrats institute of technology Pharmacy to make me capable of making a strong decision in life.

Name: Shashi Raj

Batch: 2019-2023

Gmail I'd: shashiraj3888@gmail.com (mailto:shashiraj3888@gmail.com)

Contact no. : 9471204525



## 8.7 Co-curricular and Extra-Curricular Activities (10)

### Co-curricular and Extra-Curricular Activities

Co-curricular experiential activities enhance students' learning through the application of knowledge and skills acquired in the classroom setting to activities, projects, and experiences in the community.

Requirements within each category enhance and augment specific learning outcomes outlined in traditional curricular coursework. Students participate in or create active learning experiences that explore the roles, attitudes, and values of a pharmacist. Required activities are pass/fail.

Institute has always been playing a leading role in co-curricular and extra-curricular activities in multiple directions, such as social services including rural development and up-liftment, extension of literacy and issues related to national and international importance, games and sports, blood donations, promotion of cultural activities, arts and science, welfare and promotional activities related to different classes of society.

#### 8.7.1. Availability of sports and cultural facilities

Extracurricular activities form a vital part of experience in institute, creating unique opportunities for students. They get plenty of platforms for representing the college and to develop sporting skills. As an integral part of the curriculum there is a balanced Scheme of Physical Education which teaches skills, develops overall fitness and complements the games programme. College aims to help students to understand benefits and enjoy regular Yoga, Kho-kho, and exercise to get confidence in team and individual sport. The playing fields for basketball, football, cricket or athletics are used according to the season.

#### Co-Curricular Domains, Outcomes, and Expectations:

The four domains of co-curricular activities are:

- Public Health Education and Community Service\*
- Patient Care and Advocacy\*
- Professional Engagement
- Leadership and Innovation \*

These two categories are identified collectively as “outreach activities.”



Figure 8.5. Sports Facility@ TIT- Pharmacy, Bhopal

#### Sports Facility:

To ensure Physical fitness of students sports facilities have been created within the campus which comprises of indoor and outdoor games as detailed below in tabular form, as an integral part of the curriculum there is a balanced Scheme of Physical Education that teaches skills, develops overall fitness and complements the games programme. College aims to help students to understand the benefits and enjoyment of regular exercise and feel confident in team and individual sport.

Every year the RGPV University nominates our Institute as a nodal centre for various games like.

- Cricket
- Basket Ball
- Volley Ball



Figure 8.6.: Indoor sports

Indoor sports: Students can choose from Table tennis, Carom, chess, Badminton, etc. among indoor activities to engage themselves to remain physically and mentally fit.

S. No.	Category	Game	Dimension
--------	----------	------	-----------

01	Outdoor	Cricket	As per Standard Games Norm
02		Volley Ball	
03		Basket Ball	
04		Kho-Kho	
05		Kabaddi	
06		Foot Ball	
07		Athletics'	
08		Hand-Ball	
09	Indoor	Table tennis	
10		Badminton	
11		Chess	
12		Carom	
13		Judo	
14		Gymnasium	



Figure 8.7: Outdoor Sports

#### Cultural:

College has been organizing large number of cultural activities throughout the year to provide a platform to the college students to exhibit their talents.

Table 8.10 Cultural activities at TIT-Pharmacy Bhopal

S. No.	Particular of Event	Detail of Event
1	Shubharambh	Dedicated for fresher's Students
2	Nav Aushdheya	Annual function
3	Goodbye Festa	Farewell to final year students
4	Diwali Carnival	Celebration of Diwali prior to the holidays.
5	Ganesh Chaturthi Festival	Celebration of Ganesh chaturthi at TIT Pharmacy





Figure 8.8. : Cultural Events

#### 8.7.2. NCC, NSS and Other Clubs

- v. NCC/NSS basically focus on extra-curricular activities and holistic personality development of students & also include rural outreach programs.
- v. Our TIT Pharmacy college students were participated in near by college NCC&NSS activities.

#### Roles & Responsibilities:

- Develop a sense of social and civic responsibility amongst students.
- Utilize student's knowledge in finding practical solution to individual and community problems.
- Train students to acquire leadership qualities and democratic attitude.
- Develop community service attitude for handling emergencies and natural disasters.
- Develop character, comradeship, discipline, secular outlook, the spirit of adventure and ideals of selfless service amongst young citizens.

#### NCC, NSS

Students are encouraged to participate in NCC and NSS activities being organized in other institutes in the vicinity. List of Students are as follows.

S.no.	Batch	Year	Roll no. of students	Name of students
1	2020-2024	IVth	0165PY201030	Gandharv Yadav
2	2021-2025	IIIrd	0165PY211018	Badal Kushwaha

Table 8.11: Detail of student participating in different programs

Following activities are organized with deep and active participation of the students.



1. Blood Donation
2. Village adoption for over all awareness development.
3. Tobacco free campus awareness program

Institute conducts Orientation Programmes through Program Officers and committee every year and through it new students register as volunteers and present message to others. They provide information related to CSR activities and motivate them.

**Table 8.12 Details of Activities**

S. No.	Particulars	Detail of Activities
01	Blood donation	The college is regularly organizing bloods donation camp under the patronage of BHOPAL MEMORIAL HOSPITAL BHOPAL in the campus in which large number of students donates blood voluntarily & play their part in lending helping hand to people in the region.
02	Village adoption for over- all awareness development.	A village, near the college has been adopted by the Institute; Support for the growth of villagers is being given by providing various facilities.
03	Tobacco free campus awareness program	Regular Programs are organized on issues of National and International importance such as National Security, Cancer eradication, effect of smoking and relief from smoking and relief from chewing tobacco etc by explaining to students its harmful effect. Drug addiction eradication programs also organized.

**Table 8.13 Participation in the various activities are under NCC & NSS (TIT College Group)**

S.No	Activity	Details	Date	Person	No. of Students
1.	National Youth Day	National Youth Day	12th Jun,2020	Senior Faculty Member of TIT-Pharmacy	50
2.	International yoga day	International yoga day	21-Jun-21	Associate NCC Officer & Senior Faculty Member of TIT-Pharmacy	50
3.	Plantation Drive	Plantation activities done under Social Service & Community Development	15/11/2021	NCC Officer & Senior Faculty Member of TIT-Pharmacy	20
4.	International yoga day	International yoga day	21-Jun-21	Associate NCC Officer & Senior Faculty Member of TIT-Pharmacy	30
5.	International yoga day	International yoga day	21-Jun-22	Associate NCC Officer & Senior Faculty Member of TIT-Pharmacy	30





**Figure 8.9: Participation in Various activities is under NCC**

**Blood Donation Camp:** TIT-Pharmacy, Bhopal has been participating regularly in blood donation camps conducted by our group of Institutes.

Various Donation activities include:

**Table 8.14: Detail of Blood Donation Camp**

S. No.	Date	Activity
1	10 <sup>th</sup> Feb,2021	Blood Donation Camp by Gandhi Medical College Bhopal
2	10 <sup>th</sup> Jan,2022	Blood Donation Camp by Bhopal Memorial Hospital and Research Centre, Bhopal
3	04 <sup>th</sup> Jan,2023	Blood Donation Camp by Bhopal Memorial Hospital and Research Centre, Bhopal



**Figure 8.10: Blood Donation Camp**

**Clubs / Other Activities:**

**Table 8.15: Club Activities**

S. No	Date	Activity
1	3 <sup>rd</sup> Nov,2022	Poster Presentation on Avoid tobacco and alcohol
2	17 <sup>th</sup> Feb,2022	Plantation Drive
3	26 <sup>th</sup> Jan,2022	Blood group detection camp
4	26 <sup>th</sup> Sept,2022	World pharmacist day
5	28 <sup>th</sup> Sept,2022	Health awareness camp
6	27 <sup>th</sup> Sept,2022	Health check up Camp
7	12 <sup>th</sup> Oct,2023	Importance of cleanliness presented by nukkad natak
8	8 <sup>th</sup> March 2024	Women's day



Figure 8.11: Club Activities



Figure 8.12: Club Activities



Figure 8.13: Working Model Exhibition



Figure 8.14: Women's Day Celebration

## 9 GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES (100)

Total Marks 100.00

### 9.1 Organization, Governance and Transparency (50)

Total Marks 50.00



9.1.1 Governing body, administrative setup, functions of various bodies, service rules procedures, recruitment and promotional policies (10)

List the governing, senate, and all other academic and administrative bodies; their memberships, functions, and responsibilities; frequency of the meetings; and attendance therein, participation of external members in a tabular form. A few sample minutes of the meetings and action-taken reports should be annexed

Governance is the key activity that develops the relationship among the management, staff, students and the community. We believe it should be effective, efficient and economical in execution of its duties. We support modern governance and proper administration and believe these should be carried out in a way that actively acknowledges diversity. The Institute has a governing body in place wherein the members are drawn from distinguished cross-sections of the society, as shown in Table below

**Governing Body**

**The members of Governing Body for the Session 2023-24.**

S.No.	Name	Designation	Role
1	Mrs. Sadhna Karsoliya	Chairperson	Chairperson
2	Mr. Saurabh Karsoliya	Vice-Chairman	Management Nominee – Member
3	Dr. Surbhi Karsoliya	Member	Management Nominee – Member
4	Dr. Pramod Choubey	Society Representative	Industrialist
5	Dr. N.D. Gargav	Society Representative	Educationist
6	Dr. Mohan Sen Joint Director, Directorate of Technical Education, M. P.	Member	DTE (State Govt.) Nominee (Ex. Officio)
7	Regional Officer, Central Regional Office, Bhopal All India Council for Technical Education	Member	AICTE Nominee (Ex. Officio)
8	Dr. Sanjeev Sharma Prof. & Head, SOIT, Rajiv Gandhi Proudhyogiki Vishwavidyalaya, Bhopal	Member	University Nominee (Ex. Officio)
9	Dr Deepak Kumar Basedia	Member	Faculty Representative
10	Dr Sahadev Kumar Yadav	Member	Faculty Representative
11	Dr Ashok Kumar Budhwani	Member	Faculty Representative
12	Dr Balkrishna Dubey	Director of the Institution	Member Secretary

**Functions & Responsibilities of Governing Body / Board of Governors:**

Subject to the existing provision in the by – laws and rules of the institute laid down as per the state government, the governing body of the institute shall have powers to:

- Monitor& fulfillment of the vision and mission of the institute.
- Approve new programmes in the institution leading to degrees at UG&PG level and / or diploma and variation in intake of any existing program.
- Approve strategic plan of the Institution
- Fund requirement and infrastructure related matters forwarding to Society and getting the final approval.
- Appoint other central committees for effective discharge of responsibilities
- Approve necessary issues related to development of the institution.
- Recommend, when necessary, amendments, alterations, modifications deemed or repeal or add any new provision to the constitution and the Rules and Regulations framed there under to the various committees such as Academic Council with reasons therefore.
- Lay down and implement Rules & Regulations regarding service conditions of all the employees and staff of the institute, staffing pattern, recruitment, pay scales, use of vehicles, etc.
- Do all other acts and things as are necessary to carry out the vision of the institute.
- Delegate administrative, managerial, and financial powers to the Director and other functionaries in the institute for its smooth functioning.
- Approve Annual budget and Annual Report of the institute.
- Perform such other functions and constitute Committees, as may be necessary and deemed fit for the proper development and fulfill the objectives for which the institute was established.

• **Frequency of meeting:**

The Board of Governors meets at least twice in a year or as and when required. Notice of the meeting is issued by the member secretary to all the BOG members in advance. Quorum for the meeting shall be 50% of the body members. However, if there is no quorum for the meeting convened up to half an hour, then the meeting shall stand adjourned to the next convenient day. If in the meeting next to the adjourned meeting, there is no quorum for half an hour, then members present shall themselves constitute the quorum and shall conduct the meeting. Dates of the meetings held in previous years are shown in tabular form.

Sr. No.	Date of Meeting
1	30 <sup>th</sup> December 2023

2	27 <sup>th</sup> June 2023
3	21 <sup>st</sup> December 2022
4	24 <sup>th</sup> June 2022
5	29 <sup>th</sup> December 2022
6	27 <sup>th</sup> July 2022
7	24 <sup>th</sup> December 2020
8	15 <sup>th</sup> July 2020

#### A. Service rules Policies, Procedures, Recruitment and Promotional Policies

The published rules,

policies and procedures; year of publication and its implementation shall be listed. Also state the extent of awareness among the employees/students

Institution has framed service rules, policies, procedures, recruitment, and promotional policies, which are well documented in service manual dated 25-10-2011. The service rules are provided to all employees newly joining in the Institute. These rules set out the statutory frames to regulate the service conditions of all employees. These rules also set out all matters relating to the classification, disciplinary control, disciplinary action, pay and allowances, leave, seniority, increments, promotion etc., within its ambit.

The main objectives of defining service rules are:

- To employ talented & learned faculty members who can inculcate deep domain knowledge, discipline, wisdom, vision & values in the students required to become successful professionals & responsible citizens.
  - To provide transparent and streamline mechanism of selection, annual increment and promotions of faculty members and other staff.
  - To retain the employees in the institution by providing healthy work culture, progressive environment and job reliability.
- The manual containing service rules is made available to all the staff members online through official website of institution <http://titpharmacy.net> (<http://titpharmacy.net/>) as well as offline through registrar office. Service rules are modified as and when the need arises. Important information is shared through circulars and during staff meetings. Various guidelines and procedures of recruitment and promotions are available in the registrar office for references.

#### A. Other committees for proper functioning of the institute

In addition to the Academic Council institution has the following supporting central level committees for decentralization in working and proper functioning of the institute:

- Examinations Committee
- Admissions Committee
- Central Purchase Committee
- Library Committee
- Student Affairs, Career Guidance and Welfare Committee
- Co-Curricular & Extracurricular and sports Committee
- Alumni Committee

##### 1. Examination Committee

To look after all the affairs/works related to conduct of internal, external, and competitive examinations and communication between RGPV and Institute, a committee has been formed. This committee comprises of the following members:

S.No.	Name	Designation	Role
1.	Dr Balkrishna Dubey	Director	Chairman, (Sr. Centre Superintendent)
2.	Dr. Deepak Kumar Basedia	Professor	Centre Superintendent
3.	Dr. Mukesh Kumar Patel	Professor	Member
4.	Mr. Shailendra Prasad Tiwari	Associate Professor	Member
5.	Mrs. Sandra Gautam	Assistant Professor	Member
6.	Mr. Gajendra Raghuvanshi	Office Assistant	Member

##### • Frequency of meeting:

Minimum twice in a year (before start of RGPV examination)/as and when required. Dates of the meetings for the last 4 years

S.no	Date of Meetings
1	23 <sup>rd</sup> November 2023
2	26 <sup>th</sup> April 2023
3	22 <sup>nd</sup> November 2022
4	19 <sup>th</sup> April 2022
5	17 <sup>th</sup> November 2021
6	18 <sup>th</sup> June 2021
7	08 <sup>th</sup> June 2020
8	28 <sup>th</sup> January 2020

##### 2. Admission Committee

To look after all the affairs/works related to admission of new students in UG/PG programs of the institute, a committee has been formed. This committee comprises of the following members:

S.No.	Name	Designation	Role
-------	------	-------------	------

1.	Dr. Prabhat Kumar Jain	Professor	Chairman
2.	Dr. Mukesh Kumar Patel	Professor	Member
3.	Mr. Shailendra Prasad Tiwari	Associate Professor	Member
4.	Dr. Anandi Lal Naroliya	Assistant Professor	Member
5.	Mr. Neeraj Sharma	Assistant Professor	Member

• **Frequency of meeting:**

Once in a year (before start of admission process) / as and when required. Dates of the meetings for the last 4 years:

S.no	Date of Meetings
1	14 <sup>th</sup> July 2023
2	29 <sup>th</sup> July 2022
3	9 <sup>th</sup> July 2021
4	04 <sup>th</sup> August 2020

### 3. Central Purchase Committee

A central purchase committee is formed to receive purchase indents from Director and Head of departments/cells for procurement of items/equipment's/material to be purchased as per the policy of Institute. Firstly, Quotations from different suppliers are obtained by concerned department/cell and a comparative statement is prepared then Purchase officer arranges the purchasing of the items/equipment's/material after approval from authority from the recommended supplier/vendor. This committee comprises of the following members:

S.No.	Name	Designation	Role
1.	Dr Balkrishna Dubey	Director	Chairman
2.	Dr. Deepak Kumar Basedia	Professor & Head	Member
3.	Mrs. Savia Tiwari	Librarian	Member
4.	Mr. Ratnesh Malviya	Asst. Account Officer	Member

• **Frequency of meeting:**

Once in semester/year/as and when required. Dates of the meetings for the last 3 years

S.No	Date of Meetings
1	07 <sup>th</sup> July 2023
2	04 <sup>th</sup> January 2023
3	09 <sup>th</sup> July 2022
4	11 <sup>th</sup> January 2022
5	21 <sup>st</sup> October 2021
6	06 <sup>th</sup> January 2021

### 4. Library Committee

Library is backbone of the academic institution. The library committee is formed at institute level for proper monitoring, updating and utilization of library resources. Committee approves purchase indents provided by the departments for books, journals, magazines and other useful materials as per requirements of students and also to fulfil the requirements of PCI. Committee is also responsible to solve problems raised by the students and staff members regarding proper functioning of the library. This committee comprises of the following members:

Sr. No.	Name	Profession	Designation
1.	Dr. Ashok Kumar Budhwani	Professor	Chairman
2.	Dr. Deepak Kumar Basedia	Professor, EX	Member
3.	Dr. Mukesh Kumar Patel	Associate Professor, CSE	Member
4.	Mrs. Savita Tiwari	Librarian	Chief Librarian

• **Frequency of meeting:**

At least once in a semester (before start of every semester) / as and when required. Dates of the meetings for the last 3 years:

S.no	Date of Meetings
1	14 <sup>th</sup> December 2023
2	08 <sup>th</sup> June 2023
3	13 <sup>th</sup> December 2022

4	15 <sup>th</sup> June 2022
5	16 <sup>th</sup> December 2021
6	16 <sup>th</sup> July 2021

#### 5. Student Affairs, Career Guidance and Welfare Committee

Student welfare and career counselling committee is constituted at institute level for looking after the welfare measures of the students required for positive environment in the study and also to guide them for higher education, campus placements, Govt services and to become entrepreneurs etc. This committee comprises of the following members:

S.No.	Name	Designation	Role
1.	Dr. Deepak Kumar Basedia	Professor	Chairman
2.	Dr. Mukesh Kumar Patel	Professor	Member
3.	Mr. Bhushan Kumar Korde	Associate Professor	Member
4.	Ms. Neelmani Chauhan	Associate Professor	Member
5.	Ms. Najmuas Sahar	Assistant Professor,	Member
6.	Ms. Kiran Satnami	Assistant Professor	Member

#### 6. Co-Curricular & Extracurricular and Sports Committee

The committee is formed for encouraging students to take part in different competitive examinations, co-curricular and extra-curricular activities held within and outside of the institute. This committee comprises of the following members:

Sr. No.	Name	Designation	Role
1.	Ms. Neelmani Chauhan	Associate Professor	Chairperson
2.	Dr. Mukesh Kumar Patel	Professor	Member
3.	Mr. Shailenda Prasad Tiwari	Associate Professor	Member
4.	Mr. Neeraj Sharma	Assistant Professor	Member
5.	Mrs Saby Saudagar	Assistant Professor	Member

#### • Frequency of meeting:

Once in semester / as and when required .Dates of the meetings for the last 3 years

S.No	Date of Meetings
1	20 <sup>th</sup> July 2023
2	21 <sup>th</sup> July 2022
3	24 <sup>th</sup> July 2021



## 9.1.2 Decentralization in working and grievance redressal mechanism (15)

List the names of the faculty members who are administrators /decision makers for various responsibilities. Specify the mechanism and composition of grievance redressal cell.

Principal is assisted by an administrative officer, who is assisted by office assistants looking after correspondence, admissions, HR, Scholarships etc.

Finance is looked after by accountant.

Administrative officer (Management) looks after all the support services and Maintenance.

### (a) Decentralization in working:

The College believes in decentralization at top level.

- Institute is responsible for academic activities and takes care of all administrative issues.
- The Heads of the departments share the administrative work of the Principal.
- The Heads of the departments helps in streamlining the processes and give important inputs to leadership in academic, infrastructure, training, and budgeting and compliance issues.
- The Heads of the Departments are solely in-charge of the academic activities, budgeting, infrastructure, Department administration, and research and student tissues.
- Heads of the departments are assisted in various activities by committees such as programme assessment and quality improvement committee, Budget Committee, Examination committee, Laboratory in charges, class teachers, etc.

### List of Faculty members who have been delegated powers with their administrative responsibilities (Year 2023-24)

S.No.	Name	Designation	Role
1.	Dr Balkrishna Dubey	Director	Chairman: Examinations Committee, Anti-Raging Committee, Grievance redressal Committee,
2.	Dr. Ashok Kumar Budhwani	Professor	Chairman: Staff selection committee ,SC/ST Committee,
3.	Ms. Neelmani Chauhan	Associate Professor	Chairperson: Co Curricular, Extra Curricular & Sports Committee, Chairperson ICC
4.	Dr. Prabhat Kumar Jain	Professor	Chairman: Admission Committee
5.	Dr. Deepak Kumar Basedia	Professor	Chairman: Committee, Student Affairs, Career Guidance and Welfare Committee,

### (b) Mechanism and Composition of Grievance Redressal System cell including Anti ragging committee, Anti Sexual Harassment Committee, Committee for SC/ST and Internal Academic Monitoring Committee :

#### i) Grievance Redressal Committee

The institute has an effective Grievance Redressal Committee to address the grievances of all the stakeholder (Students, staff, faculty members, parents, employers etc.) for providing a healthy atmosphere in the institute. Committee also ensures mechanisms for receiving grievances from faculty/staff/students/parents. This committee comprises of the following members:

#### Grievance Redressal Committee

S.No.	Member Name	Designation	Role
1.	Dr Balkrishna Dubey	Director	Chairman
2.	Dr. Ashok Kumar Budhwani	Professor	Convener
3.	Dr. Sahadev Kumar Yadav	Professor	Member
4.	Dr. Deepak Kumar Basedia	Professor	Member
5.	Dr. Mukesh Kumar Patel	Professor	Member
6.	Mr. Bhushan Kumar Korde	Associate Professor	Member
7.	Ms. Neelmani Chauhan	Associate Professor	Member
8.	Mrs. Sandra Gautam	Asst. Professor	Member

#### • Frequency of meeting:

Once in semester/year/as and when required. Dates of the meetings for the last 3 years

S.No	Date of Meetings
1	21 <sup>st</sup> December 2023
2	06 <sup>th</sup> July 2023
3	09 <sup>th</sup> December 2022
4	07 <sup>th</sup> July 2022
5	23 <sup>rd</sup> December 2021
6	23 <sup>th</sup> July 2021
7	04 <sup>th</sup> December 2020

• **Grievance Redressal Mechanism:**

- The grievance redressal cell resolves the issues reported by all the stake holders.
- At the department level, a proctorial system is followed where-in staff members are appointed to take care of grievances and complaints of students. Students can freely share their grievances to proctor which will be conveyed to dean student welfare and director through HOD.
- The institute has also posted the contact information such as e-mail Id's and mobile numbers of the GRC Chairman, members, HOD and Director in the official website so that students as well as staff members can convey their grievances through e-mail or Whatsapp.
- Grievance can also be reported online through institute's website by filling Google forms.

**ii) Anti-Ragging Committee**

Institute has anti ragging committee constituted by taking representative members from all categories as per UGC norms. This committee comprises of the following members:

**Anti-Ragging Committee**

S. No.	Member Name	Designation	Role	Address
1	Dr Balkrishna Dubey	Director	Chairman	TIT- Pharmacy, Bhopal
2	Dr. Deepak Kumar Basedia	Chairman, Anti Ragging Squad, Professor, ME Deptt.	Member	TIT- Pharmacy, Bhopal
3	Mr. Anurag Lal	TI, Piplani Police Station (Local Police)	Member	Piplani Police Station, Piplani, Bhopal
4	Mr. Himanshu Awasthi	Media Reporter, Dainik Bhaskar Bhopal (Local Media)	Member	114, PremPura Near Sair Sapata, BhadBhada Road, 464003
5	Ms. Shikha Khedle	SecretaryAbhudaya Research and Social Development Foundation, Bhopal (NGO Member)	Member	Secretary Abhudaya Research and Social Development Foundation, Bhopal
6	Dr. Mukesh Kumar Patel	Professor	Member	TIT- Pharmacy, Bhopal
7	Dr. Ameet Agral	Professor	Member	TIT- Pharmacy, Bhopal
8	Mrs. Sandra Gautam	ASST. PROFESSOR	Member	TIT- Pharmacy, Bhopal
9	Mr. Gajendra Raghuwanshi	Asst. Registrar Admin	Member	TIT- Pharmacy, Bhopal
10	Mrs. Savita Tiwari	Librarian	Member	TIT- Pharmacy, Bhopal
11	Mr. DEEPAK SHUKLA	Student, II Year	Student Member	TIT- Pharmacy, Bhopal
12	Ms. ANANYA DUBEY	Student, II Year	Student Member	TIT- Pharmacy, Bhopal
13	Mr. AMAN BAJPAI	Student, III Year	Student Member	TIT- Pharmacy, Bhopal
14	Ms. VAISHNAVI BATHRE	Student, III Year	Student Member	TIT- Pharmacy, Bhopal
15	Mr. RITIK RAJ	Student, I Year	Student Member	TIT- Pharmacy, Bhopal
16	Ms. SEEMA SEN	Student, I Year	Student Member	TIT- Pharmacy, Bhopal

• **Frequency of meeting:**

Once in year / as and when required. Dates of the meetings for the last 4 years

S.no	Date of Meetings
1	14 <sup>th</sup> July 2023
2	29 <sup>th</sup> July 2022
3	21 <sup>st</sup> September 2021
4	10 <sup>th</sup> November 2020

• **Functions & Responsibilities of Anti Ragging Committee:**

- To arrange awareness programme regarding law concerning ragging and its consequences.
- To check proceedings of ragging and the punishment prescribed, both under penal laws.
- Formulation of Anti Ragging Squad for visits to hostel forming part of the Institution or seeking to reside any temporary premises.
- To arrange meetings of Hostel wardens, representative of students, parents, guardians, faculty, district administration including the Police to discuss the measures to be taken to prevent ragging to arrange programs regarding dehumanizing effect of ragging, and the approach of the institution towards those indulging in ragging, prominently display posters depicting the provisions of penal law applicable.
- Keep a close watch on all locations known to be vulnerable to occurrences of ragging incidents.
- To see that tighten security is arranged in the Hostel & college premises.
- To utilize the vacation period before the start of the new academic year to launch a publicity campaign against ragging.

The statutory warning against Ragging has been displayed at various locations in the Institute.

### iii) ICC/Anti-Sexual Harassment Committee

Institute has Anti Sexual Harassment Committee constituted as per norms to resolve the issues raised by female students and female staff/faculty of the institute. This committee comprises the following members:

S.No.	Member Name	Designation	Role
1	Ms. Neelmani Chauhan	Associate Professor	Chairperson
2	Ms. Kiran Satnami	Asst. Professor	Member
3	Mrs. Sandra Gautam	Asst. Professor	Member
4	Ms. Najmus Sehar	Asst. Professor	Member
5	Mrs. Saby Saudagar	Asst. Professor	Member
6	Mr. Shailendra Prasad Tiwari	Asst. Professor	Member
7	Ms. Shruti Singh	Student of IV Year	Student Member
8	Ms. Srishti Soni	Student, III Year	Student Member

### Functions & Responsibilities of Anti Sexual Harassment Committee:

- Develop & increase literacy of Sexual Harassment Prevention amongst students & faculties.
- Arrange programs regarding gender equality.
- Arrange lectures regarding awareness of Sexual Harassment of woman at work place act 2013.
- Ensure a safe environment free from Sexual Harassment for women including prevention and deterrence of Sexual Harassment.
- Prepare and prominently display the policy for the prevention and prohibition of Sexual Harassment.
- Maintain a proactive program to educate all members as to the definition of Sexual Harassment and procedure for redressal.
- Undertake workshops and training programmes at regular intervals for sensitizing the members.
- Prominently display notices in various places spreading awareness about the issue of "Sexual Harassment at the Workplace" and giving information about the redress mechanism that has been put in place and encouraging women to seek redressal of their grievances.
- Facilitate initiation of proceedings under this Policy through the institution of Committee against Sexual Harassment for redressal of acts of sexual harassment.
- Ensure that filling of a complaint shall not adversely affect the complaints' status/job, salary/promotion, grades etc. During the pendency of an enquiry and till the final determination of a complaint of sexual harassment under this Policy the Institute shall not alter the conditions of service/study of the Complainant/Witness concerned to their prejudice, as a consequence to the filling, participation or holding of an enquiry under this Policy.
- Provide a space for confidential counseling and other necessary facilities. The provision of this facility shall be well publicized. For this purpose the Institute shall also engage a professionally competent counsellor.
- To work towards creating an atmosphere promoting equality, non-discrimination and gender justice.
- To promote and facilitate measures to create a work and study environment that is free from sexual harassment of women.

#### • Frequency of meeting:

Once in semester/year/as and when required. Dates of the meetings for the last 3 years

S.No	Date of Meetings
1	07 <sup>th</sup> December 2023
2	04 <sup>th</sup> July 2023
3	22 <sup>nd</sup> December 2022
4	06 <sup>th</sup> July 2022
5	29 <sup>th</sup> December 2021
6	07 <sup>th</sup> August 2021
7	11 <sup>th</sup> December 2020
8	08 <sup>th</sup> July 2020

### iv) Committee for SC/ST

As per the Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act 1989, No. 33 of 1989, dated 11-09-1989, the SC/ST committee has been formed to monitor and as an endeavour to resolve issues/grievances relating to SC/ST students and staff at institute level. The committee comprises the following members:

S.No.	Member Name	Designation	Role
1	Ms. Neelmani Chauhan	Associate Professor	Chairperson

2	Mr Bhushan Kumar Korde	Associate Professor	Member
3	Mr Anandi Lal Narolia	Asst. Professor	Member
4	Ms. Kiran Satnami	Asst. Professor	Member

• **Frequency of meeting:**

Once in a semester /as and when required. Dates of the meetings for the last 3 years

S.No	Date of Meeting
1	22 <sup>nd</sup> July 2023
2	19 <sup>th</sup> January 2023
3	23 <sup>rd</sup> July 2022
4	21 <sup>st</sup> January 2022
5	13 <sup>th</sup> October 2021
6	23 <sup>rd</sup> January 2021

**v) Internal academic Monitoring Committee:**

To achieve academic excellence, an effective implementation of course curriculum of all the programs offered, should be ensured. For this, our institute has established Internal Monitoring Committee on 25<sup>th</sup> June, 2019 with the aim to ensure quality teaching in the institute. The cell comprises of the following members:

S.No.	Name	Designation	Role
1.	Dr.B. K. Dudey	Director	Chairman
2.	Dr. Ashok Kumar Budhwani	Professor	Member
3.	Dr. Sahadev Kumar Yadav	Professor	Member
4.	Dr. Deepak Kumar Basedia	Professor	Member
5.	Dr. Mukesh Kumar Patel	Professor	Member
6.	Mr. Bhushan Kumar Korde	Associate Professor	Member
7.	Ms. Neelmani Chauhan	Associate Professor	Member
8.	Mrs. Sandra Gautam	Assistant Professor	Member

• **Frequency of meeting:**

At least twice in a semester (before start of every semester) /as and when required. Dates of the meetings for the last 3 years:

S.no	Date of Meetings
1	23 <sup>rd</sup> Dec 2023
2	21 <sup>st</sup> June 2023
3	27 <sup>st</sup> Dec 2022
4	28 <sup>th</sup> June 2022
5	27 <sup>th</sup> Dec 2021
6	30 <sup>th</sup> June 2021

### 9.1.3 Delegation of financial powers (15)

Explicitly mention financial powers delegated to the Principal, Heads of Departments and relevant in-charges. Demonstrate the utilization of financial powers for each year of the assessment years.

#### **Institutional mechanism to monitor effective and efficient use of available financial resources**

In order to monitor effective and efficient use of available financial resources, the financial regulation and policies are centralized with the Director through Governing Body. They are the supreme authority to allocate funds and monitor its proper utilization. Annual budget of the Institute comprises of the departmental expenses\*\*\*\*, administrative expenses, operational expenses, development expenses and other miscellaneous expenses. Every year, budget proposal is planned considering the requirement of each department and accordingly, the annual budget is put up before the governing body for approval. After approval of central budget from governing body the Institute utilizes it accordingly.

- **Delegation of financial power:**

The Governing Body has approved the following financial powers in hierarchical set up:

Sr. No.	POST	FINANCIAL POWER
01	Director	Up to Rs. 2,50,000/- (Two Lakhs Fifty Thousand Only)
02	Head of the Departments	Up to Rs. 25,000/- (Twenty Five Thousand Only)

#### 9.1.4 Transparency and availability of correct/unambiguous information in public domain (10)

Institute Marks : 10.00

### 9.1.4 Transparency and availability of correct/unambiguous information in public domain (10)

*Information on the policies, rules, processes is to be made available on web site.*

The Information of Policies, rules and processes is available in institute's website with following URL <http://titpharmacy.net> (<http://titpharmacy.net/>) and also circulated to the entire stakeholder.

#### 9.2 Budget Allocation, Utilization, and Public Accounting at Institute level (30)

Total Marks 30.00

Total Income at Institute level: For CFY,CFYm1,CFYm2 & CFYm3

CFY : (Current Financial Year),

CFYm1 : (Current Financial Year minus 1),

CFYm2 : (Current Financial Year minus 2) and

CFYm3 : (Current Financial Year minus 3)

**Table 1 - CFY 2023-2024**

Total Income 41874290				Actual expenditure(till...): 26015773			Total No. Of Students 604
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
41808648	0	0	65642	25425042	590731	0	43072.47

**Table 2 - CFYm1 2022-2023**

Total Income 30283629				Actual expenditure(till...): 40432210			Total No. Of Students 605
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
30054869	0	0	228760	22218526	18213684	0	66830.10

**Table 3 - CFYm2 2021-2022**

Total Income 47945865				Actual expenditure(till...): 36890498			Total No. Of Students 591
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
47568849	0	0	377016	36890498	0	0	62420.47

**Table 4 - CFYm3 2020-2021**

Total Income 25714367				Actual expenditure(till...): 17801434			Total No. Of Students 588
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
25622574	0	0	91793	17801434	0	0	30274.55

Items	Budgeted in 2023-2024	Actual Expenses in 2023-2024 till	Budgeted in 2022-2023	Actual Expenses in 2022-2023 till	Budgeted in 2021-2022	Actual Expenses in 2021-2022 till	Budgeted in 2020-2021	Actual Expenses in 2020-2021 till
Infrastructure Built-Up	0	0	17000000	17206044	0	0	0	0
Library	800000	847672	800000	830366	700000	730509	300000	274520
Laboratory equipment	500000	517904	350000	772176	300000	0	0	0
Laboratory consumables	700000	707702	700000	731764	700000	732568	400000	412370
Teaching and non-teaching staff salary	14000000	15120190	12500000	11645396	12500000	12784104	10000000	9861526
Maintenance and spares	4000000	3959369	4000000	4663627	4000000	5414100	1000000	1191410
R&D	200000	198530	0	0	0	0	0	0
Training and Travel	500000	521550	500000	505584	500000	520543	350000	323031
Miscellaneous expenses*	1200000	1334900	1100000	1044650	1000000	1097675	500000	493230
Others, specify	3000000	3051792	3000000	3032603	16150000	15610999	5200000	5245347
<b>Total</b>	<b>24900000</b>	<b>26259609</b>	<b>39950000</b>	<b>40432210</b>	<b>35850000</b>	<b>36890498</b>	<b>17750000</b>	<b>17801434</b>

### 9.2.1 Adequacy of budget allocation (10)

Institute Marks : 10.00

#### Adequacy of Budget Allocation:

For smooth working of financial activities at institutional level, a review of requirements and last year utilization report is prepared before commencement of each financial year for smooth working of financial activities at institutional level. The adequate budget is prepared by the concern departments after analysis of utilization report and then sent to the Local Managing Committee for the approval.

Allocations are made as per availability of funds. In special cases supplementary allocations can be made. All transactions, such as store purchases, salary, all kinds of payments etc. are centrally processed for the smooth functioning of the institute and for central Audit. The institute monitors the expenses very carefully so that it never had any serious budget crunch. The Institution has a systematized procedure to assess the collective needs of the common infrastructures and resources pertaining to each department of the institute. This process begins with ensuring the availability of physical infrastructure and its optimal utilization across the campus(institute). The Institute plans the infrastructure requirements of individual departments based on the AICTE and affiliated University norms. Some of the common resource requirements of various departments are managed through well-organized resource sharing, thus avoiding the redundant multiple investments. This process begins with inviting the budget proposal from respective Heads of the Departments (HoDs) every assessment year, and these proposals are consolidated for assessing the redundancy, for e.g., sports, infrastructure, seminar halls up gradation, common areas of library up gradation, transport up gradation, etc. Unique requirement raised by the respective HoDs are specifically attended to and the emphasis is placed to procure program specific infrastructure & resources.

The overall budget allocation for each department during assessment years 2020-21, 2021-22, and 2022-23 was adequate. The purchases are made strictly following the above budget allocations. If any deviation is needed in the budgetary allocations, respective HODs must address the issue and are solicited to make necessary changes wherever required, subsequently the same is approved, hence unnecessary purchases are avoided and funds are effectively utilized.

S no	Financial Year	Request Budget	Approved Budget	Adequate / Not Adequate
1	2023-2024	24900000	24900000	Adequate
2	2022-2023	39950000	39950000	Adequate
3	2021-2022	35850000	35850000	Adequate
4	2020-2021	17750000	17750000	Adequate

### 9.2.2 Utilization of allocated funds (15)

Institute Marks : 15.00

## 9.2.2 Utilization of allocated funds (15)

State how the budget was utilized during the last three years.

- After the approval of the program specific budget proposals, it is the duty of the HODs and the program coordinators to follow up for tendering, quotation invitation, etc. in association with the purchase committee for transparency.
- The purchase department initiates the purchase process based on the opinion of the purchase committee for the best price with the reputed dealers and suppliers.
- The stock book keeping and inventory will be subsequently managed by the respective laboratory instructors of departments.
- The purchased laboratory equipment, furniture, infrastructure resource components are constantly monitored by the department staff members for their upkeep and maintenance.
- Periodic servicing and maintenance will be performed through well-established process procedures, through reputed service providers, in which process the budget sanctioned for the purpose will carefully be utilized with the consent of the Director and management.
- The approved budget proposal also included financial sanction for organizing national, international seminars, Faculty Development Programs (FDP), department level workshops, etc.
- Each department are also concerned towards budget proposals and approval for central library and department library textbooks, reference books, journals, hand books of advanced technologies, subscription renewals of the international journals, etc.

Following are the details of percent utilization of budget for last three years that shows that proposed budget was utilised properly.

**Summary of Budget Utilization in previous Financial Years**

S.No.	Financial Year	Budget Amount	Utilized Amount	Percentage Utilization
1.	2023-2024	24900000	26259609	105%
2.	2022-2023	39950000	40432210	101%
3.	2021-2022	35850000	36890498	102%
4.	2020-2021	17750000	17801434	100%

### 9.2.3 Availability of the audited statements on the institute's website (5)

Institute Marks : 5.00

Availability of the audited statements on the institute's website (5)

Needs to make audited statements available on its website.

Audit report is available in institute's website with following URL <http://titpharmacy.net> (<http://titpharmacy.net/>)

### 9.3 Library and Internet

It is assumed that zero deficiency report was received by the institution, Effective availability and utilization to be demonstrated. (20)

Total Marks 20.00



## Quality of learning resources (hard/soft) (10)

- Relevance of available learning resources including e-resources
- Accessibility to students

SN	Particulars	Details
1.	Average number of walk-ins:	50 per day(average)
2.	Average number of books issued/returned:	50 per day(average)
3.	Ratio of library books to students enrolled:	1:565
4.	Average number of logins to OPAC Search:	85-120 daily
5.	Average number of logins to e-resources per semester:	60-80
6.	Average number of e-resources downloaded/printed: per semester.	110-120
7.	Number of information literacy trainings organized:	0
8.	Details of "weeding out" of books and other materials:	Weeding out is carried out on regularly basis. All records are maintained.

- Support to students for self-learning activities

Digital Library Services	Yes
Availability of an exclusive server	Yes
Availability of WIFI facility in library building	Yes
Availability of exclusive space /room	Yes
E-journal databases	RGPV Consortium, National Digital Library of India, (sponsored by MHRD), DELNET,INVENTI journals
No. of Educational CDs	125

### E-Library (Electronic/On-line resources/e-resource)

E-library provides collaborative search of all type of e-resources/on-line resources such as e-journals and books

- **e-Books**

Library procured different type of e-books, online books for students and faculty via IP range in the campus. Student can also be accessing various types of e-books such as text books and reference books in the electronic form.

### Electricity backup:

During power failures, the electricity backup is provided using a generator of 125 KVA.

### SERVICES

Membership All the students, faculty members, research scholars & administrative staff can register themselves for the membership of the library. The membership form is available at the circulation counter and the same is required to be attested by the Head of the Department/Section.

The number of books borrowed by users is as follows: Category	Number of Books	Duration
Faculty	10	30 days
Research Scholar	05	15 days
Student	03	15 days
Supporting Staff	02	15 days

Name of the Internet provider	Fibernet Solution Private Limited
Available band width	100 Mbps
WiFi availability	Yes
Internet access in labs, classrooms, library and offices of all Departments	Available
Security arrangements	Firewall, PF SENSE Server, Anti-Virus

**Annexure I**  
**(A) PROGRAM OUTCOME (POs)**  
**ANNEXURE I: PROGRAM OUTCOMES**

- 1. 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.
- 2. 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.
- 3. 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.
- 4. Modern tool usage:** Learn, select, and apply appropriate methods and procedures, resources, and modern pharmacy-related computing tools with an understanding of the limitations.
- 5. 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.
- 6. 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).
- 7. 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.
- 8. 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.
- 9. 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.
- 10. 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.
- 11. 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.

## Declaration

The head of the institution needs to make a declaration as per the format given -

- I undertake that, the institution is well aware about the provisions in the NBA's accreditation manual concerned for this application, rules, regulations, notifications and NBA expert visit guidelines in force as on date and the institutes shall fully abide by them.
- It is submitted that information provided in this Self Assessment Report is factually correct.
- I understand and agree that an appropriate disciplinary action against the Institute will be initiated by the NBA. In case, any false statement/information is observed during pre-visit, visit, postvisit and subsequent to grant of accreditation.

**Head of the Institute**

Name : Dr Balkrishna Dubey

Designation : Principal

Signature :



Seal of The Institution :

**Technocrats Institute of Technology-Pharmacy**  
Anand Nagar, Bhopal

**Place :** Bhopal

**Date :** 22-05-2024 18:39:16

