SUBMISSION OF E-SELF ASSESSMENT REPORT (E-SAR) FOR UNDER GRADUATE PHARMACY PROGRAM (FIRST TIME ACCREDITATION)

By

Kai. Yashodabai Dagadu Saraf Charitable Trust

College of Pharmacy

(Approved by A.I.C.T.E. PCI New Delhi, Recognized by Govt. Of Maharashtra Affiliated to Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon.)

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To

National Board of Accreditation

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KAI. YASHODABAI DAGADU SARAF CHARITABLE TRUST's
COLLEGE OF PHARMACY
ISO 9001 : 2015 Certified Institute
(Approved by AICTE, PCI, New-Delhi; Govt. of Maharashtra & Affiliated to KBC North Maharashtra University, Jalgaon)
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Mr. P. D. Saraf President
Mr. S. P. Ingale Joint-Secretary
Prof. (Dr.) P. R. Patil M. Pharm, Ph. D. Principal

Ref. No. : COPHS / 2607 / 2019 Date : 16 / 02 / 2019

To,
Member Secretary,
National Board of Accreditation,
NBCC Place, East tower, 4TH floor
Bhishma Pitamah Marg, Pragati Vihar
New Delhi-110003, INDIA

Respected Sir/Madam,

Subject: KYDSCT'S College of Pharmacy, Sakegaon, Bhusawal – 425201, submission of e-Self Assessment Report (eSAR)-Institutional Assesment and accreditation By NBA –Regarding

Reference application Number: **3023-05/07/2018**

Dear sir,

With reference to subject cited and reference above, herewith we are submitting e-Self Assessment Report (e-SAR). The above said SAR is uploaded on NBA website (www.nbaind.org) and also on our college website (www.bpharmacysakegaon.org). Self Assessment Report (e-SAR) of KYDSCT'S College of Pharmacy, Sakegaon, Bhusawal – 425201, Dist-Jalgaon, Maharashtra is hereby submitted for your kind consideration for Institutional Assessment and Accreditation by NBA through peer team.

This is for your kind information.

Thanking you.

KYDSCT'S College of Pharmacy Sakegaon 425201 Maharashtra
Office Seal

Yours faithfully,
Principal
College of Pharmacy
Sakegaon Bhusawal. Dist. Jalgaon

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SelfAssessment Report Committee

Sr.No	Staff Name	Qualification	Designation
1	Dr. P. R. Patil	M.Pharm PhD	Principal
2	Dr. S. P. Warke	M.Pharm PhD	NBA Coordinator
3	Dr. D.D. Kumbhar	M.Pharm PhD	Asso Prof
4	Dr. U. B. Gandagule	M. Pharm PhD	Asso Prof
5	Mr. K.G. Ingale	M. Pharm	Asst Prof
6	Mr. R. G. Jadhav	M. Pharm	Asst Prof
7	Mr. S. S. Patil	M. Pharm	Asst Prof
8	Mrs. B. Y. Rane	M. Pharm	Asst Prof
9	Mr. S. W. Rangari	M. Pharm	Asst Prof
10	Mrs.U.M.Sonawane	M. Pharm	Asst Prof
11	Mr. S.A.Nagdev	M. Pharm	Asst Prof

PART A: Institutional Information

PART A: Institutional Information

1. **Name and Address of the Institution:**

KYDSCT's COLLEGE OF PHARMACY, SAKEGAON, BHUSAWAL – 425201

2. **Name and Address of the Affiliating University:**

The Registrar, Kavayitri Bahinabai Chaudhari North Maharashtra University, P. O. Box No. 80,Umavi Nagar,Jalgaon - 425001 (M.S.) India

STD Code: 0257, Tel. No. **2257250** Fax No.: **2257250**

E.Mail: **sfc@nmuj.digitaluniversity.ac**

Website: http://www.nmu.ac.in

3. **Year of Establishment:** 2007

4. **Type of the Institution:**

University	
Deemed University	
Autonomous	
Affiliated	✓
Any Other (Please Specify)	

5. **Ownership Status:**

Central Government	
State Government	
Grant-in-Aid	
Self-Financing	✓
Trust	
Society	
Section 25 company	
Any other (Please Specify)	

Provide Details:

Society Registration Number: E-724(Jalgaon)

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

Name of the Institution(s)	Year of Establishment	Programs of Study	Location
K.Y.D.S.C.T.'s Institute of Management studies	2010-2011	MBA	Sakegaon

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

Sr.No	Program Name	Year of Start	Intake	Increase in intake, if any	Year of increase	AICTE Approval	Accreditation Status*
1	B. Pharm	2007-08	**60**	-	-	Yes	Applying first time

2	M. Pharm	2011-12	**36**	---	---	Yes	Eligible but not applied
3	D. Pharm	2013-14	**60**	---	---	Yes	Eligible but not applied

* ***Write applicable one***

√	*Applying first time*
	Granted provisional accreditation for two years for the period(specify period)
	Granted accreditation for 5 years for the period (specify period)
	Not accredited (specify visit dates, year)
	Withdrawn (specify visit dates, year)
	Not eligible for accreditation
	Eligible but not applied

Note: *Add rows as needed*

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

Sr.No	Programme Name
1	Under Graduate Pharmacy(B.Pharmacy)

9. Total Number of employees:

A. Regular* Faculty and Staff

Items		2018-19		2017-18		2016-17	
		Min	**Max**	**Min**	**Max**	**Min**	**Max**
Faculty in Pharmacy	**M**	14	15	12	13	12	16
	F	8	8	4	5	3	3
Non-Teaching Staff	**M**	16	17	14	16	14	14
	F	1	1	1	2	1	1

**Means-*

Full time on roll with prescribed pay scale. An employee on contract for a period of more than two years and drawing consolidated salary equal or more than applicable grosssalary shall only be counted as a regular employee.

Prescribed pay scales mean pay scales notified by the AICTE/Central Govt. and implementation as prescribed by the State Govt. In case State Govt. prescribes lesser consolidated salary for a particular cadre then same *will be considered as reference while counting faculty as a regular faculty.*

CAY: Current Assessment Year

CAYm1: (Current Assessment Year minus 1)

CAYm2: (Current Assessment Year minus 2)

B.Contractual Staff (Not covered in Table A):

Items		2018-19		2017-18		2016-17	
		Min	**Max**	**Min**	**Max**	**Min**	**Max**
Faculty in Pharmacy	**M**	-	-	1	1	-	-
	F	1	1	2	2	1	1
Non-Teaching Staff	**M**	-	-	-	-	-	-
	F	-	-	-	-	-	-

10. Total number of pharmacy students: Undergraduate

Student Numbers	2018-19	2017-18	2016-17
Total no. of Boys	177	153	157
Total no. of Girls	85	69	64
Total no. of Students	262	222	221

11. Vision of the Institution:

To provide quality education to meet the highest ethical standards of professionalism to achieve excellence in academic and research activities and thereby cater the health need of society.

12. Mission of the Institution:

To be the best among pharmacy colleges in the field of pharmaceutical education, academics and research.

1. To produce skilled pharmacy professionals by prompting high quality education, training and research.
2. To provide enhancement of creativity and motivation that drives the institutional members towards inculcating professionalism.
3. To make all efforts to update and upgrade faculties and to encourage overall development of students and staff.

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

i. Head of the institute: Principal

Name: Dr. Parag Ramchandra Patil

Designation: Principal

Mobile No: 9890864219, 8459605644

Email id:drparagrpatil@gmail.com

ii. NBA coordinator:

Name: Dr. SamikshaPrashantWarke

Designation: Associate Professor

Mobile No: 9890187435

Email id: samiksha28@gmail.com

PART B: Criteria Summary

Name of the Program: B. Pharmacy

CRITERION NO.	CRITERIA	MARK/WEIGHTAGE
	Program Level Criteria	
1.	Vision, Mission and Program Educational Objectives	50
2.	Program Curriculum and Teaching –Learning Processes	150
3.	Course Outcomes and Program Outcomes	100
4.	Student's Performance	180
5.	Faculty Information and Contributions	175
6.	Facilities	120
7.	Continuous Improvement	75
	Institute Level Criteria	
8.	Student Support Systems	50
9.	Governance, Institutional Support and Financial Resources	100
	Total	**1000**

NOTE: In the document wherever word 'Semester' has been used, same shall be read as 'Semester or Annual'. The Institutions may use appropriately whichever is applicable to them.

SELF ASSESSMENT REPORT (SAR)

Criterion 1 Vision, Mission and Program Educational Objectives 50

1.1. State the Vision and Mission 05

(Vision statement typically indicates aspirations and Mission statement states the broad approach to achieve aspirations.)

Vision:

"To provide quality education to meet the highest ethical standards of professionalism to achieve excellence in academic and research activities and thereby, cater the health need of society."

Mission:

"To be the best among pharmacy colleges in field of pharmaceutical education, academics and research."

The mission statement mentioned above is a concise statement. The statement is applied to the program B. Pharmacy. A few important keywords are identified (broad approach) and defined in order to formulate program educational objectives (PEOs).
The program is intended to impart pharmaceutical education. The highlights are:
a) **International standards, M1:** To produce skilled pharmacy professionals by promoting high quality education, training and research.
b) **Highest caliber of Professionalism, M2**: To provide enhancement of creativity and motivation that drives the institutional members towards inculcating professionalism.
c) **Upgrading staff and student values, M3**: To make all efforts to update and upgrade faculties and to encourage overall development of students and staff.
These highlights have become the basis to vitalize the educational program and processat Kai. Yashodabai Dagadu Saraf Charitable Trust's College of Pharmacy, Sakegaon.

1.2.State the Program Educational Objectives (PEOs) 05

(*State the Program Educational Objectives (3 to 5) of the program seeking accreditation*)

A). **PEO1:** To produce pharmacy graduates with strong fundamental concepts and high technical competence in pharmaceutical sciences and technology, who shall be able to use these tools in pharmaceutical industry and/or institutes where ever necessary for success.

B). **PEO2:**Graduates will develop an ability to visualize and work on multidisciplinary tasks. They will be able to demonstrate necessary skills (e.g. working independently, time management and organizational skills).They will demonstrate an adaptable, flexible and effective approach towards organizational development.

C). **PEO3:**Graduate will be able to think logically and solve the problems, will develop an ability to conduct, analyze and interpret data of pharmaceutical experiments in various departments (e.g.: Drug discovery, Formulation & Development, Production, Quality control & Quality assurance etc) as per the needs of pharmaceutical industries.

D). **PEO4:** Graduates will develop interpersonal skills such as influencing others, negotiating and working with others, conflict management and leading others through the problem-solving process. They will be able to lead and function both individually and as a member of a team.

E). **PEO5:** Graduates will demonstrate the impact of pharmacy knowledge and research on the society and also will be aware of modern issues. They will create awareness of healthcare issues through interactions with others and will gain a sense of self-respect towards community and citizenship.

1.3. Indicate where and how the Vision, Mission and PEOs are published and disseminated among stakeholders. 15

(Describe where (websites, curricula, posters etc.) the Vision, Mission and PEOs are published and detail the process which ensures awareness among internal and external stakeholders with effective process implementation)(Internal stakeholders may include Management, Governing Board Members, faculty, support staff, students etc. and external stakeholders may include employers, industry, alumni, funding agencies, etc.)

Every effort is made to ensure that the Vision and Mission of the college is communicated effectively to all stakeholders namely students, faculty, parents, industry, regulating authorities, alumni, management, etc.

The Vision and Mission statements are published and disseminated through the following methods.

- Print Media: College brochure, Lab records and lab manuals.
- Electronic Media: College website, Mobile Application.
- Display Boards: Notice boards, exclusive display boards.
- Laboratory and classrooms: Departmental laboratories, Staffroom & HOD Chamber and Classrooms.
- Direct Communication: Orientation programmers to fresher's/parents, Faculty meeting, induction programmers to staff members.

The college makes several efforts to ensure that the B. Pharmacy PEOs are communicated effectively to all stakeholders, namely students, faculty, parents, industry, alumni, management, etc.

The PEOs are published and disseminated through the following methods.

- **Print Media:** College brochure, Lab records and lab manuals.
- **Electronic Media:** College website, Mobile Application.
- **Display Boards:** Notice boards, exclusive display boards.
- **Laboratory and classrooms:** Departmental laboratories, Staffroom & HOD Chamber and Classrooms.
- **Direct Communication:** Orientation programmers to fresher's/parents, Faculty meeting, induction programmers to staff members.

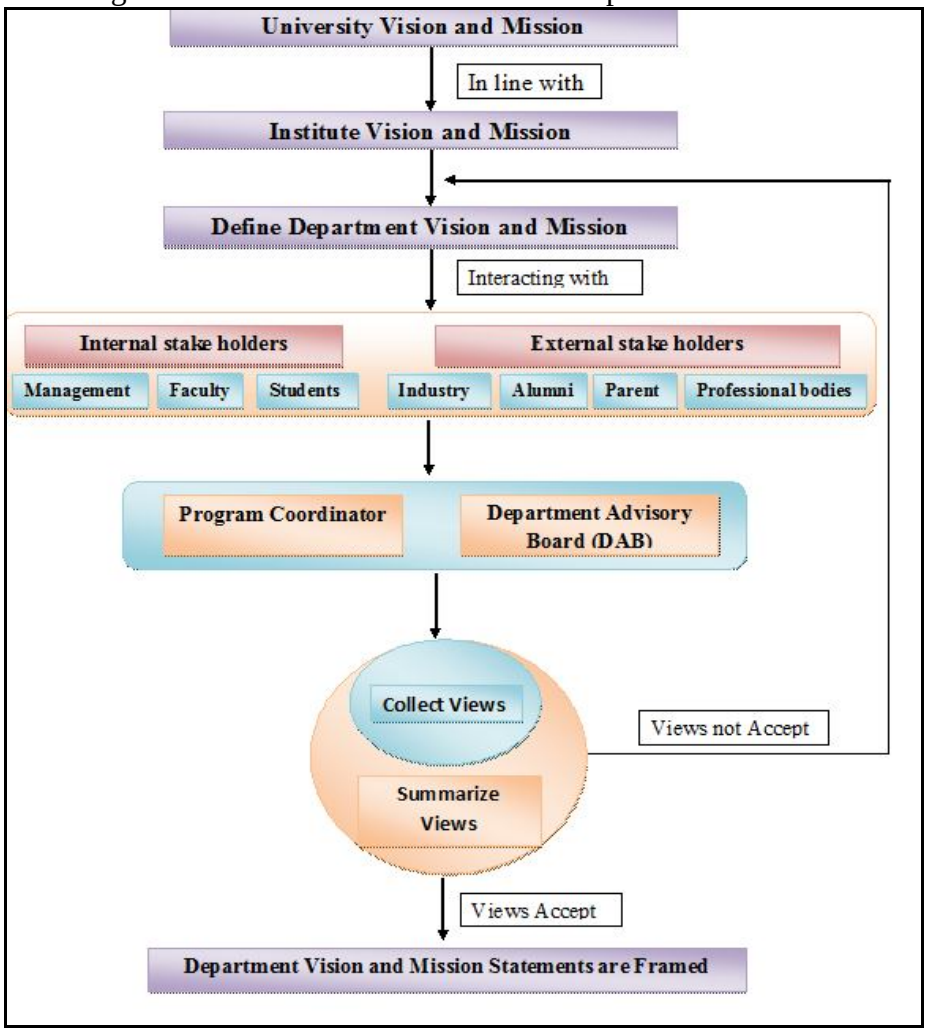
1.4. State the process for defining the Vision & Mission and PEOs of the Program 10

(*Articulate the process for defining the Vision, Mission and PEOs of the program)*

The college has established the Vision and Mission statements through consultative process involving the stake holders; internal stake holders (management, Governing body members, faculty, support staff, students, etc.) and external stake holders (employees, industry, alumni) considering the scope and growth of the college and the future societal needs.

The process to arrive at the Mission and Vision of the college is as follows.

- SWOT analysis was conducted by considering internal stakeholders including management and alumni.
- The information thus collected was reviewed by faculty to develop and cultivate a strong and meaningful vision and mission.
- The mission was also finalized based on the following components.
  - Quality education,
  - Professional career,
  - higher education,
  - Research,
  - Creativity and Lifelong learning.
- Processes for Defining the Vision and the Mission of the Department is shown in the figure below:



The process to arrive at the Mission and Vision of the college is as follows.

1. This process reviews the aspirations of our college in the light of similar statements made by premier educational institutions running similar programs.
2. The feedback from all stake holders is considered.
3. The management has conceived the ideas from their pharmacy professional background and pharmaceutical industry business backdrop, in order to cater the needs of the society effectively.
4. These are updated and processed through institutional development and monitoring committee.
5. The statements are placed for approval by the governing body and final statements are published and disseminated. The inputs from stake holders, faculty, alumni, industry, and professional bodies are considered to formulate our course PEOs. Formatted survey data is utilized to gather comprehensive information for scrutiny and analysis. Formal and informal visits by the alumni gives scope for direct personal interaction, discussion and also give an opportunity to collect and record information required for improving the programme based on their professional experiences. A similar format can be used in other cases.

Internal stake holders

Management: Management is interested to impart quality education to the students. For this purpose, the best infrastructure and qualified faculty members are arranged. Sophisticated equipment's are made available and the latest developments are familiarized to the students. Thus, the management is looking to attract the best students and also provide best out-puts.

Faculty: The faculty members of the department are one of the key stake holders empowered to evaluate the feedback received from all other stake holders, proposing improvements in the curriculum, the outcomes and objectives, and in implementing any changes. All changes in the curriculum are initiated by the faculty. Additionally, all the faculty members continually interact with all of the other stakeholders, allowing for the opportunities to receive, apart from formal, the informal feedback also into the process.

Supporting staff: The nonteaching staff (technical and administrative) extends cooperation and support for achieving the PEOs. These are also ground level employees, who understand the needs and accordingly make arrangement at the laboratory level, in-terms of inventory, receipts, consumption of chemicals and glassware as well as maintenance of equipment. The phrases such as international standards and research, allow them to prepare for achieving objectives.

Students: Students are the direct beneficiary stake holders. Students seek quality environment at the college, which includes good infrastructure, qualified faculty and conductive learning environment. The teaching-learning process should enhance their capabilities and value addition is expected. Students expect that their qualifications are recognized for employment in reputed industries and Govt. organizations, for admission into best educational institution, if opted for higher education or prepare one for career of own choice.

External stake holders

Industry/Employers: Input from employers plays a vital role in the formulation and review of the PEOs, which reflect on the success and the relevance of the designed courses. They give us early indications of changes or new trends in the profession. The information is gathered from employers using both formal surveys and informal interactions. In such interactions, employers are inquired about their views on the needs and direction of growth of the domain and correspondingly what the goals should be in educating the students.

Alumni: The alumni provide vital inputs for drafting and reviewing our PEOs. The inquiry includes opinion on the current courses, its shortfall, suggestive changes for revising curriculum, any advice they have to give to the current students, and what they have to do for succeeding in their careers.

Affiliating university: The College is affiliated to KBC North Maharashtra University. The university is a body that monitors the academic programmers and approves the award of degree. Therefore, the programme objectives and outcomes of the college should match with that of the university. Though several bodies are available from the university to oversee the academic program, the KBC North Maharashtra University nominated member to the Governing body to the college is the close contact. Therefore, through the member, the college seeks guidance for reviewing the PEOs.

Professional bodies: Professional bodies like IPA, APTI and IGPA periodically express the status of industry, which are noted and utilized during formulating or reviewing the PEOs.

The PEOs are established through the following steps.

Step 1: Vision and Mission of the college is taken as the basis for formulating the PEOs.

Step 2: All documents relating to the programme are reviewed. These include instructional material, which is collected for all the courses and reviewing. The outcomes in terms of courses are listed for the programme and the graduate attributes are taken into account. The information is collected from stake holders, namely students, faculty, alumni, industry, etc., as mentioned above.

Step 3: In the light of current status of the institute, teaching-learning environment, and based on the review of feedback, PEOs are formulated by the staff and the head of the institution.

Step 4: The proposed PEOs are reviewed and recommended at the institution development and monitoring committee. These are further sent to the Governing Body.

Step 5: The member secretary (Principal) submits the recommendations to the Governing Body. After approval by the Governing Body, the PEOs are given wide publicity.

We convey Vision and Mission during the first day of each academic semester by HOD & respective class coordinators and also convey the same through departmental associations such as departmental forum. Apart from these Vision and Mission are disseminated to all the stakeholders of the program through faculty meetings, student awareness workshops, student induction program, Alumni meetings and parent meetings.

Input to formulation and review of PEO

The department draws upon constituents input to construct and periodically revise our PEO's. Data are collected from constituents in various ways, some formal, systematic, and some not. We have learned that some modes of input are much more effective than others in generating useful information, and constantly improving our processes for gathering input from constituencies in response to these experiences.

Current Students:

We consider the input of our current students in the establishment and review our PEO's, with their knowledge or experience in the academics.

Employee:

Feedback from employers plays a key role in the formulation and review of the PEO's. Employee is at the leading edge of the practice of the profession, and they give us early indications of new trends in it. In addition, we find that they have general opinions about the preparation of competent pharmacy professionals as a whole, and this is useful in guiding the formulation of our PEO's. We gather information from employees via both formal surveys and various informal activities. In these interactions with employees we enquire about their views on the pharmacy education and correspondingly what our goals should be in educating our students. Regular input from employees is obtained via the following interactions.

Employer Survey:

The survey is used to inquire about an employee perception regarding both the appropriateness and achievement (described elsewhere) of our PEO. In short, we present our PEO and ask the employee to rank the appropriateness of each on a 1 to 3 scale (1 = not appropriate, 3 = extremely appropriate). In the

future, we plan to extend our survey efforts to a broader audience, including individuals that supervise our cooperative students, recruiters that visit campus, and direct supervisors of our alumni.

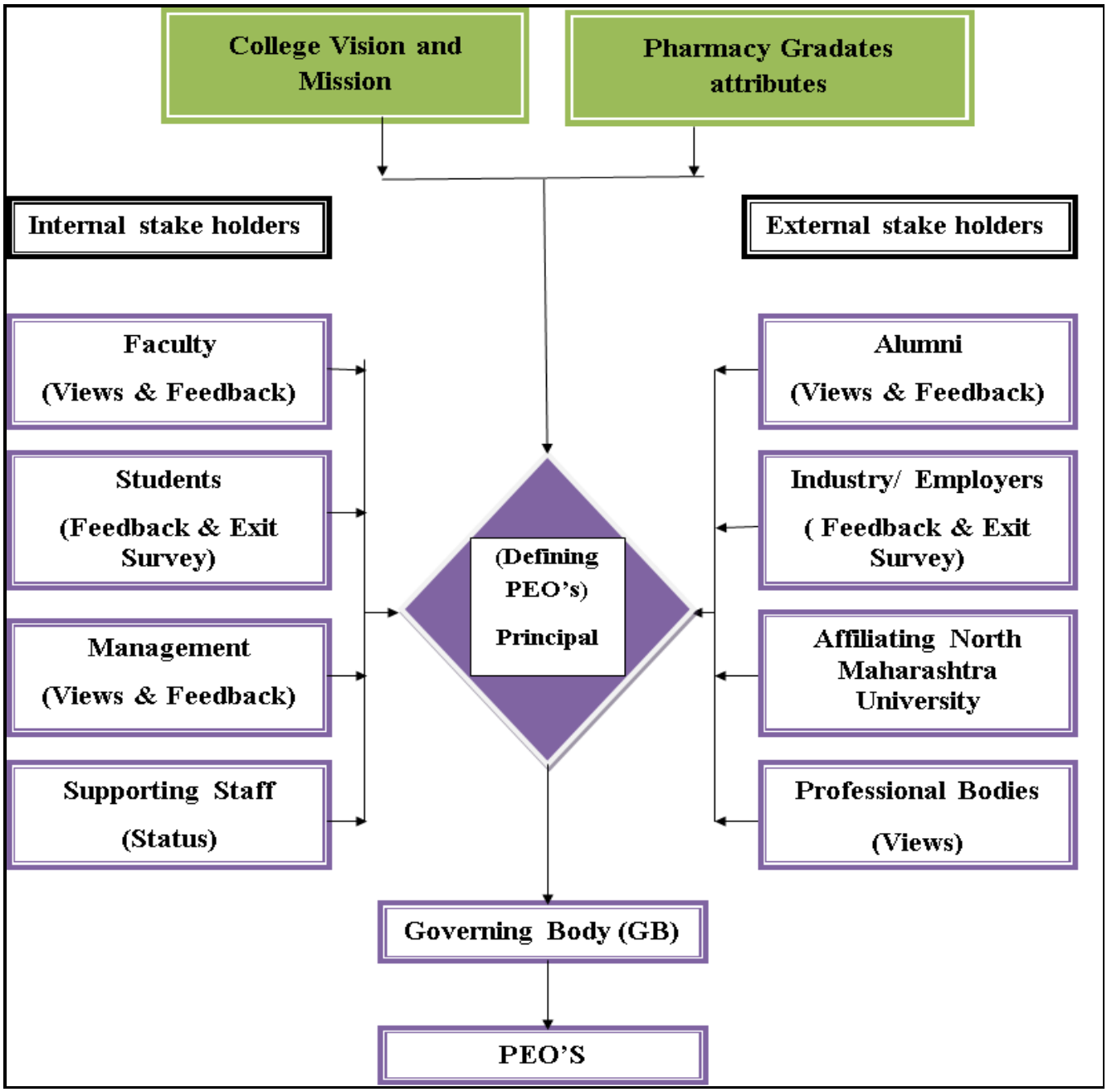
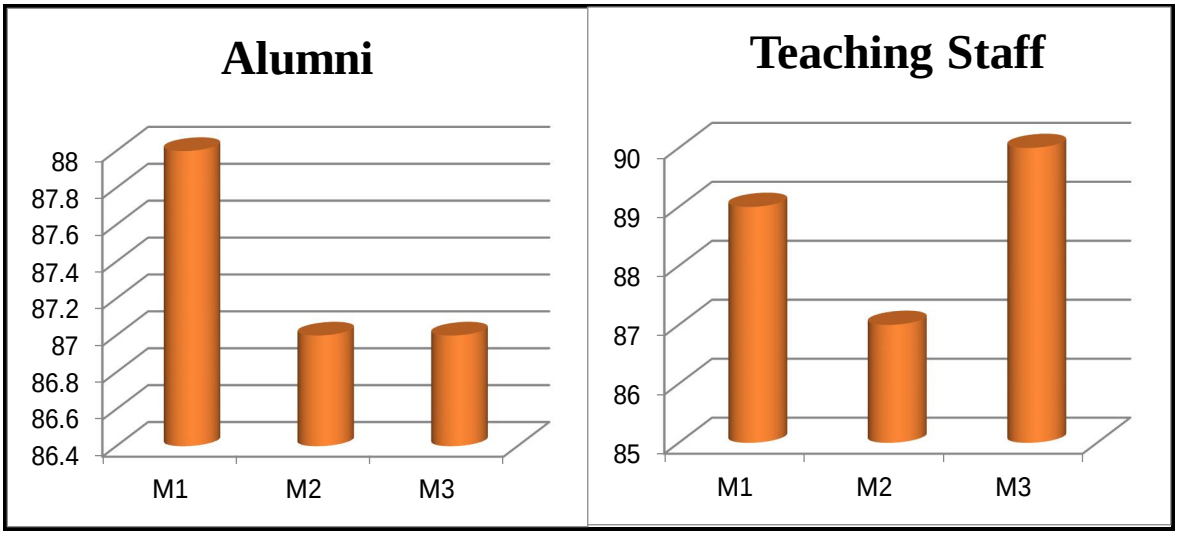


Figure 1.1: The process of establishing PEOs

1.5. Establish consistency of PEOs with Mission of the Institute **15**

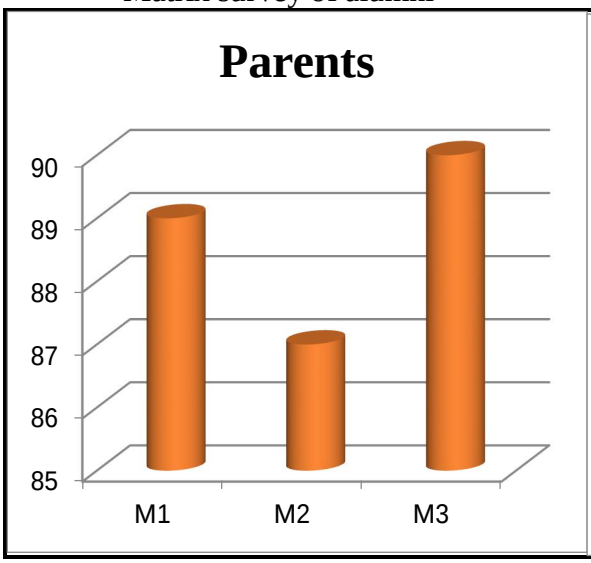
(*Generate a "Mission of the Institute – PEOs matrix" with justification and rationale of the mapping*)

The PEOs are consistent with the mission of the college, which can be tested by mapping, for obtaining the evidence. The PEOs should reflect the expected accomplishments of the graduates, a few years after their graduation. These objectives are consistent with the KYDSCTS COP, Sakegaon, and mission statement, as is evident from the statements below.

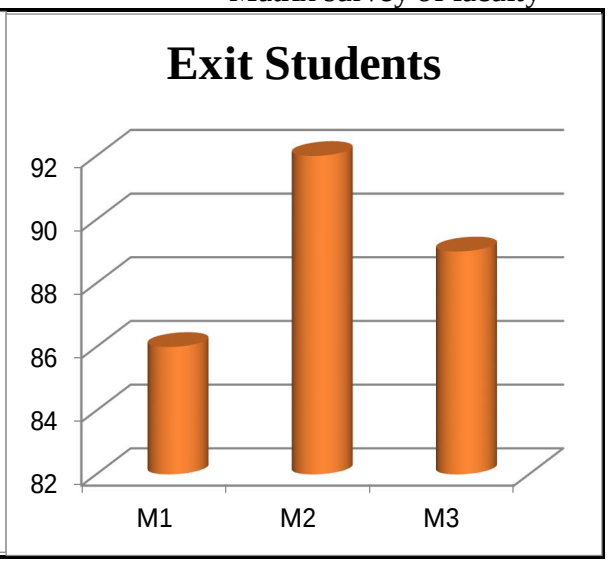


Matrix survey of alumni

Matrix survey of faculty



Matrix survey of Parents



Matrix survey of Exit Students

Figure 1.2: The matrix of mission statements *vs* PEO's

Total consistency of PEOs with Mission of the Institute

PEO	% Consistency with the Mission statements				
	Alumni	Teaching	Parents	Exit Students	Average
1	86	88	89	90	88.25
2	85	80	86	89	85.00
3	85	80	87	85	84.25
4	90	82	90	92	88.50
5	89	82	88	88	86.75

All PEO's are satisfied to the tune of 78 to 88 % for obtaining consistency of mission statements by the stake holders' survey.

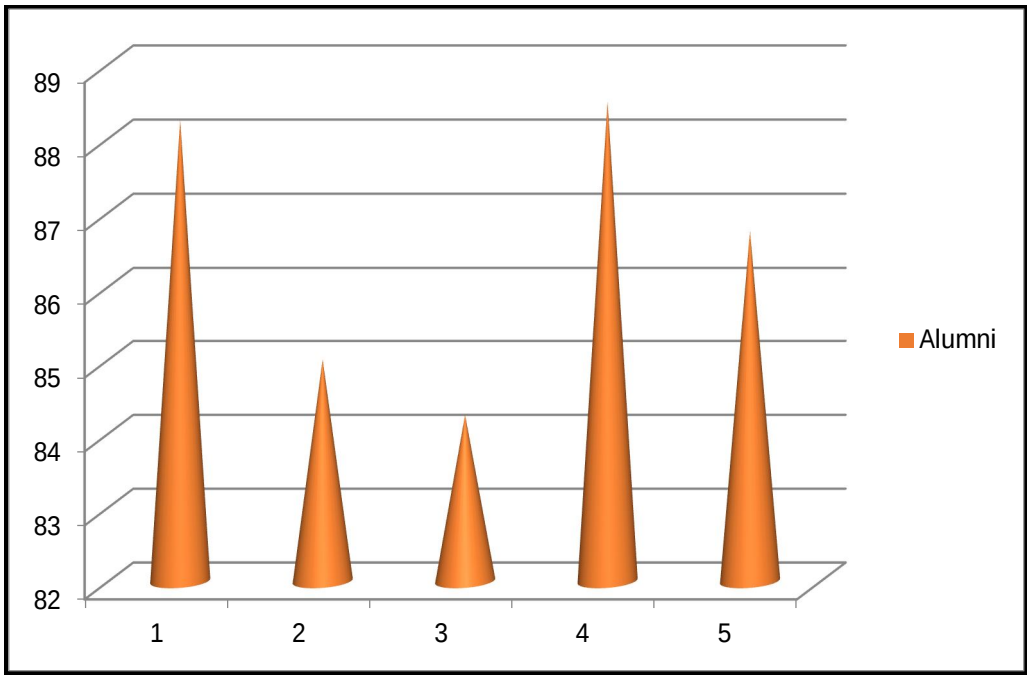


Figure 1.3: Average percentage consistency profiles of PEO's

The pharmacists are being modeled for career in industrial practices, and leadership by providing broad-based pharmacy education of highest caliber, through communication and lifelong learning elements. This also develops and strengthens their ability to solve the practical problems of social relevance. The program educational objectives are deemed to be consistent with NBA criteria for accrediting pharmacy course.

Criterion 2 Program Curriculum and Teaching–Learning Processes 150

2.1. Program Curriculum 40

2.1.1 Delivery of Syllabus Contents and compliance of the curriculum for attainment of POs10

(State the contents of the syllabus; about the course/learning material/content/Laboratory experiments/projects etc. also mention identified curriculum gaps, if any)

Note: In case all POs are being demonstrably met through University Curriculum then 2.1.2 will not be applicable and the weightage of 2.1.1will be 30.

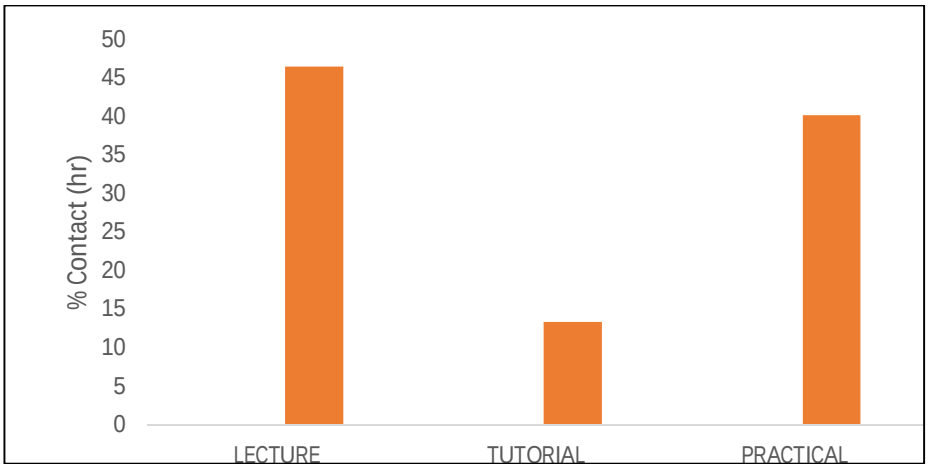
KYDSCT's College of Pharmacy, Sakegaon, Bhusawal established in year 2007 and approved by AICTE New Delhi and is affiliated to KBC North Maharashtra University Jalgaon. All the courses, B. Pharmacy and M. Pharmacy (two specializations) are affiliatedKBCNorth Maharashtra University Jalgaon. As per the regulations of KBC North Maharashtra University, II, III and IV years B. Pharmacy is running, and from year 2017 the First year B Pharmacy is running under the regulations of Pharmacy council of India (PCI). All the said courses are in semester pattern total 8 semesters for B Pharmacy and 4 semesters for M pharmacy. University includes theory, laboratory experiments, assignment, oral presentation or seminars for the said course which is well defined for theory and laboratory experiments. All the subjects of B Pharmacy and m pharmacy are correlates with the program outcomes (POs) envisaged by NBA. However, gaps are identified and attempted to fill with relevant teaching-learning methods, so as to further improve the program educational objectives (PEO's) and program outcomes (PO's).

Contents of syllabus – courses and modes of teaching (2018-2019)

Course code	Course title	Total numbers of contact hours				Credits/marks
		Lecture	Tutorial	Practical	Total	
BP101T	Human Anatomy and Physiology I	3	1	-	4	100
BP102T	Pharmaceutical Analysis I	3	1	-	4	100
BP103T	Pharmaceutics I	3	1	-	4	100
BP104T	Pharmaceutical Inorganic Chemistry	3	1	-	4	100
BP105T	Communication skills	2	-	-	2	50
BP106RBT	Remedial Biology	2	-	-	2	50
BP106RMT	Mathematics	2	-	-	2	50
BP107P	Human Anatomy and Physiology	-	-	4	4	50
BP108P	Pharmaceutical Analysis I	-	-	4	4	50
BP109P	Pharmaceutics I	-	-	4	4	50
BP110P	Pharmaceutical Inorganic Chemistry	-	-	4	4	50
BP111P	Communication skills	-	-	2	2	50
BP112RBP	Remedial Biology	-	-	2	2	50
BP201T	Human Anatomy and Physiology II	3	1	-	4	100
BP202T	Pharmaceutical Organic Chemistry I	3	1	-	4	100
BP203T	Biochemistry	3	1	-	4	100
BP204T	Pathophysiology	3	1	-	4	100
BP205T	Computer Applications in Pharmacy	3	-	-	3	75
BP206T	Environmental sciences	3	-	-	3	75
BP207P	Human Anatomy and Physiology II	-	-	4	4	50
BP208P	Pharmaceutical Organic Chemistry I	-	-	4	4	50

BP209P	Biochemistry	-	-	4	4	50
BP210P	Computer Applications in Pharmacy	-	-	2	2	25
BP301T	Pharmaceutical Organic Chemistry II	3	1	-	4	100
BP302T	Physical PharmaceuticsI	3	1	-	4	100
BP303T	Pharmaceutical Microbiology	3	1	-	4	100
BP304T	Pharmaceutical Engineering	3	1	-	4	100
BP305P	Pharmaceutical Organic Chemistry II	-	-	4	4	50
BP306P	Physical Pharmaceutics I	-	-	4	4	50
BP307P	Pharmaceutical Microbiology	-	-	4	4	50
BP308P	Pharmaceutical Engineering	-	-	4	4	50
BP401T	Pharmaceutical Organic Chemistry III	3	1	-	4	100
BP402T	Medicinal Chemistry I	3	1	-	4	100
BP403T	Physical Pharmaceutics II	3	1	-	4	100
BP404T	Pharmacology I	3	1	-	4	100
BP405T	Pharmacognosy and Phytochemistry I	3	1	-	4	100
BP406P	Medicinal Chemistry I	-	-	4	4	50
BP407P	Physical Pharmaceutics II	-	-	4	4	50
BP408P	Pharmacology I	-	-	4	4	50
BP409P	Pharmacognosy and Phytochemistry I	-	-	4	4	50
T 3.5.1.	Pharmaceutical Chemistry – VI (Medicinal Chemistry - I)	4	1	-	5	100
T 3.5.2.	Pharmaceutics – VI(Pharmaceutical Technology I)	4	1	-	5	100
T 3.5.3.	Pharmacology – I	4	1	-	5	100
T 3.5.4.	Pharmacognosy –IV	3	1	-	4	100
T 3.5.5.	Pharmaceutical Analysis-II	3	1	-	4	100
P 3.5.1.	Pharmaceutical Chemistry – VI (Medicinal Chemistry - I)	-	-	3	3	100
P 3.5.2.	Pharmaceutics – VI (Pharmaceutical Technology I)	-	-	3	3	100
P 3.5.3.	Pharmacology – I	-	-	3	3	100
P 3.5.4.	Pharmacognosy –IV	-	-	3	3	100
P 3.5.5.	Pharmaceutical Analysis-II	-	-	3	3	100
T 3.6.1.	Pharmaceutical Chemistry – VII (Medicinal Chemistry -II)	4	1	-	5	100
T 3.6.2.	Pharmaceutics –VII (Biopharmaceutics & Pharmacokinetics)	3	1	-	4	100
T. 3.6.3	. Pharmacology –II	4	1	-	5	100
T 3.6.4.	Pharmacognosy – V (Chemistry of Natural Products)	3	1	-	4	100
T 3.6.5.	PharmaceuticalJurisprudence& Ethics	4	1	-	5	100
P 3.6.1.	Pharmaceutical Chemistry – VII (Medicinal Chemistry - II)	-	-	3	3	100
P. 3.6.2.	Pharmaceutics –VII (Biopharmaceutics & Pharmacokinetics)	-	-	3	3	100
P 3.6.3.	Pharmacology –II	-	-	3	3	100
P 3.6.4.	Pharmacognosy – V (Chemistry of Natural Products)	-	-	3	3	100

P.3.6.6	Project Report	4	1	-	5	100
T 4.7.1.	Pharmaceutics – VIII (Pharmaceutical Technology - II)	3	1	-	4	100
T 4.7.2.	Pharmaceutical Chemistry- VIII (Medicinal Chemistry – III)	3	1	-	4	100
T 4.7.3.	Pharmacology –III	3	1	-	4	100
T.4.7.4.	Pharmaceutical Analysis-III	3	1	-	4	100
T 4.7.5.	Pharmaceutical Biotechnology	3	1	-	4	100
T 4.7.6.	Pharmaceutical Industrial Management	3	1	-	4	100
P. 4.7.1.	Pharmaceutics – VIII (Pharmaceutical Technology - II)	-	-	3	3	100
P 4.7.2	Pharmaceutical Chemistry-VIII (Medicinal Chemistry – III)	-	-	3	3	100
P 4.7.3.	Pharmacology –III	-	-	3	3	100
P.4.7.4.	Pharmaceutical Analysis-III	-	-	3	3	100
T 4.8. 1.	Pharmaceutics – IX	3	1	-	4	100
T 4.8.2.	Pharmaceutical Analysis – IV	3	1	-	4	100
T 4.8.3.	Pharmaceutical Chemistry-IX (Medicinal Chemistry- IV)	3	1	-	4	100
T 4.8.4.	Pharmacognosy – VI	3	1	-	4	100
T.4.8.5.	Pharmacology - IV (Clinical Pharmacy & Drug Interactions)	3	1	-	4	100
T.4.8.6.	Elective(Theory)	3	1	-	4	100
P 4.8. 1	. Pharmaceutics – IX	-	-	3	3	100
P 4.8.2.	Pharmaceutical Analysis – IV	-	-	3	3	100
P 4.8.3.	Pharmaceutical Chemistry–IX (Medicinal Chemistry- IV)	-	-	3	3	100
P. 4.8.4.	Pharmacognosy – VI	-	-	3	3	100
P. 4.8.7.	Industrial training report	-	-	3	3	100
	Total	139	40	120	299	6575
	Percentage	46.48	13.37	40.13	100	



Graphical representation of percentage of contact hours (2018-19)

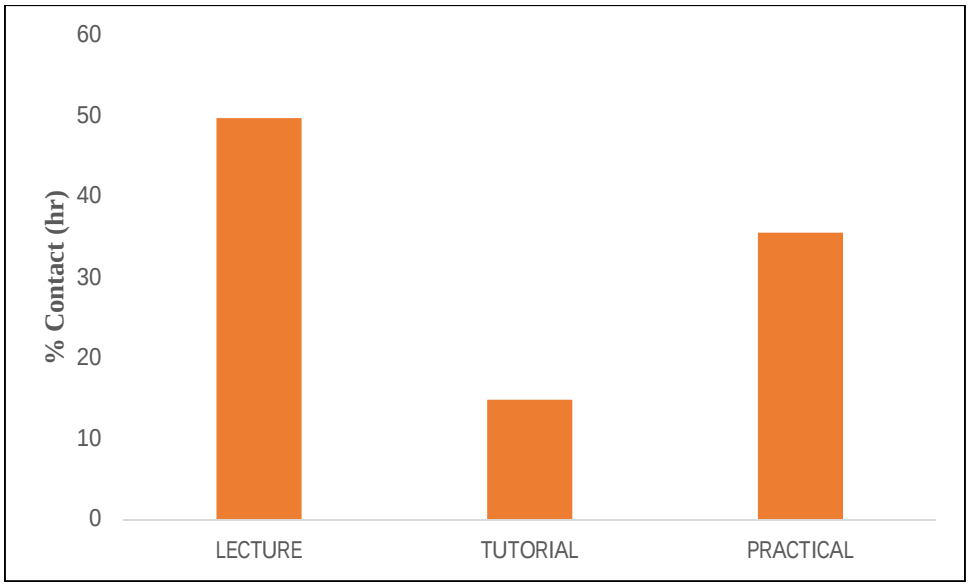
Contents of syllabus – courses and modes of teaching (2017-18)

Course code	Course title	Total numbers of contact hours				Credits/marks
		Lecture	Tutorial	Practical	Total	
BP101T	Human Anatomy and Physiology I	3	1	-	4	100
BP102T	Pharmaceutical Analysis I	3	1	-	4	100
BP103T	Pharmaceutics I	3	1	-	4	100
BP104T	Pharmaceutical Inorganic Chemistry	3	1	-	4	100
BP105T	Communication skills	2	-	-	2	50
BP106RBT	Remedial Biology	2	-	-	2	50
BP106RMT	Mathematics	2	-	-	2	50
BP107P	Human Anatomy and Physiology	-	-	4	4	50
BP108P	Pharmaceutical Analysis I	-	-	4	4	50
BP109P	Pharmaceutics I	-	-	4	4	50
BP110P	Pharmaceutical Inorganic Chemistry	-	-	4	4	50
BP111P	Communication skills	-	-	2	2	50
BP112RBP	Remedial Biology	-	-	2	2	50
BP201T	Human Anatomy and Physiology II	3	1	-	4	100
BP202T	Pharmaceutical Organic Chemistry I	3	1	-	4	100
BP203T	Biochemistry	3	1	-	4	100
BP204T	Pathophysiology	3	1	-	4	100
BP205T	Computer Applications in Pharmacy	3	-	-	3	75
BP206T	Environmental sciences	3	-	-	3	75
BP207P	Human Anatomy and Physiology II	-	-	4	4	50
BP208P	Pharmaceutical Organic Chemistry I	-	-	4	4	50
BP209P	Biochemistry	-	-	4	4	50
BP210P	Computer Applications in Pharmacy	-	-	2	2	25
T 2.3.1	Pharmaceutics-III (Physical Pharmacy-I)	3	1	-	4	100
T 2.3.2	Pharmaceutical Chemistry-IV (Organic Chemistry - II)	3	1	-	4	100
T 2.3.3	Pharmacognosy –II	3	1	-	4	100
T 2.3.4	Pharmaceutical Analysis – I	3	1	-	4	100
T 2.3.5	A P HE-II	3	1	-	4	100
T 2.3.6	Pathophysiology of Common Diseases-I	3	1	-	4	100
P 2.3.1	Pharmaceutics-III (Physical Pharmacy-I)	-	-	3	3	100
P 2.3.2	Pharmaceutical Chemistry-IV (Organic Chemistry - II)	-	-	3	3	100
P 2.3.3	Pharmacognosy –II	-	-	3	3	100
P 2.3.4	Pharmaceutical Analysis – I	-	-	3	3	100

P 2.3.5	A P HE-II	-	-	3	3	100
T 2.4.1	Pharmaceutics–IV (Physical Pharmacy-II)	3	1	-	4	100
T 2.4.2	Pharmaceutical Microbiology	3	1	-	4	100
T 2.4.3	Pharmacognosy – III	3	1	-	4	100
T 2.4.4	Pharmaceutics –V (Hospital Pharmacy)	3	1	-	4	100
T 2.4.5	Pharmaceutical Chemistry – V (Biochemistry)	3	1	-	4	100
T 2.4.6	Pathophysiology of Common Diseases-II	3	1	-	4	100
P 2.4.1	Pharmaceutics–IV (Physical Pharmacy-II)	-	-	3	3	100
P 2.4.2	Pharmaceutical Microbiology	-	-	3	3	100
P 2.4.3	Pharmacognosy – III	-	-	3	3	100
P 2.4.4	Pharmaceutics –V (Hospital Pharmacy)	-	-	3	3	100
P 2.4.5	Pharmaceutical Chemistry – V (Biochemistry)	-	-	3	3	100
T 3.5.1.	Pharmaceutical Chemistry – VI (Medicinal Chemistry - I)	4	1	-	5	100
T 3.5.2.	Pharmaceutics – VI(Pharmaceutical Technology I)	4	1	-	5	100
T 3.5.3.	Pharmacology – I	4	1	-	5	100
T 3.5.4.	Pharmacognosy –IV	3	1	-	4	100
T 3.5.5.	Pharmaceutical Analysis-II	3	1	-	4	100
P 3.5.1.	Pharmaceutical Chemistry – VI (Medicinal Chemistry - I)	-	-	3	3	100
P 3.5.2.	Pharmaceutics – VI (Pharmaceutical Technology I)	-	-	3	3	100
P 3.5.3.	Pharmacology – I	-	-	3	3	100
P 3.5.4.	Pharmacognosy –IV	-	-	3	3	100
P 3.5.5.	Pharmaceutical Analysis-II	-	-	3	3	100
T 3.6.1.	Pharmaceutical Chemistry – VII (Medicinal Chemistry -II)	4	1	-	5	100
T 3.6.2.	Pharmaceutics –VII (Biopharmaceutics & Pharmacokinetics)	3	1	-	4	100
T. 3.6.3	Pharmacology –II	4	1	-	5	100
T 3.6.4.	Pharmacognosy – V (Chemistry of Natural Products)	3	1	-	4	100
T 3.6.5.	Pharmaceutical Jurisprudence& Ethics	4	1	-	5	100

P 3.6.1.	Pharmaceutical Chemistry – VII (Medicinal Chemistry - II)	-	-	3	3	100
P. 3.6.2.	Pharmaceutics –VII (Biopharmaceutics & Pharmacokinetics)	-	-	3	3	100
P 3.6.3.	Pharmacology –II	-	-	3	3	100
P 3.6.4.	Pharmacognosy – V (Chemistry of Natural Products)	-	-	3	3	100
P.3.6.6	Project Report	4	1	-	5	100
T 4.7.1.	Pharmaceutics – VIII (Pharmaceutical Technology - II)	3	1	-	4	100
T 4.7.2.	Pharmaceutical Chemistry- VIII (Medicinal Chemistry – III)	3	1	-	4	100
T 4.7.3.	Pharmacology –III	3	1	-	4	100
T.4.7.4.	Pharmaceutical Analysis-III	3	1	-	4	100
T 4.7.5.	Pharmaceutical Biotechnology	3	1	-	4	100
T 4.7.6.	Pharmaceutical Industrial Management	3	1	-	4	100
P. 4.7.1.	Pharmaceutics – VIII (Pharmaceutical Technology - II)	-	-	3	3	100
P 4.7.2	Pharmaceutical Chemistry-VIII (Medicinal Chemistry – III)	-	-	3	3	100
P 4.7.3.	Pharmacology –III	-	-	3	3	100
P.4.7.4.	Pharmaceutical Analysis-III	-	-	3	3	100
T 4.8. 1.	Pharmaceutics – IX	3	1	-	4	100
T 4.8.2.	Pharmaceutical Analysis – IV	3	1	-	4	100
T 4.8.3.	Pharmaceutical Chemistry-IX (Medicinal Chemistry- IV)	3	1	-	4	100
T 4.8.4.	Pharmacognosy – VI	3	1	-	4	100
T.4.8.5.	Pharmacology - IV (Clinical Pharmacy & Drug Interactions)	3	1	-	4	100
T.4.8.6.	Elective(Theory)	3	1	-	4	100
P 4.8. 1	. Pharmaceutics – IX	-	-	3	3	100
P 4.8.2.	Pharmaceutical Analysis – IV	-	-	3	3	100
P 4.8.3.	Pharmaceutical Chemistry–IX (Medicinal Chemistry- IV)	-	-	3	3	100

P. 4.8.4.	Pharmacognosy – VI	-	-	3	3	100
P.4.8.7.	Industrial training report	-	-	3	3	100
	Total	148	43	118	309	7875
	Percentage	47.89	13.91	38.18	100	



Graphical representation of percentage of contact hours (2017-18)

Contents of syllabus – courses and modes of teaching (2016-17)

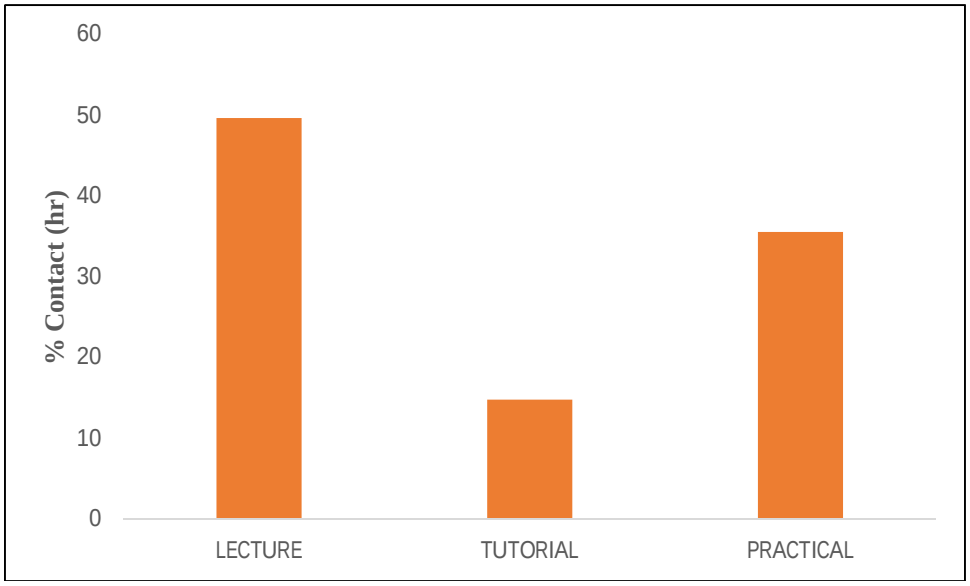
Course code	Course title	Total numbers of contact hours				Credits/marks
		Lecture	Tutorial	Practical	Total	
T 1.1.1	Pharmaceutics-I(Dispensing Pharmacy)	4	1	-	5	100
T 1.1.2	Pharmacognosy-I	3	1	-	4	100
T 1.1.3	Pharmaceutical Chemistry-I (Inorganic Pharmaceutical Chemistry)	3	1	-	4	100
T 1.1.4	Applied Biostatistics & Computer Applications in Pharmacy	4	1	-	5	100
T 1.1.5	Communication skills & soft Skills development	4	1	-	5	100
P 1.1.1	Pharmaceutics-I(Dispensing Pharmacy)	-	-	3	3	100
P 1.1.2	Pharmacognosy-I	-	-	3	3	100

P 1.1.3	Pharmaceutical Chemistry-I (Inorganic Pharmaceutical Chemistry)	-	-	3	3	100
P 1.1.4	Applied Biostatistics & Computer Applications in Pharmacy	-	-	3	3	100
T 1.2.1	Pharmaceutics -II(Unit Operations)	4	1	-	5	100
T 1.2.2	Pharmaceutical Chemistry –II (Inorganic &Physical Chemistry)	3	1	-	4	100
T 1.2.3	Pharmaceutical Chemistry-III (Organic Chemistry-I)	4	1	-	5	100
T 1.2.4	Anatomy, Physiology & Health Education (APHE) – I	4	1	-	5	100
T 1.2.5	Industrial Psychology	3	1	-	4	100
P 1.2.1	Pharmaceutics -II(Unit Operations)	-	-	3	3	100
P 1.2.2	Pharmaceutical Chemistry –II (Inorganic &Physical Chemistry)	-	-	3	3	100
P 1.2.3	Pharmaceutical Chemistry-III (Organic Chemistry-I)	-	-	3	3	100
P 1.2.4	Anatomy, Physiology & Health Education (APHE) – I	-	-	3	3	100
5555	Environmental Science	3	-	-	3	100
T 2.3.1	Pharmaceutics-III (Physical Pharmacy-I)	3	1	-	4	100
T 2.3.2	Pharmaceutical Chemistry-IV (Organic Chemistry - II)	3	1	-	4	100
T 2.3.3	Pharmacognosy –II	3	1	-	4	100
T 2.3.4	Pharmaceutical Analysis – I	3	1	-	4	100
T 2.3.5	A P HE-II	3	1	-	4	100
T 2.3.6	Pathophysiology of Common Diseases-I	3	1	-	4	100
P 2.3.1	Pharmaceutics-III (Physical Pharmacy-I)	-	-	3	3	100
P 2.3.2	Pharmaceutical Chemistry-IV (Organic Chemistry - II)	-	-	3	3	100
P 2.3.3	Pharmacognosy –II	-	-	3	3	100
P 2.3.4	Pharmaceutical Analysis – I	-	-	3	3	100
P 2.3.5	A P HE-II	-	-	3	3	100

T 2.4.1	Pharmaceutics–IV (Physical Pharmacy-II)	3	1	-	4	100
T 2.4.2	Pharmaceutical Microbiology	3	1	-	4	100
T 2.4.3	Pharmacognosy – III	3	1	-	4	100
T 2.4.4	Pharmaceutics –V (Hospital Pharmacy)	3	1	-	4	100
T 2.4.5	Pharmaceutical Chemistry – V (Biochemistry)	3	1	-	4	100
T 2.4.6	Pathophysiology of Common Diseases-II	3	1	-	4	100
P 2.4.1	Pharmaceutics–IV (Physical Pharmacy-II)	-	-	3	3	100
P 2.4.2	Pharmaceutical Microbiology	-	-	3	3	100
P 2.4.3	Pharmacognosy – III	-	-	3	3	100
P 2.4.4	Pharmaceutics –V (Hospital Pharmacy)	-	-	3	3	100
P 2.4.5	Pharmaceutical Chemistry – V (Biochemistry)	-	-	3	3	100
T 3.5.1.	Pharmaceutical Chemistry – VI (Medicinal Chemistry - I)	4	1	-	5	100
T 3.5.2.	Pharmaceutics – VI(Pharmaceutical Technology I)	4	1	-	5	100
T 3.5.3.	Pharmacology – I	4	1	-	5	100
T 3.5.4.	Pharmacognosy –IV	3	1	-	4	100
T 3.5.5.	Pharmaceutical Analysis-II	3	1	-	4	100
P 3.5.1.	Pharmaceutical Chemistry – VI (Medicinal Chemistry - I)	-	-	3	3	100
P 3.5.2.	Pharmaceutics – VI (Pharmaceutical Technology I)	-	-	3	3	100
P 3.5.3.	Pharmacology – I	-	-	3	3	100
P 3.5.4.	Pharmacognosy –IV	-	-	3	3	100
P 3.5.5.	Pharmaceutical Analysis-II	-	-	3	3	100
T 3.6.1.	Pharmaceutical Chemistry – VII (Medicinal Chemistry -II)	4	1	-	5	100
T 3.6.2.	Pharmaceutics –VII (Biopharmaceutics & Pharmacokinetics)	3	1	-	4	100
T. 3.6.3	. Pharmacology –II	4	1	-	5	100
T 3.6.4.	Pharmacognosy – V (Chemistry of	3	1	-	4	100

	Natural Products)					
T 3.6.5.	Pharmaceutical Jurisprudence& Ethics	4	1	-	5	100
P 3.6.1.	Pharmaceutical Chemistry – VII (Medicinal Chemistry - II)	-	-	3	3	100
P. 3.6.2.	Pharmaceutics –VII (Biopharmaceutics & Pharmacokinetics)	-	-	3	3	100
P 3.6.3.	Pharmacology –II	-	-	3	3	100
P 3.6.4.	Pharmacognosy – V (Chemistry of Natural Products)	-	-	3	3	100
P.3.6.6	Project Report	4	1	-	5	100
T 4.7.1.	Pharmaceutics – VIII (Pharmaceutical Technology - II)	3	1	-	4	100
T 4.7.2.	Pharmaceutical Chemistry- VIII (Medicinal Chemistry – III)	3	1	-	4	100
T 4.7.3.	Pharmacology –III	3	1	-	4	100
T.4.7.4.	Pharmaceutical Analysis-III	3	1	-	4	100
T 4.7.5.	Pharmaceutical Biotechnology	3	1	-	4	100
T 4.7.6.	Pharmaceutical Industrial Management	3	1	-	4	100
P. 4.7.1.	Pharmaceutics – VIII (Pharmaceutical Technology - II)	-	-	3	3	100
P 4.7.2	Pharmaceutical Chemistry-VIII (Medicinal Chemistry – III)	-	-	3	3	100
P 4.7.3.	Pharmacology –III	-	-	3	3	100
P.4.7.4.	Pharmaceutical Analysis-III	-	-	3	3	100
T 4.8. 1.	Pharmaceutics – IX	3	1	-	4	100
T 4.8.2.	Pharmaceutical Analysis – IV	3	1	-	4	100
T 4.8.3.	Pharmaceutical Chemistry-IX (Medicinal Chemistry- IV)	3	1	-	4	100
T 4.8.4.	Pharmacognosy – VI	3	1	-	4	100
T.4.8.5.	Pharmacology - IV (Clinical Pharmacy	3	1	-	4	100

	& Drug Interactions)					
T.4.8.6.	Elective(Theory)	3	1	-	4	100
P 4.8. 1	. Pharmaceutics – IX	-	-	3	3	100
P 4.8.2.	Pharmaceutical Analysis – IV	-	-	3	3	100
P 4.8.3.	Pharmaceutical Chemistry–IX (Medicinal Chemistry- IV)	-	-	3	3	100
P. 4.8.4.	Pharmacognosy – VI	-	-	3	3	100
P.4.8.7.	Industrial training report	-	-	3	3	100
	Total	151	45	108	304	8200
	Percentage	49.67	14.80	35.52	100	



Graphical representation of percentage of contact hours (2016-17)

Core pharmacy courses against the program outcomes

Course code	Course title	Support Program outcomes										
		1	2	3	4	5	6	7	8	9	10	11
BP101T	Human Anatomy and Physiology I	✓			✓		✓	✓		✓		
BP102T	Pharmaceutical Analysis I	✓		✓	✓			✓		✓		
BP103T	Pharmaceutics I	✓			✓		✓		✓	✓		✓
BP104T	Pharmaceutical Inorganic Chemistry	✓		✓						✓	✓	✓
BP105T	Communication skills		✓	✓	✓	✓	✓			✓		✓
BP106RBT	Remedial Biology		✓	✓	✓							✓
BP106RMT	Mathematics		✓	✓	✓							✓
BP107P	Human Anatomy and Physiology	✓			✓		✓	✓		✓		
BP108P	Pharmaceutical Analysis I	✓		✓	✓							✓
BP109P	Pharmaceutics I	✓			✓		✓		✓	✓		✓
BP110P	Pharmaceutical Inorganic Chemistry	✓		✓						✓	✓	✓
BP111P	Communication skills		✓	✓	✓							✓
BP112RBP	Remedial Biology		✓	✓	✓							✓
BP201T	Human Anatomy and Physiology II	✓			✓					✓		✓
BP202T	Pharmaceutical Organic Chemistry I	✓			✓					✓		✓
BP203T	Biochemistry	✓		✓						✓	✓	✓
BP204T	Pathophysiology	✓			✓		✓	✓		✓		✓
BP205T	Computer Applications in Pharmacy	✓		✓	✓							✓
BP206T	Environmental sciences		✓	✓		✓					✓	✓
BP207P	Human Anatomy and Physiology II	✓		✓		✓	✓					✓
BP208P	Pharmaceutical Organic Chemistry I	✓			✓					✓		✓
BP209P	Biochemistry	✓		✓			✓			✓	✓	✓
BP210P	Computer Applications in Pharmacy	✓		✓	✓							✓
BP301T	Pharmaceutical Organic Chemistry II	✓			✓		✓				✓	✓
BP302T	Physical Pharmaceutics I	✓	✓	✓		✓	✓	✓				✓
BP303T	Pharmaceutical Microbiology	✓					✓			✓	✓	✓
BP304T	Pharmaceutical Engineering	✓		✓	✓		✓	✓				✓
BP305P	Pharmaceutical Organic Chemistry II	✓			✓		✓				✓	✓
BP306P	Physical Pharmaceutics I	✓	✓	✓		✓	✓	✓				✓

BP307P	Pharmaceutical Microbiology	✓				✓			✓	✓	✓
BP308P	Pharmaceutical Engineering	✓		✓	✓	✓	✓		✓		✓
BP401T	Pharmaceutical Organic Chemistry III	✓		✓	✓		✓	✓	✓		✓
BP402T	Medicinal Chemistry I	✓		✓	✓						✓
BP403T	Physical Pharmaceutics II	✓			✓		✓		✓		✓
BP404T	Pharmacology I	✓		✓	✓		✓		✓		✓
BP405T	Pharmacognosy and Phytochemistry I	✓			✓	✓	✓		✓		✓
BP406P	Medicinal Chemistry I	✓		✓	✓		✓	✓	✓		✓
BP407P	Physical Pharmaceutics II	✓				✓	✓	✓	✓		✓
BP408P	Pharmacology I	✓				✓			✓		✓
BP409P	Pharmacognosy and Phytochemistry I	✓								✓	✓
T 1.1.1	Pharmaceutics I	✓			✓	✓		✓	✓		✓
T. 1.1.2	Pharmacognosy I	✓		✓	✓		✓	✓	✓		✓
T. 1.1.3	Pharmaceutical Chemistry I	✓		✓					✓	✓	✓
T.1.1.4	Biostatistics and Computer Application in Pharmacy		✓	✓	✓						✓
T 1.1.5	Communicating Skills and soft skill development		✓	✓	✓						✓
P 1.1.1	Pharmaceutics I	✓			✓	✓		✓	✓		✓
P 1.1.2	Pharmacognosy I	✓		✓	✓		✓	✓	✓		✓
P 1.1.3	Pharmaceutical Chemistry I	✓		✓					✓	✓	✓
P.1.1.4.	Biostatistics and Computer Application in Pharmacy		✓	✓	✓						✓
T 1.2.1	Pharmaceutics -II(Unit Operations)	✓			✓	✓		✓	✓		✓
T 1.2.2	Pharmaceutical Chemistry –II (Inorganic &Physical Chemistry)	✓		✓	✓		✓	✓	✓		✓
T 1.2.3	Pharmaceutical Chemistry-III (Organic Chemistry-I)	✓								✓	✓
T 1.2.4	Anatomy, Physiology & Health Education (APHE) – I	✓			✓				✓		✓
T 1.2.5	Industrial Psychology	✓								✓	✓
P 1.2.1	Pharmaceutics -II(Unit Operations)	✓			✓	✓		✓	✓		✓
P 1.2.2	Pharmaceutical Chemistry –II (Inorganic &Physical Chemistry)	✓		✓	✓		✓	✓	✓		✓
P 1.2.3	Pharmaceutical Chemistry-III (Organic Chemistry-I)	✓			✓				✓	✓	✓
P 1.2.4	Anatomy, Physiology & Health Education (APHE) – I	✓								✓	✓

5555	Environmental Science	✓	✓	✓					✓			
T 2.3.1	Pharmaceutics-III(Physical Pharmacy-I)	✓	✓	✓				✓	✓	✓	✓
T 2.3.2	Pharmaceutical Chemistry-IV Organic Chemistry - II)	✓			✓				✓		✓
T 2.3.3.	Pharmacognosy –II	✓		✓	✓		✓	✓	✓		✓
T 2.3.4	Pharmaceutical Analysis – I	✓		✓	✓		✓		✓		
T 2.3.5	A P HE-II	✓			✓		✓		✓		✓
T 2.3.6	Pathophysiology of Common Diseases-I	✓			✓		✓		✓		
P 2.3.1	Pharmaceutics-III(Physical Pharmacy-I)	✓	✓	✓				✓	✓	✓	✓
P 2.3.2	Pharmaceutical Chemistry-IV (Organic Chemistry - II)	✓		✓	✓				✓		✓
P 2.3.3	Pharmacognosy –II	✓		✓	✓		✓	✓	✓		✓
P 2.3.4	Pharmaceutical Analysis – I	✓		✓	✓						✓
P 2.3.5	A P HE-II	✓			✓		✓		✓		✓
T.2.4.1	Pharmaceutics–IV (Physical Pharmacy-II)	✓		✓	✓		✓		✓		✓
T.2.4.2	Pharmaceutical Microbiology	✓			✓	✓	✓		✓		✓
T.2.4.3	Pharmacognosy – III	✓		✓	✓		✓	✓	✓		✓
T.2.4.4	Pharmaceutics –V (Hospital Pharmacy)	✓				✓	✓	✓	✓		✓
T.2.4.5	Pharmaceutical Chemistry – V (Biochemistry)	✓				✓			✓		✓
T.2.4.6	Pathophysiology of Common Diseases-II	✓								✓	✓
P.2.4.1	Pharmaceutics–IV (Physical Pharmacy-II)	✓			✓	✓	✓		✓		✓
P.2.4.2	Pharmaceutical Microbiology	✓			✓	✓	✓		✓		✓
P.2.4.3	Pharmacognosy – III	✓			✓				✓	✓	✓
P.2.4.4	Pharmaceutics –V (Hospital Pharmacy)	✓				✓	✓	✓	✓		✓
P.2.4.5	Pharmaceutical Chemistry – V (Biochemistry)	✓			✓	✓			✓		✓
T 3.5.1	Pharmaceutical Chemistry – VI (Medicinal Chemistry - I)	✓			✓		✓		✓		✓
T 3.5.2	Pharmaceutics – VI(Pharmaceutical Technology I)	✓			✓			✓	✓		✓
T 3.5.3	Pharmacology – I	✓		✓	✓				✓	✓	
T 3.5.4	Pharmacognosy –IV	✓			✓				✓	✓	
T 3.5.5.	Pharmaceutical Analysis-II	✓		✓	✓				✓	✓	
P 3.5.1	Pharmaceutical Chemistry – VI (Medicinal Chemistry - I)	✓			✓		✓		✓		✓
P 3.5.2	Pharmaceutics – VI	✓			✓			✓	✓		✓

	(Pharmaceutical Technology I)										
P 3.5.3	Pharmacology – I	✓		✓	✓			✓		✓	✓	
P 3.5.4	Pharmacognosy –IV											
P 3.5.5	Pharmaceutical Analysis-II	✓		✓	✓					✓		
T 3.6.1	Pharmaceutical Chemistry – VII (Medicinal Chemistry -II)	✓			✓			✓		✓		✓
T 3.6.2	Pharmaceutics –VII (Biopharmaceutics & Pharmacokinetics)	✓			✓				✓			✓
T. 3.6.3	Pharmacology –II	✓		✓	✓					✓	✓	✓
T 3.6.4	Pharmacognosy – V (Chemistry of Natural Products)	✓			✓					✓	✓	
T 3.6.5	PharmaceuticalJurisprudence& Ethics	✓		✓	✓							✓
P 3.6.1	Pharmaceutical Chemistry – VII (Medicinal Chemistry - II)	✓			✓			✓		✓		✓
P 3.6.2	Pharmaceutics –VII (Biopharmaceutics & Pharmacokinetics)	✓			✓				✓			✓
P 3.6.3	Pharmacology –II	✓		✓	✓			✓		✓	✓	
P 3.6.4	Pharmacognosy – V (Chemistry of Natural Products)	✓			✓					✓	✓	✓
P.3.6.6	Project Report	✓	✓	✓	✓			✓		✓		✓
P.4.8.7	Industrial training report	✓		✓	✓	✓		✓		✓		✓

Contents of each course, projects – Core Pharmacy Courses (Theory)

BP101T- Human anatomy and Physiology I

Human anatomy & physiology theory course is designed to impart fundamental knowledge on the structure and functions of the various systems of the body. Students acquire knowledge about the generating and transmitting nerve impulses with knowledge of cell signaling and cell communication including receptors. 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 with structure and function of lymphatic system.It also describes cellular level organization & tissue level organization. Focus is also given to the appreciation of basic anatomy and physiology of the sensory organs (eye, ear, taste buds, nose and skin). The course also imparts on the nutritional values of vitamins and their deficiency disorders. Acquire the basic knowledge of skeletal system, joints, anatomy and physiology of muscle contraction. The students should be able to (1) describe the various physiological aspect of the human body, (2) explain various systems in coordination with various organs and tissues. Acquire the knowledge regarding health education in human life.

BP102T Pharmaceutical Analysis I

Pharmaceutical Analysis-I Theory Course is designed to provide the knowledge of different techniques of titrimetric analysis, electrochemical methods, Data handling in analytical chemistry, errors and their sources, preparation and standardization of solutions of different concentrations used in analysis. The course design provides significant understanding of different techniques of titrimetric analysis like acid-

base, non-aqueous, complexometric, Gravimetric, redox titrations, Conductometry, potentiometry , polarography and miscellaneous methods like diazotization titration their applications. The students should be able to describe uses of titrations, choice of indicators in titrations, purpose and use of titrimetric methods and use of electrochemical methods in standardization of solutions of various concentrations

BP103T Pharmaceutics I

Pharmaceutics I course is designed to impart a fundamental knowledge on the preparatory pharmacy with art and science of preparing the different conventional dosage forms.

Student acquires the knowledge about history and profession of pharmacy; understand the basic of different dosage forms, pharmaceutical incompatibilities and pharmaceutical calculations. This course also provides knowledge about professional way of handling the prescription and preparation of various conventional dosage forms.

BP104T Pharmaceutical Inorganic Chemistry

Pharmaceutical Inorganic Chemistry theory course is designed to provide basic knowledge about impurities in Pharmaceutical substances, radiopharmaceuticals, physiological ions and monographs of Inorganic compound. The students acquire knowledge about limit test for chloride, sulphate, iron, heavy metals and arsenic. The course design provides significant understanding about the acids, bases and buffers including measurement and methods of adjusting isotonicity. The course ensures the ability to assimilate the concepts of electrolytes and physiological acid base balance. It also describes the dental products and monograph of compound used as dental agents. The emphasis is given to the expectorants, emetics, haematinics, astringents, poison and antidote including their examples monograph.

Focus is given to gain knowledge about the gastrointestinal agents. Focus is also given to the appreciation of basic radiopharmaceuticals. The students also gain adequate knowledge about radioisotopes.

The students should be able to: (1) describe the sources of impurities and limit test.

(2) Explain various categories with their examples monograph.

(3) Explain mechanism of antimicrobial agent, and

(4) Acquire the knowledge regarding inorganic chemistry

BP105T Communication Skills

Communication Skills theory course is designed to provide basic knowledge about barriers to communication, perspectives in communication and, Interview skills. The students acquire knowledge about communication styles basic listening skill, effective written communication, writing effectively, Interview skills, giving presentation and group discussion.

The students should be able to: (1) How to communicate in society.

(2) How to face interview.

(3) How to develop their personality skill and communication style.

(4) How to present their self.

BP106RMTRemedial Mathematics

Theory Course is designed to provide the knowledge of introduction to Partial fraction, Logarithm, matrices and Determinant, Analytical geometry, Calculus, differential equation and Laplace transform.Upon completion of the course the student shall be able toknow the theory and their application in Pharmacy, Solve the different types of problems by applying theory, appreciate the important application of mathematics in Pharmacy.

BP106RBTRemedial Biology

To learn and understand the components of living world, structure and functional system of plant and animal kingdom. Upon completion of the course, the student shall be able to know the classification and

salient features of five kingdoms of life. Understand the basic components of anatomy & physiology of plant and know the basic components of anatomy & physiology animal with special reference to human

BP201THuman anatomy and Physiology II

This subject is designed to impart fundamental knowledge on the structure andfunctions of the various systems of the human body. It also helps in understanding bothhomeostatic mechanisms. The subject provides the basic knowledge required tounderstand the various disciplines of pharmacy. The students also acquire knowledge about brief account of basics of Anatomy and physiology of humans that's help in understanding of pharmacology. The course also imparts on study of basic knowledge of daily life related problem.

BP202T Pharmaceutical Organic Chemistry I

Pharmaceutical Organic Chemistry theory course is designed to provide elementary knowledge about general methods of preparation and reactions of some organic compounds. The students acquire knowledge about the classification and nomenclature of simple organic compounds. The course design provides significant understanding about the intermediates forming in reactions. The course ensures the ability to assimilate the concepts of structure, name and the type of structural isomerism of the organic compound. It also describes the important physical& chemical properties.

Focus is given to gain knowledge about the carbonyl compounds, carboxylic acids. Focus is also given on alkyl halides. The students also gain adequate knowledge about the alkanes, alkenes and conjugated dienes. The course also imparts on the aliphatic amines and alcohols. The students should be able to: (1) describe the various structure, name and the type of isomerism of the organic compound, (2) explain various reaction, name the reaction and orientation of reactions (3) explain reactivity/stability of compounds, and (4) acquire the knowledge regarding organic compound in human life.

BP203T Biochemistry

Biochemistry theory course is designed to provide basic knowledge about carbohydrate, lipids, nucleic acid, amino acids and proteins. The students acquire knowledge about glycolysis, citric acid cycle, HMP shunt, and gluconeogenesis. The course design provides significant understanding about the electron transport chain, β oxidation of saturated fatty acid, transamination and deamination. It also describes the structure of DNA and RNA.Focus is given to gain knowledge about the enzymes, isoenzymes and coenzymes. The emphasis is given to the enzyme kinetic and enzyme inhibitors. The course ensures the ability to assimilate the disorders of carbohydrate, lipids and amino acid. The students should be able to:

(1) Describe the disorders of carbohydrate, lipids and amino acid.
(2) Explain application of the enzymes, isoenzymes and coenzymes.
(3) Explain metabolism of nutrient molecules in physiological and pathological conditions.
(4) Acquire the knowledge regarding biosynthesis of purine and pyrimidine nucleotides.

BP204T Pathophysiology

Pathophysiology theory course having emphasis on the study of diseases and reactions of the body to such disease producing causes. The course design provides significant understanding about basic principle of cell injury and adaptation and mechanism involved in the process of inflammation and repair. The course describes cardiovascular, respiratory and renal diseases. The students also gain adequate knowledge about hematological diseases causes due to iron deficiency, megablastic anemia, sickle cell anemia, thalassemia, hereditary acquired anemia, hemophilia.The course design provides significant understanding about disorder of endocrine system, nervous system and also give idea about peptic ulcer. This course explain etiology, mode of transmission, symptoms, prevention and treatment of jaundice, hepatitis (A, B, C, D, E, F), inflammatory bowel diseases, alcoholic liver diseases, disease of bones and joints, principles of cancer, diseases of bones and joints.The students also describes causative agent, mode of transmission, prevention and treatment of meningitis, typhoid, leprosy, tuberculosis, urinary tract infections, AIDS, Syphilis, Gonorrhea.

BP205 TComputer Applications in Pharmacy

Computer application in pharmacy Theory Course is designed to provide the knowledge of Database, Database Management system, computer application in clinical studies and use of databases. And Upon completion of the course the student shall be able to know the various types of application of computers in pharmacy know the various types of databases know the various applications of databases in pharmacy

BP301T Pharmaceutical Organic Chemistry II

The students should be able to:

1. To understand the concept general methods of preparation and reactions of some organic compounds.
2. Emphasizes on mechanisms and orientation of reactions
3. To understand the concept of Reactivity of organic compounds
4. To understand the concept of Chemistry of fats and oils

BP302T Physical pharmaceutics I

Physical pharmaceutics I theory course is designed in such way that to provides basic knowledge about introduction to pharmaceutical formulation, Drug design, physiochemical properties, evolutionary parameters and many more. The students also acquire knowledge about brief account of basics of any formulation at industrial level and institutions involved in work on such formulations in India. The course also imparts on study of basic knowledge of Drug formulation along with evaluation techniques.

The students should be able to:

(1) Give information about solubility and Distribution phenomenon.
(2) Knowledge about State of matter and its changes
(3) Acquire the knowledge of physic-chemical parameters.
(4) Acquire the knowledge regarding surface phenomenon, Complexation, different types of solutions

BP303T Pharmaceutical Microbiology

Pharmaceutical Microbiology theory course is designed to impart fundamental knowledge on Understand methods of identification, cultivation and preservation of various microorganisms (Bacteria, Virus, and Fungi) Students acquire knowledge about the Sterilization & Disinfectant with importance and implementation in pharmaceutical processing and industries. The course design provides significant understanding about selection of disinfectant on the basis of evaluation test of bacteriostatic &bactericidal disinfectant. The course ensures the ability to understand procedure of sterility testing of sterile product of various official books. It also describes cellular standardization of pharmaceutical product by microbial assay. Acquire the basic knowledge of about animal cell culture, its preparation procedure & application in pharmaceutical industry.

BP304T Pharmaceutical Engineering

Pharmaceutical engineering theory course is designed to provide basic knowledge about size reduction and size separation. It deals with various theories and instruments of size reduction and size separation. The students also acquire knowledge about Flow of fluids. The course designed to provides significant understanding about Heat transfer, Evaporation and distillation methods. The course also gives the information about Objectives, applications & mechanism of. Drying and mixing. Course also includes principles, construction, working, uses, merits and demerits of different dryer and Mixer. The emphasis is also given on Filtration and centrifugation along with its principle, theories and instruments. The student also gains the knowledge about Materials of pharmaceutical plant construction like Rubber, plastic, glass, various metals etc. The course also imparts on study of corrosion and its prevention. The students should be able to: (1) Give information about Flow of fluid, Size separation and reduction Techniques. (2) Knowledge about various heat transfer principle along with distillation and evaporation phenomenon. (3) Acquire the knowledge of drying and mixing. (4) Acquire the knowledge of corrosion theories and how to prevent corrosion. (5) It also give idea of centrifugation and filtration

BP401T Pharmaceutical Organic Chemistry III

Pharmaceutical Organic Chemistry-III theory course is designed to provide elementary knowledge about general methods of preparation and reactions of some hetero cyclic compounds. The students acquire knowledge about the classification and nomenclature of stereo-chemical aspect of organic compounds. The course design provides significant understanding about the important named reactions. The course ensures the ability to assimilate the concepts of structure, name and the type of structural isomerism of the organic compound. It also emphasizes the important medicinal & other uses of organic chemistry.

Focus is given to gain knowledge about the sequence rule, configuration, racemic modification and resolution of racemic mixture. Acquire knowledge on atropisomerism. The students also gain adequate knowledge about the stereospecific and stereo selective reactions. The course also imparts on the heterocyclic compounds and important reaction. The students should be able to: (1) describe the various structure, name and the type of isomerism of the organic compound, (2) explain various reaction, name the reaction and orientation of reactions (3) explain reactivity/stability of heterocyclic compounds, and (4) acquire the knowledge regarding organic compound in human life.

BP402T Medicinal Chemistry I

Pharmaceutical chemistry course is designed to gain the knowledge of medicinal chemistry which covers all the introductory part about medicinal chemistry. This course provides the knowledge regarding theoretical aspects of drug action (molecular mechanisms of drug action. physicochemical parameters affecting drug action: Solubility, partition coefficient, Surface activity, pka, ionization). Students also acquire the detail knowledge of drugs acting on Autonomic Nervous System, cholinergic neurotransmitters, parasympathomimetic agents, drugs acting on central nervous system, general anesthetics, narcotic and non-narcotic analgesics, anti-inflammatory agentsincludes introduction, classification, mechanism of action, structure-activity relationship, pharmacokinetics (Metabolism), therapeutic uses and synthesis of drugs.

BP403T Physical Pharmaceutics II

Physical pharmaceutics II theory course is designed in such way that to provides basic knowledge about namely colloidal dispersions, rheology, and deformation of solids, coarse dispersion, micromeritics and drug stability. Colloidal dispersions includes Classification of dispersed systems & their general characteristics, size & shapes of colloidal particles, classification of colloids &comparative account of their general properties. Optical, kinetic & electrical properties.Effect of electrolytes, coacervation, peptization& protective action. Rheologyincludes Newtonian systems, law of flow, kinematic viscosity, effect of temperature, non-Newtonian systems, pseudoplastic, dilatant, plastic, thixotropy, thixotropy in formulation, determination of viscosity, capillary, falling Sphere, rotational viscometers Deformation of solids includes Plastic and elastic deformation, Heckel equation, Stress, Strain, Elastic Modulus. Coarse dispersion includes suspension, interfacial properties of suspended particles, settling in suspensions, and formulation of flocculated and deflocculated suspensions. Emulsions and theories of emulsification, micro emulsion and multiple emulsions; Stability of emulsions, preservation of emulsions, rheological properties of emulsions and emulsion formulation by HLB method.Micromeritics includes Particle size and distribution, mean particle size, number and weight distribution, particle number, methods for determining particle size by different methods, counting and separation method, particle shape, specific surface, methods for determining surface area, permeability, adsorption, derived properties of powders, porosity, packing arrangement, densities, bulkiness & flow properties. Drug stability includes Reaction kinetics: zero, pseudo-zero, first& second order, units of basic rate constants, and determination of reaction order. Physical and chemical factors influencing the chemical degradation of pharmaceutical product: temperature, solvent, ionic strength, dielectric constant, specific & general acid base catalysis, Simple numerical problems. Stabilization of medicinal agents against common reactions like hydrolysis

& oxidation.Accelerated stability testing in expiration dating of pharmaceutical dosage forms. Photolytic degradation and its prevention

BP404 T Pharmacology I

Pharmacology I theory course is designed to introduce students to basic concepts in general pharmacology. Students will know the history and definition of pharmacology. This course provides primary knowledge of routes of administration of drug, agonist, antagonist (competitive and noncompetitive), spare receptors. It will introduce students with, membranetransport, absorption of drugs, drug distribution, biotransformation and excretion, mechanism of drug action – types of receptors. Regulation of receptors, signal transduction mechanisms, theories of drug receptor interactions, dose response relationship, therapeutic index, enzyme induction & enzyme inhibition, distribution factors modify drug action like synergism, antagonism, drug tolerance, idiosyncrasy, allergy and tachyphylaxis. Student will able to understand adverse drug reaction, drug interaction (pharmacokinetics &pharmacodynamics). This course introduces about role of Pharmacologists in drug development and drug use & pharmacovigilance. Also informs students regarding the steps involved in drug discovery, along with stages of preclinical testing (efficacy testing, safety testing, toxicity testing) and clinical drug development (four phases of Clinical trials).

This course highlights the importance of knowledge of Pharmacotherapeutics to preclinical, clinical and hospital pharmacologist. Emphasis is given on pharmacotherapy of drugs acting on Autonomic nervous system. The students acquire knowledge about the neurohumoral transmission. Students acquire knowledge of classification, mechanism of action, pharmacokinetics, pharmacodynamics, adverse effects, contraindications, Therapeutic uses, interactions and dose and route of administration of drugs acting for neuromuscular blocking agent and skeletal muscle relaxants(peripheral), local anesthetics agent, and drug acting in myasthenia gravis and glaucoma, general anesthetics and pre-anesthetics,sedative,hypnotics and centrally acting muscle relaxant,antiepileptic, alcohol, disulfiram, antipsychotics,antidepressant,anti-anxiety agent,anti-manic and hallucinogens ,drugs used in Parkinson's& Alzheimer's disease, CNS stimulant and nootropics,opioid analgesics and antagonists, The students acquire knowledge about the neurohumoral transmission on the CNS like GABA,Glutamate, glycine,serotonin,dopamine.

BP405TPharmacognosy and Phytochemistry I

Pharmacognosy and Phytochemistry I subject involves the fundamentals of Pharmacognosy like scope, classification of crude drugs, their identification and evaluation, phytochemicals present in them and their medicinal properties. History of Pharmacognosy gives an idea about the ancient system of medicine. It is also useful for understanding the development of Pharmacognosy. Theory course focuses on the systematic description, classification, cultivation, collection, storage and therapeutic uses of crude drugs. The course imparts the knowledge regarding the influence of exogenous and endogenous factors in the variability of drug constituents. It also includes the type of adulteration, evaluation of crude drugs by various methods like quantitative microscopy of crude drugs including lycopodium spore method, leaf constants, camera lucida and diagrams of microscopic objects to scale with camera lucida. Systematic study of carbohydrates, fixed oils, fats, waxes, tannins, fibers, and drugs from mineral and animal origin, proteins and enzymes is illustrated. Hazards, adulteration and drugs deterioration aspects are included. The plant tissue culture is also included in the syllabus. Role of Pharmacognosy is discussed in allopathy and traditional systems of medicine namely, Ayurveda, Unani, Siddha, Homeopathy and Chinese systems of medicine. Plant fibres used in pharmaceutical is also studied during the course. The crude drugs obtained from marine source are important part of included in study.

T 1.1.1 Pharmaceutics I

Pharmaceutics I course is designed to impart a fundamental knowledge on the preparatory pharmacy with art and science of preparing the different conventional dosage forms. Students acquire the

knowledge about history and profession of pharmacy; understand the basic of different dosage forms, pharmaceutical incompatibilities and pharmaceutical calculations. This course also provides knowledge about professional way of handling the prescription and preparation of various conventional dosage forms.

T. 1.1.2 Pharmacognosy I

Pharmacognosy I theory course is provides knowledge about scope and development of Pharmacognosy. This course include classification of drugs, sources of drug, cultivation, collection, processing and storage of crude drugs, quality control of crude drugs, an introduction to active constituents of drugs. This course also include systematic pharmacognostic study of carbohydrates and derived products such as agar, guar gum, acacia, honey, isabgol, pectin, Starch, sterculia and lipids such as bees wax, castor oil, cocoa butter, cod-liver oil, hydnocarpus oil etc.

T. 1.1.3 Pharmaceutical Chemistry I

This theory course gives knowledge about Purity of pharmaceuticals which includes sources of impurities, tests for purity and identity, including limit tests for iron, arsenic, heavy metals (lead), chloride, sulphate and special tests if any, of the following classes of inorganic pharmaceuticals included in Indian Pharmacopoeia. Acids, Bases and Buffers includes theories of acid and base, types of pharmaceutical buffers, mechanism of action, Buffer equation, buffer capacity, measurement of tonicity, calculations and methods of adjusting isotonicity. Major Intra and extra cellular electrolytes, essential and trace elements, cationic and anionic components of inorganic drugs useful for systemic effects, and study of gases and vapors.

T.1.1.4. Biostatistics and Computer Application in Pharmacy

This theory course includes introduction to statistics, meaning of statistics, uses and limitation of statistics. Collection of data, classification of raw data into ungrouped and grouped frequency distribution, representation of data by diagram and multiple bar diagram, simple bar diagram and pie diagram and representation of data by graph. Students also know probability and probability distribution, meaning of classical probability, axiomatic approach to probability, probability theorem, binomial distribution, and normal probability distribution. This course also includes history and generation of computers fundamentals, evolution and generation, types of computers, anatomy and computer peripherals and detail information regarding operating system.

T 1.1.5. Communication Skills and soft skill development

Communication Skills theory course is designed to provide basic knowledge about barriers to communication, perspectives in communication and, Interview skills. The students acquire knowledge about communication styles basic listening skill, effective written communication, writing effectively, Interview skills, giving presentation and group discussion. Students also gain knowledge about business communication, career skills, formal written skills and modern technology.

T.1.2.1 Pharmaceutics – II (Unit Operation)

This course is designed to provide an elementary knowledge about the various unit operations used in pharmaceutical industry. The unit operations such as size reduction, size separation, distillation, drying and filtration are covered in the said course. Besides, the course emphasizes on the various aspects of corrosion, fluid flow, extraction, and handling and conveying of solids. Upon completion of the course student shall be able: 1. To know various unit operations used in Pharmaceutical industries. 2. To understand the material handling techniques. 3. To perform various processes involved in pharmaceutical manufacturing process. 4. To carry out various test to prevent environmental pollution. 5. To appreciate and comprehend significance of plant lay out design for optimum use of resources. 6. To appreciate the various preventive methods used for corrosion control in Pharmaceutical industries.

T. 1.2.2 - Pharmaceutical Chemistry II (Inorganic &Physical Chemistry)

This course deals with the monographs of inorganic drugs and pharmaceuticals in relation with physical chemistry. This covers various aspects of topical agents, dental products, complexing and chelating agents used in pharmacy, radiopharmaceuticals and contrast media. Besides, the course focuses on behavior of gases, chemical kinetics, quantum mechanics and photochemistry. Upon completion of course student shall be able to i. understand the medicinal and pharmaceutical importance of inorganic compounds ii. Know the sources of poisoning and their antidotes and iii. Get acquaintance with behavior of gases, chemical kinetics, quantum mechanics and photochemistry.

T.1.2.3 Pharmaceutical Chemistry III (Organic Chemistry-I)

This subject deals with classification and nomenclature of simple organic compounds, importance and properties of carbon, hybridization of elements, atomic structure, and atomic orbitals, molecular orbital theory, types of bonding , bond dissociation energy, polarity of bonds, polarity of molecules. Besides, the syllabus emphasizes on stereochemistry, reactive intermediates, and the preparation and reactions of alkanes, alkenes, alkynes, cycloalkanes, dienes, trienes, aldehydes ketones and polynuclear aromatic compounds (naphthalene, phenanthrene, and anthracene). Upon completion of the course the student shall be able to 1. Write the structure, name and the type of isomerism of the organic compound 2. Write the reaction, name the reaction and orientation of reactions 3. Account for reactivity/stability of compounds, 4. Identify/confirm the identification of organic compound.

T.1.2.4- Anatomy, Physiology and Health Education-I

This subject is designed to impart fundamental knowledge on the structure and functions of the various systems of the human body and the concept of health education. The course covers nervous system, endocrine system, haemopoeitic system, lymh and lymphatic system. Besides, the course focuses on cells and tissues organization, musculoskeletal system, special sense organs, and the immunity. Upon completion of this course the student should be able to 1. Explain the gross morphology, structure and functions of various organs of the human body. 2. Describe the various homeostatic mechanisms and their imbalances. 3. Identify the various tissues and organs of different systems of human body. 4. Perform the various experiments related to special senses and nervous system. 5. Appreciate coordinated working pattern of different organs of each system

T.1.2.5. Industrial Psychology

This course is an exploration of how psychology, the science of behavior and mental processes, is applied in the workplace. The course includes, historical aspects of industrial psychology, remises. Modus operandi of industrial psychology, its development and associated hurdles. The course also covers various aspects of personnel selection and development, selection techniques, psychological tests, intelligence (Otis, standord-Binet, Weehster adult Intelligence test, Multifactor test); Aptitude (DAT); Personality (Rorschaeh, TAT andMMPI). The focus is also given on theories of motivation (Maslow, Vroom), accident prevention and safety measures alongside various aspects of sociology, industrial democracy, trade Unions and impact of science & technology on industry andsociety.

T. 2.3.1- Pharmaceutics III (Physical pharmacy- I)

Pharmaceutics III (Physical pharmacy- I) theory course is designed to provide basic knowledge about the different physical properties and characteristics of each state of matter. The students acquire knowledge about behavior of gases molecule from gas theory, able to differentiate between Real gases & Ideal gases. The course design provides significant understanding about Methods for liquefaction of gases, principle of aerosols, Crystallization and methods of crystal analysis. The course ensures the ability to identify the thermodynamic systems and processes. The students will able to understand the basic principles of various laws thermodynamics, Concept of Enthalpy, Entropy and concept of law of constant heat summation. The course aims to give students a detailed knowledge about, diffusion, dissolution and Complexation. Focus is given to gain knowledge about the solutions of electrolytes, non-electrolyte, and

solubility and distribution phenomenon including Raoulte's law, Henry's law, and Colligative properties, Faraday's laws of electrolysis, Arrhenius theory and Debye- Huckel theory. The students also gain adequate knowledge about General principles and types of solvent, solubility of gases in liquids, Nernst coefficient and Phase rule for 1 component system. The students should be able to: 1.Correlate utility of physicochemical properties in design of pharmaceutical product. 2. Gain insight of techniques for determination of physicochemical properties. 3. Understand factors governing stability of finished pharmaceutical product. 4. Analyze and tackle problems encountered in formulation development.

T 2.3.2 - Pharmaceutical Chemistry IV (Organic Chemistry-II)

Pharmaceutical chemistry IV course is designed to provide knowledge about the classes of reactions such as electrophilic and Nucleophilic reactions, concept and rules of resonance. Tis course also provides brief knowledge about Chemistry of Carbohydrates (Introduction, Classification, Mutarotation, Killiani-fischer synthesis, Ruff degradation, Epimerization, Cyclic structure of carbohydrates, Determination of Ring size of D-glucose) and Chemistry of Proteins (Geometry of peptide linkage, Formation of peptide bond, Determination of structure of peptides, Methods of peptide synthesis, Zwitterion ion, Isoelectric point). Students also acquire the knowledge regarding introduction and classification of rearrangements with mechanism and Chemistry of heterocyclic compounds (Structure and numbering of the Heterocyclic compounds such as Furan, Thiophene, Pyrrole, Pyrazole, Thiazole, Imidazole, Oxazole, Iso-oxazole, Pyridine, Pyrimidine, Indole, Benzimidazole, Quinolone, Isoquinoline, and Purine)

T. 2.3.3 - Pharmacognosy II

Pharmacognosy theory course is designed to provide basic knowledge about external, histological and chemical constituents of crude drugs obtained from the plant and animals. The students acquire knowledge about the plant and animal sources, its family, Genus and species of crude drugs. The course designed to provides significant information about the medicinal uses, different extraction methods and advanced techniques and phytochemical investigation of natural products, extraction, isolation process and pharmaceutical uses of drugs. The course also introduces the different types of resins, tannins, volatile oil, there classification, properties, extraction, analysis along with biological source, collection, preparations, chemical constituents, test, uses, adulterants and substituents. Focus is also given to gain the knowledge about different types of fibers like cotton, silk, wool and their utilization in pharmacy. The students also gain adequate knowledge about different pharmaceutical aids like talc, kaolin, betonite. The students should be able to: (1) give information about extraction methods their merits and demerits, biological source, its genus, species and family of crude drugs, (2) Identify the drug on the basis of external and histological characters. (3) Identify the drug by different chemical tests.

T 2.3.4 - Pharmaceutical Analysis I

Pharmaceutical Analysis-I Theory Course is designed to provide the knowledge of different techniques of titrimetric analysis, Data handling in analytical chemistry, errors and their sources, preparation and standardization of solutions of different concentrations used in analysis. The course design provides significant understanding of different techniques of titrimetric analysis like acid-base, non-aqueous, complexometric, Gravimetric, redox titrations and miscellaneous methods like diazotization titration, oxygen flask combustion method, kjeldhal method and their applications. The students should be able to describe uses of titrations, choice of indicators in titrations, purpose and use of titrimetric methods

T2.3.5 - Anatomy, Physiology and Health Education

Anatomy, physiology and health education theory course is designed to provide elementary knowledge about anatomical features, histological features and physiological functioning of systems and organs. 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 respiratory, digestive system urinary system. The emphasis is given to the pancreas, gonads including

their functioning. Focus is given to gain knowledge about the diuretic system. The students also gain adequate knowledge about the inflammation process, edema and shock. The course also imparts on the nutritional values of vitamins and their deficiency disorders. The students should be able to: (1) describe the various physiological aspect of the human body, (2) explain various systems in coordination with various organs and tissues (3) explain pathological and diseased process and repair mechanism of various systems, and (4) acquire the knowledge regarding health education in human life.

T 2.3.6Pathophysiology of common diseases I

Pathophysiology of common diseases I theory course is designed to provide elementary knowledge about pathogenesis, etiology and management of various diseases including disorder related with central nervous system, gastrointestinal tract and liver. Focus is given to gain knowledge about Basic principles of cell injury and mechanism of wound healing inflammation, autoimmunity and immunity. The course design provides significant understanding about the hypersensitivity, pain, types of acid-base derangements. The students acquire knowledge about Biological effects of radiation. The students should be able to: 1. Explain functional changesassociated with disease or injury.2. Explain the physiological processes, mechanisms of disease and correlate with their clinical course. 3. Identify the targets for the treatment of disease. 4. Get knowledge regarding management of common diseases.

T. 2.4.1- Pharmaceutics IV (Physical pharmacy- II)

Pharmaceutics IV (Physical pharmacy- II) theory course is designed to provide basic knowledge about utility of physicochemical properties in design of pharmaceutical product. The students acquire knowledge about determination of physicochemical properties. The students will able to understand factors governing stability of finished pharmaceutical product. Focus is given to gain knowledge about Interfacial phenomenon Newtonian system, non- Newtonian system- plastic flow, pseudo plastic flow, dilatant flow, thixotropy, bulges & spurs. The students also gain adequate knowledge about classification of colloids and their method of preparation and also about optical properties, kinetic properties and electrical properties of colloids. Students will be able to understand in detail about coarsedispersions and micromeritics including Fundamental properties Particle size and size distribution, number & weight distribution.

T 2.4.2- Pharmaceutical microbiology

Pharmaceutical microbiology theory course covers the principle of microbiology with emphasis or microorganisms and human disease. The course design provides significant understanding about classification of microscope and its terminology like resolving power, numerical Aperture, magnification, also about lens. The course ensures the ability to assimilate the concepts of structure of bacteria and viruses by studying the characteristics of bacteria and viruses with their reproduction and cultivation. It also describes physical and chemical control of microorganism. The students also gain adequate knowledge about immunity, its type and definition of antigen and antibody with their types. The course design provides significant understanding about monoclonal antibody, autoimmunity, and complement pathway. This course giving idea about vaccine, types of vaccine, production of vaccine, edible vaccine, DNA vaccine, & application of vaccine. this course explain procedure of various pharmaceutical microbiology test like sterility test, antibiotic assay, microbial limit test, pyrogen testing, preservative efficacy test, carcinogenic test. The students also known industrial microbiology by gaining the knowledge of culture, types of culture, preservation of culture, uses of culture, lyophilisation.

T. 2.4.3 Pharmacognosy III

Pharmacognosy III theory course is designed to provide basic knowledge about glucosidal drug their biological source, chemical constituents, morphology and microscopy and uses. The students also acquire knowledge about brief account ofmarine originated drug and different plant toxin and allergens. The course designed to provides significant understanding about the herbal insecticide and pesticide their use and importance. The course also gives the information about Common & Vernacular Names,

Botanical Sources, Morphology, Chemical Nature of Chief Constituents, Common Uses and Marketed Formulations of traditional drugs. The emphasis is also given on standardization of crude drug and extract according to WHO guideline. The student also gains the knowledge about Indian Traditional Systems of Medicine like Asavas, Arishtas, Tailas, Churna and Bahamas. The course also imparts on study of Introduction and Principle of Unani, Siddha, Homeopathy and Aromatherapy.

The students should be able to (1) Give information about glycoside contain drug. (2) Knowledge about marine drugs and plant toxin and allergen. (3) Acquire the knowledge of herbal pesticide and traditional drug. (4) Acquire the knowledge of chemotaxonomy and alternative medicinal system.

T 2.4.4 Pharmaceutics V

Pharmaceutics V course is designed to impart a fundamental knowledge of hospital and its organization and functions, hospital pharmacy and organization, administration governing body and Management. Students acquire the knowledge about drug distribution system in hospital, hospital drug policy and pharmacy and therapeutic committee. This course also provides knowledge about hospital formulary, hospital pharmacy services and medical stores. From this course students also learn manufacturing of pharmaceuticals in hospitals, surgical dressing, radio pharmaceuticals, handling and packaging and application of computers.

T.2.4.5 Pharmaceutical Chemistry V (Biochemistry)

Pharmaceutical Chemistry-V (Biochemistry) theory course is designed to provide basic knowledge about cell, carbohydrates, proteins, amino acids, lipids, vitamins , enzymes, co-enzymes, nucleic acid , their introduction, classification, structures, biological roles in body, uses and their mechanism of metabolism in body, by Pharmaceutical Chemistry-V (Biochemistry) theory course, students are able to understand the basic functioning and their roles all of the above in the body

T 3.5.1. Pharmaceutical Chemistry VI (Medicinal Chemistry I)

Pharmaceutical chemistry VI course is designed to gain the knowledge of medicinal chemistry which covers all the introductory part about medicinal chemistry. This course provides the knowledge regarding theoretical aspects of drug action (The Ferguson Principle; Drug targets: Molecular mechanisms of drug action. Physicochemical parameters affecting drug action: Solubility, Partition Coefficient, Surface Activity, pKa, Ionization) and Stereochemistry and drug action (Optical isomerism, Geometrical isomerism, Bio-isosterism). This course gives the idea about Metabolism, routes of elimination, and concept of receptor. Students also acquire the detail knowledge of Cholinergic Drugs, Adrenergic Drug, CVS Drug**s**includes introduction, and classification, mechanism of action, structure-activity relationship, pharmacokinetics (Metabolism), therapeutic uses and synthesis of drugs.

T 3.5.2. Pharmaceutics VI (Pharmaceutical Technology I)

Pharmaceutical Technology I course is designed to provide knowledge about the formulation and evaluation or quality control of dosage forms (tablet, capsule, ointment, suppository, emulsion suspension and aerosol system).The students also gain knowledge about pilot plant scale up technique and GMP, CGMP for tablet, liquid orals include emulsion, suspension and semisolids.

T 3.5.3 Pharmacology I

Pharmacology I theory course is designed to introduce students to basic concepts in general pharmacology. Students will know the history and definition of pharmacology. This course provides primary knowledge of routes of administration of drug including novel drug delivery systems (inunction, iontophoresis, antibody assisted drug delivery, administration of biological). It will introduce students with absorption of drugs and factors affecting them, drug distribution, biotransformation and excretion, mechanism of drug action – types of receptors, signal transduction mechanisms, theories of drug receptor interactions, dose response relationship, concept of bioavailability and factors modify drug action like synergism, antagonism, drug tolerance, and tachyphylaxis. This course introduces about role of Pharmacologists in drug development and drug use. Also informs students regarding the steps involved

in drug discovery, along with stages of preclinical testing (efficacy testing, safety testing, toxicity testing) and clinical drug development (four phases of Clinical trials). This course highlights the importance of knowledge of Pharmacotherapeutics to preclinical, clinical and hospital pharmacologist. Emphasis is given on pharmacotherapy of drugs acting on Autonomic nervous system. The students acquire knowledge about the neurohumoral transmission. Students acquire knowledge of classification, mechanism of action, pharmacokinetics, pharmacodynamics, adverse effects, contraindications, Therapeutic uses, interactions and dose and route of administration of drugs acting for bronchodilator and nasal decongestants, non-steroidal anti-inflammatory drugs (NSAID). The students also gain adequate knowledge aboutautocoids and their types and their physiological roles on various organ systems.

T. 3.5.4 Pharmacognosy IV

Pharmacognosy theory course is designed to provide basic knowledge about morphological, Microscopical and phytochemical constituents of herbal drugs. The students acquire knowledge about the plant source, its family, Genus and species. The course designed to provides significant understanding about the medicinal uses, extraction and isolation process and pharmaceutical uses of herbal drugs. The course also gives the information about the different enzymes their tests and biological source. Focus is also given to gain knowledge about different technique of biosynthetic pathways in the plant. The emphasis is also given on plant tissue culture (Lab requirement culture media, callus culture, cell suspension culture protoplast culture including their industrial application). The student also gains the knowledge about how sweet and bitter plant can be useful in pharmaceutical preparation. The course also imparts on study of neutraceuticals as ahealth food, beneficial for better health, Emphasis is given on how the colour and dyes are useful in pharmaceutical preparation. The students should be able to: (1) give information about drugs biological source, its genus, species and family. (2) Identify the drug on the basis of morphological and microscopical characters (3) explain drugs chemical constituent and medicinal uses. (4) Acquire the knowledge regarding plant tissue culture and their application in pharmacognosy.

T.3.5.5. - Pharmaceutical Analysis II

Pharmaceutical Analysis-II theory course is designed to provide analytical knowledge aboutprincipal, instrumentation&working of different types of analytical methods such as potentiometry, conductometry, thermal analysis, etc. The students acquire knowledge about the various methods of analytical separations. The course design provides significant understanding about the electrochemistry and electrochemical methods of analysis. The course ensures the ability to assimilate the equipment of refrctometer and polarimetry. It also describes the different electrode i.e. reference electrode and indicator electrode. Focus is given to gain knowledge about the gasometric analysis. Focus is also given to the appreciation of nephelometry&turbidimetry. The students also gain adequate knowledge about the polarography. The course also imparts on the Karl fisher titration. The students should be able to: (1) describe the principle & working of various method of analytical techniques, (2) explain variousinstrumentationmethod of analytical techniques (3) explain various application to pharmaceutical drug analysis, and (4) acquire the knowledge & analytical techniques applied to drug quality control.

T3.6.1. Pharmaceutical Chemistry VII (Medicinal Chemistry II)

The subject deals with study Antibiotics, anticancer agents, anti-TB, antimalarial agents, antiamoebic agents, antifungal agents, sulphonamide, antiseptic & disinfectant.

The students should be able to:

1. Understand the structural activity relationship of chemotherapeutic agents.
2. To understand the structure activity relationship (SAR) of different classes of drugs
3. Apply the knowledge of medicinal chemistry for synthesis of new compounds
4. Understand the biological sources and structures of some important antibiotics.

T 3.6.2. Pharmaceutics VII

Pharmaceutics VII course is designed to impart a fundamental knowledge Introduction to Biopharmaceutics and Pharmacokinetics and their role in formulation development and clinical setting. Students acquire the knowledge absorption of drugs, distribution of drugs, protein binding of drugs, biotransformation of drugs, excretion of drugs, and non- linear pharmacokinetic. This course also provides knowledge about compartment modeling, bioavailability and bioequivalence, design of dosage regimens.

T. 3.6.3Pharmacology II

Theory course is designed to provide fundamental knowledge about drugs acting on central nervous system (CNS). This includes neurotransmitters involved in central nervous system (CNS) with their role in physiology and pathology of CNS disorders, pharmacology of alcohol and treatment of alcohol abuse, general anesthetics, and pharmacology of various classes of drugs acting on CNS such as local anesthetics, antiparkinsonian drug, sedatives, hypnotics and anxiolytics, CNS stimulants and respiratory stimulants, anticonvulsants, antipsychotics, antidepressants, opiates and opioid analgesics. Besides the course also emphasize on concept of bioassays, Pharmacology of drugs acting on respiratory system such as mucolytic, Antitussives, Expectorants, and Anti-Asthmatic drugs, Pharmacology of drugs acting on Endocrine system such as thyroid and antithyroid drugs, Insulin and insulin analogues, oral hypoglycemic drugs, Male and female sex hormones and oral contraceptives, Oxytocin and other uterine stimulants and relaxants. Thus, upon completion of the course the students should be able to: (1) comprehend action of drugs on CNS (2) acquire knowledge of pharmacology of drugs acting on respiratory system (3) acquire knowledge of pharmacology of drugs acting on endocrine system(4) acquire the knowledge regarding various types of bioassay.

T 3.6.4 Pharmacognosy V (Chemistry of Natural Products)

Pharmacognosy V (Chemistry of Natural Products) theory course is designed to provide fundamental knowledge about the chemistry, biogenesis and pharmacological activity of medicinally important phytoconstituents. This includes monoterpenes, sesquiterpenes, diterpenes, triterpenoid, glycosides: such as digitoxin, digoxin, sennoside, diosgenin, hecogeninand sarasapogenin, alkaloids such as atropine, quinine, reserpine, morphine, papaverine, ephedrine, ergot and vinca alkaloids, carotenoids such as α-carotenoids, β-carotenes, vitamin A. Besides, the course overviews biogenesis of medicinally important lignans and flavonoids, Chemistry and therapeutic activity of Penicillin, Streptomycin and Tetracycline, chemistry and spectral characterization of simple natural origin molecules using modern analytical tools (UV, IR, NMR, and Mass) and the concept of stereoisomerism of natural products. Thus, upon completion of the course the students should be able to: (1) explain biogenesis and chemistry of alkaloids, glycosides, flavonoids etc (2) acquire knowledge of medicinally important phytoconstituents (3) acquire knowledge of modern analytical tools (UV, IR, NMR, and Mass) for characterization of simple natural origin molecules (4) acquire the knowledge regarding stereoisomerism of natural products.

T 3.6.5 Pharmaceutical Jurisprudence& Ethics

Pharmaceutical Jurisprudence & Ethics Theory Course is designed to provide the knowledge of several important legislations related to the profession of pharmacy in India. The Drugs and Cosmetics Act, along with its amendments is the core of this course. Other acts, which are covered, include the Pharmacy Act, dangerous drugs, medicinal and toilet preparation Act etc. Besides this the new drug policy, professional ethics, DPCO, will be discussed. After completion of syllabus we are able to understand the Pharmaceutical legislations and their implications in the development and marketing, Understand and follow the code of ethics during the pharmaceutical practice, Know and understand various Indian pharmaceutical acts and laws, Know about the process of drug discovery and developments , Know the regulatory authorities and agencies governing the manufacture and sale of

Pharmaceuticals and Know the regulatory approval process and their registration in Indian and international markets.

T 4.7.1 Pharmaceutical Technology II (Pharmaceutics VIII)

Pharmaceutical Technology II theory course is designed to provide fundamental knowledge about the sterile dosage forms such as parenteral and ophthalmic. This includes various aspects like general requirements, packaging, design of facilities and environmental control, processing of parenteral & ophthalmic products, quality control and quality assurance of sterile dosage form. Besides, the course encourage the students to learn about the stability aspects of drug with detailed kinetic and degradation mechanism involving hydrolysis {Ester and amide hydrolysis with examples}, oxidation {Auto oxidation kinetics of ascorbic acid}. Miscellaneous reactions with their preventive measures such as optical isomerization, epimerization, geometrical isomerization, polymerization, and decarboxylation.Effect of light {photochemical decomposition}. The course also emphasize on oral sustained and controlled drug delivery system, use of polymer in controlled drug delivery, various microencapsulation and optimization techniques. Thus, upon completion of the course the students should be able to: (1) design and evaluate sterile dosage form, (2) acquire knowledge of various mechanism of drug stability and degradation pathways (3) design and evaluate controlled release dosage form(4) acquire the knowledge regarding microencapsulation and optimization technique

T 4.7.2 Pharmaceutical Chemistry VIII (Pharmaceutical Medicinal Chemistry III)

Pharmaceutical chemistry-VIII (PMC-III) theory course is designed to provide elementary knowledge about classes of drugs including, classification, chemical nomenclature, structure including stereochemistry, generic names, chemistry, physicochemical properties, SAR. Metabolism, molecular mechanism of action, and synthesis, introduction to rational development if any of the class of drugs. The students acquire knowledge about the mode of action of drug i.e. binding affinity of drug and specific receptors. The course design provides significant understanding about the drugs acting ondisease related to central nervous system including anti-depressants and anti-convulsants. The course ensures the ability to assimilate the concepts of structure activity relationship (SAR), acid-base i.e. bioequivalence&bioavailability study. Focus is given to gain knowledge about the antiviral agents including HIV. Focus is also given to the appreciation of basic pathophysiology &care giving treatment of the Alzheimer's diseases. The students also gain adequate knowledge about the general & local anesthetics. The course also imparts on the nutritional values of vitaminsand their deficiency disorders. The students should be able to: (1) describe the various mechanism of action of drugs, (2) explain various structure activity relationshipsof drugs, (3) explain chemistry, source, deficiency, physiological role, metabolism, & therapeutic uses of vitamins and (4) acquire the knowledge regarding drugs on human body.

T 4.7.3 Pharmacology III

This course provides knowledge of pharmacology drugs acting on cardiovascular system includes diuretics and antidiuretics, antihypertensive, antianginal, cardiotonics,antiarrhythmic antihyperlipidemics. The students will understand pharmacology of drugs acting on blood and blood forming agents such as coagulants and anticoagulants, hemopoietics, thrombolytic and antiplatelets.This course also includes concept, merits and demerits, methods, types, bioassay of insulin, digitalis as per official books. Students will know the various methods of biostatics with reference to bioassay. Also the course highlights the pharmacology of immunosuppressantand immunostimulants. This course focuses on chemotherapy. Students acquire knowledge of different mechanism of drug resistance development, classification, mechanism of action, pharmacokinetics, pharmacodynamics, adverse effects, contraindications, Therapeutic uses, interactions and dose and route of administration of drugs. This includes introduction and molecular basis of chemotherapy, sulphonamide and cotrimoxazole, penicillin

and cephalosporin, tetracycline and chloramphenicol, Macrolides, aminoglycosides, polyenes and polypeptids, Quinolones and fluoroquinolones, chemotherapy of T. B and leprosy, antifungal antibiotics, antiviral agents and anti HIV agents, chemotherapy of protozoal infections (malaria), chemotherapy of amoebiasis and giardiasis, pharmacology of anthelmintics drug, chemotherapy of cancer.

T - 4.7.4 - Pharmaceutical Analysis –III

In this course chapter 1 (chromatography) and chapter 2 (Planer chromatography) covers all the fundamental aspects of chromatography intended for the students who have recently started using chromatographic techniques. Both the chapters helps to achieve the following objectives:

(i) It helpsthe students to understand the fundamental principles and methods involved in chromatography,

(ii) Provides guidance on method selection and method development for both large and small molecules,

(iii) To comprehend the qualitative and quantitative approaches adopted in chromatography.

The chapter 3 (Electrophoresis) helps the students to achieve following objectives:

(i) To get acquainted with the principles of separation of charged and uncharged analytes by capillary electrophoresis methods,

(ii) To understand the concept of electro-osmotic flow,

(iii) To gain a knowledge of capillary electrophoresis system and how analytes are injected into it and the methods of detection.

Chapter 4 (Radioimmunoassay and related immunoassay techniques) provides the knowledge about radio immune assay. It tells us how ELISA tests and other immunoassays works and how it is useful in diagnosis of fatal diseases like AIDS.

Chapter 5 (Basic Concepts in Spectroscopy) & chapter 6 (UV-Vis absorption spectroscopy) provides the knowledge aboutelectromagnetic radiations. The chapter also provide very useful information aboutproperties of electromagnetic radiations such as wavelength, wave number, frequency, absorbance and transmittance. This also covers significance of spectrometers in the analysis of materials and pharmaceuticals.

Chapter 7 (Fluorescence spectroscopy)&8 (Atomic emission and atomic absorption spectrophotometry) provide information about how to analyze metals, mercury and other volatile species by Atomic absorption. It covers all the aspects related to Fluorescence, Atomic emission and atomic absorption.

T. 4.7.5 - Pharmaceutical biotechnology

Pharmaceutical biotechnology theory course is designed to provide basic knowledge about the biotechnology, plant and animal tissue culture, fermentation technology. The students acquire knowledge about the plant and animal tissue culture, its techniques, media requirements, laboratory requirement and their applications, polymerase chain reactions, gel electrophoresis, RIA and ELIZA. The course designed to provides significant information about the genetic recombination of animal cell, their steps, endonucleases, biological productions, principle and applications of blotting techniques. The course also introduces the different types of culture media useful for plant and animal tissue cultures, germplasm conservations. Focus is also given to gain the knowledge about the basic biotechnology, differenttissue cultures techniques, fermentation and their utilization in pharmacy. The student also gains adequate knowledge about principle and applications of blotting techniques, colony plaque hybridization. The students should be able to: (1) give information abouttissue culture and their media requirements, merits and demerits,and their applications, (2) explain the applications of plant and animal tissue culture.(3) give information about biotechnological productions and their applications.

T4.7.6 - Pharmaceutical Management

Pharmaceutical management theory course is designed to provide elementary knowledge about pharmaceutical management. The students acquire knowledge about theplanning, organization communication skill, leadership etc. Designed course provides significant understanding about complete

Pharmaceutical Management. The course ensures the ability to assimilate the concepts of management, its objective, its limitation etc. It also describes role of various management system. The emphasis is given to role of different management levels such as, production management, personnel management, purchase management, marketing management etc.Focus is given to gain knowledge about the pharmaceutical management it also discuss the general agreement on tariff & tradeand its impact on pharmaceutical industry. The subject is also elaborated on good manufacturing process, CGMP, Good laboratory practice its documentation its application etc. This subject also covers various issues related to Standard institution & regulatory authorities like IBS, ISO. WHO etc.

T 4.8.1. Pharmaceutics – IX

Pharmaceutics –IXtheory course is designed to provide fundamental knowledge about targeted and novel drug delivery systems (NDDS). This includes advantages, disadvantages, classification, pharmaceutical applications, stability, and storage of systems such as nanoparticles, concept of polymeric nanoparticles, solid lipid nanoparticles (SLNs), Nanostructured lipid carriers (NLCs), and Lipid drug conjugate nanoparticles (LDC). Other carrier systems such as liposomes, niosomes, resealed erythrocytes, dendrimers, parenteral implants, and osmotic pumps are also overviewed in the course. Besides, the course provides a detailed discussion on various targeted drug delivery such as ocular, transdermal, mucosal, gastroretentive, colon specific, pulmonary, nasal and an intrauterine and intravaginal drug delivery system. Thus, upon completion of the course the students should be able to: (1) design and evaluate NDDS (2) acquire knowledge of various mechanism of drug targeting (3) design and evaluate site specific controlled release dosage form(4) acquire the knowledge regarding osmotic pumps, IUDs and parenteral implants.

T 4.8.2. Pharmaceutical Analysis – IV

Pharmaceutical Analysis –IV theory course is designed to provide fundamental knowledge about the various analytical techniques. This includes column chromatography its principle, column packing techniques, application, theory, efficiency of column, capacity factor and other performance parameters. Gas chromatography which includes introduction, carrier gases , columns, injection system, detectors, thermal conductivity detectors (TCD), electron capture detector (ECD), thermo-ionic detector (TID), flame ionization detector (FID), nitrogen phosphorus detector (NPD), photo-ionization detector (PID), head space analysis, applications, programmed temperature gas chromatography (PTGC). HPLC including its instrumentation, pumps (reciprocating pumps, displacement & pneumatic pumps), mobile phase reservoirs, solvent treatment systems, isocratic elution, gradient elution, injection system. Detectors, photometric detectors (single wavelength, multi wavelength, variable wavelength, diode array, fluorescence detectors), refractive index detectors, electrochemical detectors. Columns analytical columns, guard columns, column thermostats, types of column packaging, introduction of UPLC (Ultra Pressure Liquid Chromatography).Other instrumental techniques such as Infrared spectroscopy, NMR spectroscopy, Mass spectroscopy, X- ray diffraction are also discussed in the course. Thus, upon completion of the course the students should be able to: (1) gain information about various analytical techniques used in pharmaceutical field. (2) Acquire knowledge of various chromatographic techniques such as Ion exchange and Ion Pair chromatography, Gel permeation chromatography, Flash Chromatography etc. (3) Structural elucidation problems based on IR, NMR, and Mass spectroscopy.

T 4.8.3. Pharmaceutical Chemistry-IX (Medicinal Chemistry- IV)

Pharmaceutical Chemistry –IX (Medicinal Chemistry- IV) theory course is designed to provide fundamental knowledge about the quantitative approaches to structure–activity relationships including general introduction, descriptors: biological and physicochemical descriptors; Topliss tree and Craig plot, determining relationships between chemical and biological data (QSAR methods). The Hansch approach, Free-Wilson analysis and related methods, Partial least squares (PLS), linear discriminant analysis (LDA), Principal component analysis (PCA), Cluster analysis. Introduction to 3D-QSAR, introduction

to CADD: energy minimization, Quantum Mechanics, Molecular Mechanics. Also, the course emphasize on designing prodrugs and bioprecursors, various diuretics such as Site 1 Carbonic: anhydrate inhibitors acetazolamide,methazolamide. Site 2 High ceiling or loop diuretics is sulfamoyl anthranilicacids like furosemide, azosemide and bumetanideinphenoxyacetic acids ethacrynic acid Site 3 Thiazide and Thiazide like diuretics, Site 4 Potassium sparing diuretics such as spironolactone triamterene and amiloride. Other drug glasses discussed in the course are steroids, antihistaminics, antiemetics and antiulcer drugs, analgesics, NSAID's, Hypoglycemic etc. Thus, upon completion of the course the students should be able to: (1) gain the information on quantitative approaches to structure–activity relationships (2) acquires knowledge of designing prodrugs and bioprecursors (3) synthesis of diuretics, analgesics, NSAIDs, and hypoglycemics etc.

T. 4.8.4. Pharmacognosy VI

PharmacognosyVI theory course is designed to provide basic knowledge about World-wide trade in medicinal plants and their derived products like diosgenin, Taxol, digitalis, tropane alkaloid containing plants. The students also acquire knowledge about brief account of plant based industries and institutions involved in work on Medicinal and aromatic plants in India. The course designed to provides significant understanding about the herbal cosmetics and their formulation, evaluation for herbal skincare and herbal shampoo. The course also gives the information about the different plants used for the preparation of herbal cosmetics. The emphasis is also given on standardization of crude drug and extract according to WHO guideline. The student also gains the knowledge about Quality control of herbal drugs as per AYUSH and Pharmacopoeial standards. The course also imparts on study of standardization of herbal formulation along with HPLC and HPTLC techniques. It gives emphasis on regulation of patent for herbal drugs. The students should be able to: (1) give information about aromatic plants and their trade. (2) Knowledge about herbal drug and derived product (3) acquire the knowledge of herbal cosmetics. (4) Acquire the knowledge regarding standardization of crude drug and herbal formulation according to WHO and AYUSH.

T.4.8.5. Pharmacology IV (Clinical Pharmacy & Drug Interactions

Pharmacology IV (Clinical Pharmacy and Drug Interactions) theory course is designed to provide fundamental knowledge about drug development process including its introduction, various approaches to drug discovery, preclinical evaluation (acute, sub-acute, chronic toxicity, ADME, therapeutic index), clinical evaluation etc. The course also emphasize on drug interactions, drug induced diseases, therapeutic drug monitoring and adverse drug reaction monitoring. Besides, the course discusses about various aspects of medication errors, drug utilization evaluation, role of clinical pharmacist in DUE, essential and rational drug use, guidelines for rational prescribing for antibiotics, injections and OTC drugs, the pharmacist role in rational drug use, pharmacoeconomics, and pharmacoepidemiology. Thus, upon completion of the course the students would be able to: (1) explain drug development process (2) acquire knowledge of various mechanism of drug interaction (3) understand medication error in prescription and rational use of drugs (4) acquire the knowledge regarding pharmacoeconomics, and pharmacoepidemiology.

T.4.8.6. Elective (Theory)

Pharma marketing (Elective) theory course is designed to provide fundamental knowledge about marketing, product decision, pricing, pharmaceutical marketing channels, promotion. The course emphasize on various aspects such as emerging trends in marketing, Industry and competitive analysis, Indian Pharmaceutical Industry; analyzing consumer buying behavior; industrial buying behavior, Pharmaceutical market segmentation & targeting. Also, the course includes, classification, product line and product mix decisions, product life cycle, product portfolio analysis; product positioning; New product decisions; Product branding, packaging and labeling decisions, Product management in pharmaceutical industry, An overview of DPCO (Drug Price Control Order) and NPPA (National

Pharmaceutical Pricing Authority), etc. Thus, upon completion of the course the students should be able to: (1) comprehend emerging trend in pharmaceutical marketing (2) acquire knowledge of various pricing control bodies such as DPCO (Drug Price Control Order) and NPPA (National Pharmaceutical Pricing Authority) (3) gain knowledge about pharmaceutical market segmentation & targeting (4) acquire competency in strategic marketing planning; marketing implementation and evaluation.

2.1.2 State the delivery details of the content beyond the syllabus for the attainment of PO's 20

Content beyond the syllabus with attainment of PO's(2018-2019)

Course Code	Subject Name, Year/Sem	Gap	Action taken	Date-Month-Year	Resource Person with designation	No. of students present	Relevance to Pos
BP101T	Human Anatomy and Physiology I	Accessory Organs of skin	Extra lecture	20/8/2018	Ms. U.M.Sonwane	53	1,7,11
BP103T	Pharmaceutics I	Different grades of powder	Seminar	01/11/2018	Mr. S S Patil	54	1, 11
BP106RMT	Remedial Mathematics	Matrices chapter (For understanding its relevance in Pharmaceutics)	Lecture arranged	17/10/2018	Dr. S.P.Warke	All (17)	1,3,4,11
BP107P	Human Anatomy and Physiology	Blood pressure measurement by using digital meter	Practical performed	Batch C-9/10/2018 Batch -A 16/10/2018 Batch -B 17/8/2018	Mr. K. G. Ingale	C-18 A-19 B-18	1,3,4
BP 201T	Human anatomy and physiology-II	Detail about peripheral nervous system. including ANS	explained by taking regular class	01/02/2019	Mr. P.R.Tijare	47	1,9 & 11
BP301T	Pharmaceutical Organic Chemistry-II	Conformation of cyclohexane not mentioned in syllabus	Seminar	29/10/2018	Mr.S.S. Chaudhari	65	1 & 11
BP302T	Physical pharmaceutics I	Definition, classification of solubility.	Explained by taking regular class	25/06/2018	Mr. P.R.Tijare	59	1 & 11
BP303T	Pharmaceutical Microbiology	Pyrogen test&LAL test	Extra Lecture	20/10/2018	Mr.S.A.Nagdev	69	1,6,9,10, 11
BP304T	Pharmaceutical	Factor affecting	Explained	22/6/18	Mr. M.R.	34	1 &11

	Engineering	drying	in regular class		Bhurat		
BP305P	Pharmaceutical Organic Chemistry-II	Demonstration &Ester oil value determine by Practically	Seminar	29/10/2018	Mr. R. G. Jadhao	65	1 & 11
BP306P	Physical pharmaceutics I	Demonstration on Optical rotation.	Explained by taking extra practical after completing regular practical	21/08/2018	Mr. P.R.Tijare	62	1, 11
BP307P		Counting Of colony	Demonstration of colony counter	Batch A-29/10/2018 Batch B-30/10/2018 Batch C-31/10/2018	Mr.S.A.Nagdev	Batch A-21 Batch-B-20 BatchC-20	1,6,9,10, 11
T 3.5.1.	Pharmaceutical Chemistry – VI (Medicinal Chemistry - I)	FTIR studies of Synthesized Medicinal agents	Seminar	30/10/2018	Mr. R G Jadhao	60	1,11
T 3.5.2.	Pharmaceutics – VI(Pharmaceutical Technology I)	Introduction to different storage conditions of dosage forms	Seminar	26/09/2018	Mr. S S Patil	60	1, 11
T 3.5.3.	Pharmacology I	Introduction to chronopharmacology	Seminar was arranged	05/10/2018	Mr. K. G. Ingale	70	1
T 3.5.4.	Pharmacognosy –IV	Extraction methods for different phytoconstituent	Explained by taking extra class	19/9/118	Dr. U.B. Gandagule	50	4
T 3.5.5.	Pharmaceutical Analysis-II	In topic of Gasometric analysis: The combustion methods of gases, i.e. water, carbon dioxide, & free nitrogen, etc. and in order to effect the combustion by	Extra Lecture was arranged	10 Oct. 2018	Mr. S. S. Chaudhari	57	1, 3, 4,& 9

		using the eudiometer					
P 3.5.1.	Pharmaceutical Chemistry – VI (Medicinal Chemistry - I)	FTIR studies of SynthesizedMedicinal agents	Seminar	30/10/2018	Mr. R G Jadhao	60	1,11
P.3.5.3	Pharmacology I	To demonstrate Acute oral toxicity(AOT-425)	Demonstration	12/10/2018 11/10/2018 22/09/2018	Mr. K. G. Ingale	18 20 22	1,7
P 3.5.5.	Pharmaceutical Analysis-II	Bio analytical approaches: To measure the specific gravity of human urine. (Demonstration)	Extra Practical was arranged	A batch: 14/07/2018 B batch: 14/07/2018 C batch: 23/07/2018	Mr. S. W. Rangari	A Batch-20 B Batch-20 C Batch-23	1, 3, 4,& 9
T 3.6.5.	Pharmaceutical Jurisprudence & Ethics	Preparation of documents for NDA	Lecture	14/2/2019	Ms. Snehal Jaiswal	40	1,11
T 4.7.1.	Pharmaceutical TechnologyII (Pharmaceutics –VIII)	Regulatory consideration forSterile products	lecture was arranged	09/08/2018	Mrs. R V Patil	45	1,7, 9,11
T 4.7.2.	Pharmaceutical Chemistry-VIII (Medicinal Chemistry – III)	In topic of Antiviral agents: HIV-cycle, drugs acting on HIV-cycle & also why new antiviral drugs is difficult to kill HIV-virus.	Extra Lecture was arranged	08/10/2018	Dr. P. R. Patil	45	2,3,5,10, 11
T.4.7.3.	Pharmacology III	Chemotherapy of nephrolithiasis	Seminar was arranged	10/10/2018	Mr. K. G. Ingale	50	1
T 4.7.6.	Pharmaceutical Industrial Management	Organization of Pharmaceutical Industry	Explained In regular lecture	17/7/2018	Mr. M.R. Bhurat	54	1 & 7
P 4.7.3	Pharmacology III	Experiments on respiratory disorders	Demonstration conducted	10/10/2018 1/10/2018 11/9/2018	Mr. K. G. Ingale	18 18 18	1,4
P.4.7.2	Pharmaceutical Chemistry-VIII	Green synthesis: To synthesis	Extra Practical	A batch: 05/07/20	Mr. S. W. Rangari	A Batch-	2,3,5,10, 11

		toluene-p-sulphonamide from toluene -p-sulphonyl chloride by green synthesis.	was arranged	18 B batch: 06/07/2018 C batch: 07/07/2018	& Mr. V. V. Jangale	17 B Batch-18 C Batch-16	
T 4.8.2	Pharmaceutical Analysis- IV	Calibration of analytical instruments	Delivered a lecture	11/2/19	S.A. Nagdev	35	1,11
T 4.8.6.3	Quality Assurance	ISO 9000 & ISO 14000	Delivered a lecture	17/1/19	S.A.Nagdev	35	1,11

Content beyond the syllabus with attainment of PO's (2017-2018)

Course Code	Subject Name, Year/Sem	Gap	Action taken	Date-Month-Year	Resource Person with designation	No. of students present	Relevance to POs
BP101T	Human Anatomy and Physiology I	Accessory Organs of skin	Extra lecture	15/082017	Ms. U.M.Sonwane	50	1,7,11
BP103T	Pharmaceutics I	Different grades of powder	Seminar was arranged	10/09/2017	Mr. S S Patil	57	1, 11
BP104T	Pharmaceutical Inorganic Chemistry	Protective And Adsorbents	Seminar was arranged	08/10/2017	Dr. D. G. Mundhe	59	1,10, 11
BP106RMT	Mathematics	Integration chapter (For understanding some laws and equations in Physical Pharmaceutics)	Lecture arranged	2/2/2018	Mrs. Rajashri Mavale	all	1,3,4 ,11
BP107P	Human Anatomy and Physiology	Blood pressure measurement by using digital meter	Practical performed	9/10/2017 1/8/2017 2/8/2017	Mr.K G. Ingale	18 19 20	1,3,4
BP109P	Pharmaceutics I	Different grades of powders	lecture	18/9/2017	Mr. S S Patil	52	1, 11
BP110P	Pharmaceutical Inorganic Chemistry	systematic qualitative analysis of inorganic mixtures containing two anions and two cations	Practical was arranged	A = 6/11/0217 B = 7/11/2017 C = 8/11/2017	Mrs. B.Y.Rane	20,19. 20	1,3,9
BP205T	Computer	Prism software	Lecture	1/2/2018	S.A.Na	all	1,3,4

	Applications in Pharmacy	handling (For statistical analysis of data)	arranged		gdev		,11
BP206T	Environmental sciences	biodiversity and its conservation	Extra Lecture was arranged	31 /03/ 2018	Mr. S. W. Rangari	54	2,3,5 ,10,11
BP210P	Computer Applications in Pharmacy	Prism software handling, working and	Demo of software	1/2/2018	S.A.Nagdev	All	1,3,4 ,11
T 2.3.1	Pharmaceutics-III (Physical Pharmacy-I)	Adsorption Types, factors affecting and applications in pharmacy	Seminar was conducted	27/09/17	Mr.A. B. Wadekar	62	1,3,7
		Compaction and Compression theory	Seminar was conducted	25/09/17	Mr.A. B. Wadekar	65	1,3
T 2.3.3	Pharmacognosy – II	Introduction to alkaloids and glycoside	Arranged lectures on alkaloids and glycosides	12/8/2017	Dr. U. B. Gandagule	57	1,7
T 2.3.5	A P HE-II	Factor affecting heart rate and pulse rate	Extra lecture	5/07/2017	Mr.K. G. Ingale	58	1,7,11
T 2.3.6	Pathophysiology of Common Diseases-I	Diagnostic test for liver includeAlanine transaminase (ALT) test, Aspartate aminotransferase (AST) test, Alkaline phosphatase (ALP) test, Albumin test, Bilirubin test.	Seminar was conducted	21/09/17	Mr. A. B. Wadekar	60	1,
P 2.3.5	A P HE-II	SGPT and SGOT detection test by usingU.V.spectrophotometer	Practical performed	8thaug2017 10thaug2017 28thjul2017 11thaug2017 29jul2017 5aug2017	Mrs. U.M.Sonwane	B-13&18 C-19&17 A-18 &16	1,3,4 ,

T.2.4.3.	Pharmacognosy – III	Principle of Ayurvedic medicinal system.	Explained by taking extra class	16/2/18	Mr. M.R. Bhurat	55	4 &11
T.2.4.4.	Pharmaceutics –V (Hospital Pharmacy)	Classification of surgical dressings	Seminar was arranged	3/3/18	Mr. S S Patil	-	1, 11
P.2.4.3.	Pharmacognosy – III	Demonstration on pesticide content determination	Explained by taking extra practical after completing regular practical	14/2/18	Mr. M R. Bhurat	56	1,4,11.
P.2.4.4.	Pharmaceutics –V (Hospital Pharmacy)	Awareness and attitude towards HIV / AIDS	Seminar was arranged	17/1 /18	Mr. S S Patil	50	1, 9, 11
T 3.5.1.	Pharmaceutical Chemistry – VI (Medicinal Chemistry - I)	Pharmaceutical Chemistry-VI (Medicinal Chemistry-I)	Seminar	25/8/17	Dr. D. D. kumbhar	42	56
T 3.5.2.	Pharmaceutics – VI(Pharmaceutical Technology I)	Introduction to different storage conditions of dosage forms	Seminar was arranged	05/09/2017	Mr. S S Patil	54	1, 11
T 3.5.3.	Pharmacology – I	Introduction to chronopharmacology	Seminar was arranged	05/10/2017	Mr. K. G. Ingale	56	1
T 3.5.4.	Pharmacognosy – IV	Extraction methods for different phytoconstituent	Explained by taking extra class	19/9/17	Dr. Upendra Gandagule	50	4
T 3.5.5.	Pharmaceutical Analysis-II	The combustion methods of gases	Extra Lecture was arranged	31/10/2017 & 01/11/2017	Mr. S. A. Nagdev	52 & 49	1, 3, 4,& 9
P 3.5.1.	Pharmaceutical Chemistry – VI (Medicinal Chemistry - I)	FTIR studies of Synthesized Medicinal agents	Demonstration of FTIR given	16/8/17	Mr. R. G. Jadhao	56	1 & 11
P 3.5.5.	Pharmaceutical Analysis-II	To measure the specific gravity of human urine	Demonstration was arranged	A batch 31/09/2017 B batch 01/11/2017 C batch 30/09/2017	Mr. S. W. Rangari	A Batch -18 B Batch -19 C Batch -15	1, 3, 4, & 9.

T 3.6.2.	Pharmaceutics – VII (Biopharmaceutics & Pharmacokinetics)	Introduction to everted sac technique	Seminar was arranged	17/2/18	Mr. S S Patil	All	1, 11
T 3.6.5.	PharmaceuticalJurisprudence& Ethics	ISO (Indian Regulatory authority)	Lecture	4/3/2018	M.R.Bhurat	All	1,3,4,11
P 3.6.1.	Pharmaceutical Chemistry – VII (Medicinal Chemistry - II)	FTIR studies for synthesized medicinal agents	Demonstration of FTIR studies carried out	14/2/18	Mr. R. G. Jadhao	48	1 & 11
P. 3.6.2.	Pharmaceutics – VII (Biopharmaceutics & Pharmacokinetics)	Methods of enhancement of bioavailability	Seminar was arranged	16/2/18	Mr. S S Patil	45	1, 11
T 4.7.1.	Pharmaceutics – VIII (Pharmaceutical Technology - II)	Regulatory consideration forSterile products	lecture was arranged	17/07/2017	Dr.DD. Kumbhar	40	1,7, 9,11
P 4.7.2.	Pharmaceutical Chemistry- VIII (Medicinal Chemistry – III)	Green synthesis of organic compound	Practical was arranged	A batch 27/07/2017 B batch 28/07/2017	Mr. S. W. Rangari	A Batch -15 B Batch -19	1, 4, 9, 11
T.4.7.4	Pharmaceutical Analysis-III	Advantages, limitations of HPTLC	Lecture was arranged	25/07/2017	Dr. J V Manwar	41	1, 4, 11
		Capillary electro chromatography, Capillary isoelectric focusing, Capillary isotachorphoresis	Lecture was arranged	31 /07/ 2017	Dr. J V Manwar	41	1, 4, 11
		Applications of electrophoresis	Lecture was arranged	01 /08/ 2017	Dr. J V Manwar	41	1, 4, 11
		Preparation of methanol and ethanol by fermentation	Lecture was arranged	22 /08/ 2017	Dr. J V Manwar	37	1, 4, 11
		Absorption correction method	Lecture was arranged	29 /08/ 2017	Dr. J V Manwar	36	1, 4, 11
T 4.7.6.	Pharmaceutical Industrial Management	Communication tips for effective communication.	Extra Lecture was arranged	19/07/ 2017	Dr. D.D. Kumbhar	39	1,2,3,4,5,6,7,8,

T 4.8.4.	Pharmacognosy – VI	Standardization methods for herbal cosmetics	Explained by taking extra class	19/9/17	Mr. M.R. Bhurat	31	1 & 4

Content beyond the syllabus with attainment of PO's(2016-2017)

Course Code	Subject Name, Year/Sem	Gap	Action taken	Date-Month-Year	Resource Person with designation	No. of students present	Relevance to POs
T. 1.1.1	Pharmaceutics I	Introduction to granulation	seminar	10/10/16	Mr. S S Patil	52	1, 9,11
T. 1.1.2	Pharmacognosy– I	Factors affecting storage of crude drugs	Demo	7/10/16	Mr. N D Bendale	54	1,11
T. 1.1.3	Pharmaceutical Chemistry - I	Process of filtration of water	Lecture was arranged	24/10/16	Mrs. B Y Rane	50	1,11
T.1.1.5.	Communicating Skills and soft skill development	Role of information technology in pharmacy practice	Lecture was arranged	5/10/16	Mrs. G G Pal	52	1,11
P. 1.1.1	Pharmaceutics I	Process of granulation	Demo	20/9/16	Mr. S S Patil	54	1, 9,11
T. 2.3.1	Pharmaceutics III (Physical pharmacy- I)	Compaction and Compression theory	Seminar was conducted	4/10/16	Mr.A. B. Wadekar	52	1,3
T. 2.3.3	Pharmacognosy II	Overview to alkaloids and glycoside	seminar	30/9/16	Mr. N D Bendale	55	1,7
T.2.3.5	Anatomy, Physiology and Health Education	Factor affecting heart rate and pulse rate	seminar	7/10/16	Mr.K.G. Ingale	58	1,7,11
T. 2.3.6	Pathophysiology ofcommon diseases-I	Diagnostic test for GIT structural test e.g. radiography ultrasonography functional test, PH monitoring etc.	Seminar was conducted	1/10/16	Mr. A. B. Wadekar	57	1, 11
P 2.3.5	Anatomy, Physiology and Health	Spectrophotometric determination of SGPT and SGOT	Practical performed	3/10/16	Mr.K G Ingale	52	1,3,4,

	Education						
T 3.5.2	Pharmaceutics-VI	storage conditions of dosage forms	Seminar	30/9/16	Dr. S S Sheaikh	54	1, 11
T 3.5.3	Pharmacology I	Introduction to chronopharmacology	Seminar was arranged	27/9/16	Mr. N A Shaikh	52	1, 11
T. 3.5.4	Pharmacognosy IV	Extraction methods for different phytoconstituent	seminar	5/10/16	Dr. Upendra gandagule	50	4, 11
T.3.5.5.	Pharmaceutical Analysis-II	The combustion methods of gases	Extra Lecture was arranged	3/10/16	Mr. S. W Rangari	49	1, 3, 4,& 9
P.3.5.5.	Pharmaceutical Analysis-II	To measure the specific gravity of human urine	demonstration was arranged	7/10/16	Mr. S. W. Rangari	45	1, 3, 4, & 9.
T. 4.7.1	Pharmaceutical TechnologyII (Pharmaceutics –VIII)	Regulatory consideration for Sterile products	seminar	8/10/16	Dr.D D Kumbhar	40	1,7, 9,11
T 4.7.4	Pharmaceutical Analysis –III	Applications of electrophoresis	Lecture was arranged	28/9/16	Dr J V Manwar	41	1, 4, 11
T4.7.6	Pharmaceutical Management	Interview techniques	Extra Lecture was arranged	13/10/16	Mr. V C Gurumukhi	39	1,2,3,4,5,6,7,8,
P. 4.7.2	Pharmaceutical Chemistry-VIII (Pharmaceutical Medicinal Chemistry-III)	Green synthesis	Practical was arranged	30/9/16	Mr. S. W. Rangari	47	1, 4, 9, 11
T. 1.2.1	Pharmaceutics II	Demo of Distillation Assembly	Demo	7/3/17	Mr. S S Patil	49	1,11
T. 1.2.2	Pharmaceutical Chemistry – II	Classification of antodotes	Lecture was arranged	11/3/17	Mrs. B Y Rane	53	1,11
T.1.2.4	Anatomy, Physiology And Health Education-I	Blood clotting factors	Lecture was arranged	28/2/17	Mr. K G Ingale	51	1,11
T. 1.2.1	Pharmaceutics II	Demo of Distillation Assembly	Demo	7/3/17	Mr. S S Patil	49	1,11
T. 1.2.2	Pharmaceutical Chemistry – II	Classification of antodotes	Lecture was arranged	11/3/17	Mrs. B Y Rane	53	1,11
T.1.2.	Anatomy,	Blood clotting	Lecture was	28/2/17	Mr. K G	51	1,11

4	Physiology And Health Education-I	factors	arranged		Ingale		
P. 1.2.1	Pharmaceutics II	Factors affecting Extraction	Lecture was arranged	22/2/17	Mr. S S Patil	49	1,11
T 2.4.1	Pharmaceutics IV (Physical pharmacy- II)	Viscoelasticity	Seminar	22/2/17	Mr. A. B. Wadekar	48	1,3,11
T.2.4. 2	Pharmaceutical microbiology	Biological Indicators.	Extra lecture will arranged	17/3/17	Mrs. U M Sonawane	52	1,4,9,11
T. 2.4.3.	Pharmacognosy III	Ayurvedic medicinal system.	seminar	1/2/17	Mr. Mr. N D Bendale	53	1,4,11
T 2.4.4	Pharmaceutics-V	Ligatures & Sutures	Seminar was arranged	20/3/17	Mr. V C Gurumukhi	45	1, 11
T.2.4. 5	Pharmaceutical Chemistry-V (Biochemistry)	Cellular organization	Delivered a lecture	28/2/17	Mrs. B Y Rane	47	1,11
P.2.4.2	Pharmaceutical microbiology	To check Motility by Hanging drop method	Demo	7/3/17	Mr. U.M.Sonwane	48	1,9,11
P. 2.4.3.	Pharmacognosy III	pesticide content determination	Demo	4/2/17	Mr. N D Bendale	52	1, 11.
P 2.4.4	Pharmaceutics-V	Health awareness to society regarding HIV / AIDS	Seminar was arranged	21/3/17	Mr. V C Gurumukhi	51	1, 6, 9, 11
T 3.6.2.	Pharmaceutics-VII	Diffusion technique	Seminar was arranged	18/2/17	Mr. S S Patil	51	1, 11
P 3.6.2.	Pharmaceutics-VII	Methods of enhancement of bioavailability	Seminar was arranged	18/3/17	Mr. S S Patil	46	1, 11
T. 4.8.3	Pharmaceutical Chemistry –IX	Classification of proton pump inhibitors	Explained by taking extra class	3/3/17	Mr. R G Jadhao	45	1 & 4
T.4.8. 4	Pharmacognosy VI	Standardization approaches for herbal cosmetics	Explained by taking extra class	2/2/17	Mr. N D Bendale	33	1 & 4
P.4.8.4	Pharmacognosy VI	Demonstration on standardization of plant using HPLC.	Explained by taking extra	1/2/17	Mr. N D Bendale	38	1, 4

practical after completing regular practical

2.1.3. Adherence to Academic Calendar **10**

The KBC North Maharashtra University provides almanac (calendar of events) for each semester in the beginning of the academic year. Hence, we compiles with the details of NMU. The following list gives the dates for the previous two years and current academic year. These also provide semester-wise beginning dates for the conduct of examinations. In addition, the dates for the beginning and end dates for instructions are clearly defined.

University calendars – Almanac and Exams (CAY -2 2016-2017)

Year/ Semester	Date of commencement		I Sessional exam date		Practical exam date conducted
	Almanac	Actual	Almanac	Actual	
I/I	01/8/2016 to 3/10/2016 to	01/8/2016 to 3/10/2016	13/10/2016 to 18/10/2016	13/10/2016 to 18/10/2016	03/10/2016 to 08/10/2016
I/II	26/12/15 to 30/4/2016	26/12/15 to 30/4/2016	06-03-2017 to 10/3/2017	06-03-2017 to 10/3/2017	16/03/2017 to 22/3/2017
II/I	15/6/2015 to 31/10/2015	15/6/2015 to 31/10/2015	13/10/2016 to 19/10/2016	13/10/2016 to 19/10/2016	03/10/2016 to 08/10/2016
II/II	26/12/15 to 30/4/2016	26/12/15 to 30/4/2016	06-03-2017 to 11/3/2017	06-03-2017 to 11/3/2017	16/03/2017 to 22/3/2017
III/I	15/6/2015 to 31/10/2015	15/6/2015 to 31/10/2015	13/10/2016 to 18/10/2016	13/10/2016 to 18/10/2016	03/10/2016 to 08/10/2016
III/II	26/12/15 to 30/4/2016	26/12/15 to 30/4/2016	06-03-2017 to 10/3/2017	06-03-2017 to 10/3/2017	16/03/2017 to 22/3/2017
IV/I	15/6/2015 to 31/10/2015	15/6/2015 to 31/10/2015	13/10/2016 to 19/10/2016	13/10/2016 to 19/10/2016	03/10/2016 to 08/10/2016
IV/II	26/12/15 to 30/4/2016	26/12/15 to 30/4/2016	06-03-2017 to 11/3/2017	06-03-2017 to 11/3/2017	16/03/2017 to 22/3/2017

University calendars – Almanac and Exams (CAY -1 2017-2018)

Year/ Semester	Date of commencement		I Sessional theory exam date		I Sessional Practical exam date conducted	II Sessional theory examdate		II Sessional Practical exam date conducted
	Almanac	Actual	Almanac	Actual		Almanac	Actual	
I/I	01/8/2017 to 31/10/2017	01/8/2017 to 31/10/2017	11/09/2017to 16/09/2017	11/09/2017to 16/09/2017	11/09/2017 to 16/09/2017	23-10-2017 to 28-10-2017	23-10-2017 to 28-10-2017	23-10-2017 to 28-10-2017
I/II	20/12/2017 to 30/04/2018	20/12/2017 to 30/04/2018	05-02-2018 to 10-02-2018	05-02-2018 to 10-02-2018	05-02-2018 to 10-02-2018	19/03/2018 to 24/03/2018	19/03/2018 to 24/03/2018	19/03/2018 to 24/03/2018
II/I	15/6/2017	15/6/2017	23-10-	23-10-	23-10-2017			

	to 31/10/2017	to 31/10/2017	2017 to 28-10-2017	2017 to 28-10-2017	to 28-10-2017
II/II	20/12/2017 to 30/04/2018	20/12/2017 to 30/04/2018	19/03/2018 to 24/03/2018	19/03/2018 to 24/03/2018	19/03/2018 to 24/03/2018
III/I	15/6/2017 to 31/10/2017	15/6/2017 to 31/10/2017	23-10-2017 to 28-10-2017	23-10-2017 to 28-10-2017	23-10-2017 to 28-10-2017
III/II	20/12/2017 to 30/04/2018	20/12/2017 to 30/04/2018	19/03/2018 to 23/03/2018	19/03/2018 to 23/03/2018	19/03/2018 to 24/03/2018
IV/I	15/6/2017 to 31/10/2017	15/6/2017 to 31/10/2017	23-10-2017 to 28-10-2017	23-10-2017 to 28-10-2017	23-10-2017 to 28-10-2017
IV/II	20/12/2017 to 30/04/2018	20/12/2017 to 30/04/2018	19/03/2018 to 24/03/2018	19/03/2018 to 24/03/2018	19/03/2018 to 24/03/2018

University calendars – Almanac and Exams (CAY 2018-2019)

Year/ Semester	Date of commencement		I Sessional theory exam date		I Sessional Practical exam date conducted	II Sessional theory examdate		II Sessional Practical exam date conducted
	Almanac	Actual	Almanac	Actual		Almanac	Actual	
I/I	01/08/2018 to 31/10/2018	01/08/2018 to 31/10/2018	06-09-2018 to 12-09-2018	06-09-2018 to 12-09-2018	06-09-2018 to 12-09-2018	22-10-2018 to 27-10-2018	22-10-2018 to 27-10-2018	22-10-2018 to 27-10-2018
I/II	20/12/2018 to 30/04/2019	20/12/2018 to 30/04/2019	04-02-2019 to 09-02-2019	04-02-2019 to 09-02-2019	04-02-2019 to 09-02-2019	22-03-2019 to 28-03-2019		22-03-2019 to 28-03-2019
II/I	15/06/2018 to 31/10/2018	15/06/2018 to 31/10/2018	06-09-2018 to 12-09-2018	06-09-2018 to 12-09-2018	06-09-2018 to 12-09-2018	22-10-2018 to 27-10-2018	22-10-2018 to 27-10-2018	22-10-2018 to 27-10-2018
II/II	20/12/2018 to 30/04/2019	20/12/2018 to 30/04/2019	04-02-2019 to 09-02-2019	04-02-2019 to 09-02-2019	04-02-2019 to 09-02-2019	22-03-2019 to 28-03-2019		22-03-2019 to 28-03-2019
III/I	15/06/2018 to 31/10/2018	15/06/2018 to 31/10/2018	22/10/2018 to 27/10/2018	22/10/2018 to 27/10/2018	22/10/2018 to 27/10/2018			
III/II	20/12/2018 to	20/12/2018 to	22-03-2019 to		22-03-2019 to 28-03-			

	30/04/2019	30/04/2019	28-03-2019		2019
IV/I	15/06/2018 to 31/10/2018	15/06/2018 to 31/10/2018	22/10/2018 to 27/10/2018	22/10/2018 to 27/10/2018	22/10/2018 to 27/10/2018
IV/II	20/12/2018 to 30/04/2019	20/12/2018 to 30/04/2019	22-03-2019 to 28-03-2019		22-03-2019 to 28-03-2019

2.2. Teaching-Learning Processes 110

2.2.1. Initiatives in teaching and learning process 25

(Implemented teaching-learning process and Initiatives in improving instruction methods, using real worldexamples, collaborative learning, the quality of laboratory experiments with regard to conduct, record observations, analysis, Feedback collection process; collection, analysis and action taken etc. encouraging bright students, assisting weak students etc. The initiatives, implementation details and impact analysis need to be documented)

In KYDSCT'S COP, Sakegaon, the teaching and learning process starts with orientation programs, which includes professional education of students and endorse the capabilities to gain the knowledge of subjects. Initially the efforts are taken on attentiveness of students towards theory as well as practical classes, instruction regarding how to face examinations and study plans. This will greatly improves the student's educational gain and achieves high scores.

Institute has taken several steps to illustrate and channelize the energies and time for successful way in the teaching – learning process. There are three instructional methods instructional lecture mode, practical mode (including demonstration and simulation)and tutorial mode. In lecture mode audio visual means are used and Power-point presentations with LCD are used in the delivery of lectures. In practical mode laboratory experiments are performed, that will be helpful to students to improve their practical hand. Tutorial mode is very important in that we supply some online tutorial to students to improve their self-learning abilities.

The detailed instructional and teaching methods are given below

Implementation: The conduct of these teaching methods is well documented in the time tables. The recording of observations, analysis of results and documentation (laboratory manuals) are being implemented carefully.

Feedback:

Examinations of theory as well as practical's are conducted as per the regulations of NMU and feedback is given individually. Further, feedback is collected from the students at the end of each semester about the delivery of teaching per each subject. Such feedbacks are important for teachers to improve their teaching capabilities.

Impact: All these effects gave successful results as our students excelled for higher education. Faculty also promotes students toward the competitive exams and higher educations.

Teaching – learning methods:

A) Instructional Methods.

Lectures/Presentations:

The lecture can be an immensely effective tool in the classroom, allowing an instructor to provide an overarching theme that organizes material in an illuminating and interesting way, it is also helpful in achieving instructional goals. Lectures as a means of helping students learn to think about the key concepts of a particular subject, rather than primarily as a means of transferring knowledge from

instructor to student. Lecture remains an important way to communicate information, of achieving the program outcomes (POs) and course outcomes (COs).

Laboratory Component:

The laboratory is an exciting and important component where students investigate, analyze, and reflect. They test and apply theories and make abstract concepts concrete. To ensure that lab exercises run smoothly and that students don't run into confusing directions or computational difficulties, we follow some planning steps before every experiment as per the procedure given in books or publications in referred journals.

Educational/Industrial Visits:

Educational/Industrial visits helps to discover all opportunities and have greater impact on the students. These visits are not only helpful for students to gain the industrial knowledge but also allow the students to make real-life decisions. These have proved successful in career exploration, decision making and to become life-long learners.

Seminars:

These serve as a platform for better communication, confidence and sharing knowledge/expertise in advanced areas, which results in collaboration and attempt for enhancement of the skills, techniques and modern tools necessary for the practice of pharmacy profession. Several POs can be attained in a seminar method on account of flexibility.

Guest Lectures/Expert Talks:

Expert talks by the eminent persons working in pharmaceutical industries/research organizations/ practicing pharmacists help the students and the faculty to understand current trends in various spheres, which leads to the attainment of POs. External resource persons also add value to the program and help students to realize the link between education and real world in the profession. These talks become a bridge to fill the gaps and also develop rapport for meeting the future need of the industries / research organization / universities. These promote the sense of life-long learning.

Workshops:

The college organizes the orientation programs as a first step to introduce the students to the college, of course, profession etc. As a part of this exercise, the college also conducts workshops. These also help in developing self-learning process and support the lifelong learning.

Among these the following teaching – learning methods are highlighted.

- Tutorial
- Self-Learning
- Language Laboratory

Tutorial

Tutorials provide an interactive learning environment where students can clarify and extend, through readings, discussions and other activities. Tutorials also allow to practice analytical thinking and problem solving strategies and to acquire important group work, presentation and speaking skills. Students can also learn from hearing other. This means that tutorials can save study time and help students to prepare for assignments and exams. These also help in developing self-learning process and support the lifelong learning.

- There are 8 subjects with tutorials in the First year as per the syllabus of PCI
- There are 9 subjects with tutorials in the Second year as per the syllabus of PCI
- There are 10subjects with tutorials in the First year as per the syllabus of NMU
- There are 12 subjects with tutorials in the Second year as per the syllabus of NMU
- There are 10 subjects with tutorials in the Third year as per the syllabus of NMU
- There are 12 subjects with tutorials in the Final year as per the syllabus of NMU

Above all college has adopted ICT based collaborative peer learning system through VMedulife, Pune.
Vmedulife is discovered to serve the society by adding values in education. Education is becoming the medium to get entry in to the corporate life but not to enter in life by educating ourselves. Vmedulife offers a different learning experience, creates avenues and provides opportunities for its students to explore themselves, thus nurturing them to be ready to face the corporate world. We encourage students to develop a passion in them to be successful in the ever changing competitive world. Vmedulife delivers value added services, working closely with different institutes and the corporate sector.

Pedagogical Initiatives

Following are some pedagogical initiatives taken by the department in addition to Chalk & Talk, Lectures, Assignments, power point presentation, tutorials;

- Seminars/ presentations
- Lab experiments beyond syllabus
- Group Discussions
- Working model/Visual charts/ videos
- Analogy with live examples from industries and surroundings
- Lecture interspersed with discussions among students
- E-tutorial
- Group assignments and projects with defined individual roles
- Quizzes (conventional/ Technical)
- Designing and problem solving through simulation e.g. Ex-Pharm, etc. Apart from the methods listed above, while developing and delivering the Course/Lecture objectives, the faculty considered cognitive aspects of Bloom's Taxonomy i.e. the faculty listed what they wanted the students to know- knowledge and development of intellectual skills.

B) Methodologies to support weak students and encourage bright students

Weak and bright students Identification through result analysis of unit test/ Class tests (mid semester test).

Weak student support strategy:

Teachers attempt to enhance the performance of weak student as follows;

- Regular counseling and providing moral support to them by mentor teacher. For each teacher around 20 students are allotted for mentoring.
- Constant monitoring their performance in internal tests.
- Extra classes (remedial classes) arranged for backlog subjects.
- Formation of study group with one or two bright students are kept as group mentor
- Encouraging them for regular attendance.

Bright student support strategy:

Faculty members make efforts to boost up the performance of bright students by;

- Encouraging them to score good percentile in their final examination for that teachers provide special and challenging assignments.
- Encouraging them to participate in seminars/conferences in different institutes.
- Encouraging them to participate in state and national levels quiz and debate competitions. Around 100 students have participated in such competitions in last three years.
- Students are encouraged to publish papers in various journals of national and international repute.
- Encouraging them to guide their weak classmates. Teaching others make them more perfect.
- We conduct online assessment and aptitude test to encourage students.

Our faculty has also adopted following three modes of tutorial class to support weak students and encourage bright students:

Supervision tutorials: In this type of tutorials, the teacher selects those students who are above average intelligence (Advanced Learners). Teacher assigns a problem to the student and he is asked to present a paper on this problem. The student presents his paper related to the problems before the teacher and his classmates. The teacher observes and supervises his paper presentation. On these audience may put questions and he has to answer them. When he is in a difficulty to satisfy the queries of the audience, the teacher helps him by giving appropriate and satisfactory answers to the listeners.

Group Tutorials: These steps of tutorials are arranged for students of low intelligence (slow Learners). Those students, who have difficulties in classroom teaching, are grouped together on the basis of nature of the problem. Teacher provides them remedial teaching and thus, helps to make the lecture clear and legible.

Practical Tutorials: This type of remedial classes tries to remove difficulties in practical work. These tutorials can be organized after lecture and practical in the objects like science, arts and music etc. These tutorials are basically employed to achieve psychomotor objectives.

Self-Learning

Self-learning helps students develop the confidence they need to tackle challenging problems and obstacles in the future. Our faculty encourages the students for learning and preparations of competitive exams. Self-learning also helps students to broaden their thinking level.

Language Laboratory

Language labs provide practice in an entertaining and interactive way to acquire the 4 main language skills: **listening, speaking, reading,** and **writing. Language labs** allow students to practice the language with a much wider **variety** of **activities** and **exercises** based on the computer. Learning occurs in a **structured** way**,** in a **real context** and visually **attractive** way that immerses the student in the language learning environment and **promotes** language use. The students can watch videos, practice their **pronunciation** through a speech recognizer, learn new vocabulary, and much more.

Following experiments are carried out in language laboratory

The following learning modules are to be conducted using Wordsworth® English languagelab software

Basic communication covering the following topics

Meeting People
Asking Questions
Making Friends
What did you do?
Dos and Don'ts

Pronunciations covering the following topics

Pronunciation (Consonant Sounds)
Pronunciation and Nouns
Pronunciation (Vowel Sounds)

Advanced Learning

Listening Comprehension / Direct and Indirect Speech
Figures of Speech
Effective Communication
Writing Skills
Effective Writing
Interview Handling Skills
E-Mail etiquette
Presentation Skills

C) Quality of classroom teaching

- The lecture can be an immensely effective tool in the classroom, allowing an instructor to provide an overarching theme that organizes material in an illuminating and interesting way, it is also helpful in achieving instructional goals. Lectures as a means of helping students learn to think about the key concepts of a particular subject, rather than primarily as a means of transferring knowledge from instructor to student. Lecture remains an important way to communicate information, of achieving the program outcomes (POs) and course outcomes (COs).
- Information communication technology (ICT) is fully employed for training in the language lab using software that trains the students with international trends and formats.
- The teaching faculty is also involved in development of books and laboratory manuals, which facilitates the learning by students. It is hardware development.
- The faculty encourages the students to get experience in answering MCQ type of questions. This is beyond the curriculum and being implemented, so as to train the students for competitive exams like GPAT etc. This is at assessment and evaluation level.
- Tutorials are made more interactive and student-centric which facilitates the learningprocess.
- Assignments on subject topics are being introduced and are self-learning exercises for the students, where in the teacher acts as a facilitator. It includes instructional methods.

D) Conduct of experiments:

The syllabus of B. Pharmacy in KBC North Maharashtra University has specified the list of experiments after due consideration of the quality of the experiments. Experiments are performed in order to further enhance the quality of the experimental skills. A few highlights are enumerated below.

- The laboratories are spacious and equipped with the necessary infrastructure that facilitate for the smooth conduct of experiments.
- The college has the necessary equipments, instruments and apparatus as prescribed the Pharmacy Council of India.
- The college has procured the necessary equipment in order to conduct the labs as per the specifications of KBCNorth Maharashtra University.
- The teachers are meritorious, well qualified and experienced for handling the practical/labs work and effective learning.
- The teachers are continuously striving and actively involved in research work, which is translated into the practicals.
- The language laboratory imparts specific skill. A multimedia aided language lab gives stress on experiments: grammatical exercises, phonetics pronunciation, oral presentations, vocabulary building, writing skills and interview skills.
- Each student is given opportunity to conduct the experiments independently. For this reason, the practical batch size limited to 20 to 22 students.

E) Continuous assessment in the laboratory

All labs are equipped with relevant equipments with standard operation procedures. Students conduct experiments. Each student prepares a lab record which is assessed by the teacher immediately after the completion of the experiment or before commencement of the next practical. Each student in the practical record indicates the collection of data and analysis along with the conclusion. The students wherever applicable submit the developed product.

F) Student feedback on teaching learning process and action taken.

We took the feedback from students and appropriate action have been taken.

2.2.2 Quality of internal semester question papers, assignments and evaluation Sessional Exam 10

Sessional exam questions are aligned with Bloom's Taxonomy. Questions are decided as per the CO's which are made according to the Bloom's Level. While preparing the question paper, it is ascertained that the student does not omit answering question related to specific CO. After checking answers and allotment of marks, the whole process of assessment is done.

Assignments:

Assignments are given to the students for assessing their knowledge formation about different topics which is structured and is mentioned in the course file. Each time the teacher prepares the assignment according to the teaching plan and subject matter covered. The assignments are also prepared in such a manner that it covers the relevant COs. Here, attempts are also made to ensure that students respond to all COs. Each teacher evaluates assignment sheets and awards marks according to the answers provided by the students and follows a systematic procedure for ascertaining relationships between COs and POs. In later criterion, the whole process of assessment through excel sheet is given. Sample of assignment and their relevance with CO is given below.

Sample of assignment and their relevance with CO

Sr. No.	Name of Topic	Relevance To CO
1	Design and Management of Hospital pharmacy department for a 300 bedded hospital.	CO1
2	Pharmacy and Therapeutics committee – Organization, functions, and limitations.	CO2
3	Development of a hospital formulary for 300 bedded teaching hospital	CO3
4	Preparation of ABC analysis of drugs sold in one month from the pharmacy	CO4

The quality of question paper and assignments is such that all students (Weak, Medium, and Bright) would be able to answer them.

2.2.3. Quality of student projects 15

Quality of the project is measured in terms of consideration to factors including, but not limited to, cost, type (application, product, research, review etc.), environment, safety, ethics and standards. Processes are established forproject identification, allotment, continuous monitoring, evaluation including demonstration of working prototypes, and to enhance the relevance of projects. The following section summarizes the implementation details including details of POs addressed through the projects with justification.

A) Identification of projects and allocation methodology to faculty members

Every third year (VIth semester) student undertakes project which is spread over a period of two semesters. Teacher/guide is assigned through the lottery system to a group of 3 students. The students thereafter in consultation with teacher select a topic. The students then perform literature survey, formulate the problem individually and then proceed further. Projects may be theoretical (review) or experimental.

B) Type and relevance of the projects and their contribution to POs:

The teachers and the students select topics that are relevant to the learning of pharmacy and the teachers ensures that while selecting the topic, contribution to respective POs is assured. Projects normally cover a wide range of POs. The analysis of the same is carried out which is reflected in tables in subsequent criteria.

C) Process of monitoring and evaluation:

Every week, the student reports to concerned faculty and provides the details about the progress made. If necessary, teacher may ask individual student for presentation as well. Students write their respective

dissertations after conducting the field work/ library work and the project report is presented. Progress is continuously monitored by supervisor and periodically project evaluation committee in the form of PPT presentations. The principal is also a signatory to final project report and he does the same only after proper content evaluation. If any deficiency is found, the principal directs the student through the supervisor for the proper remedial action.

D) Process to access individual and team performance

Assessment of projects is done considering factors such as – (i) their quality, (ii) the state-of the-art technology used in execution, (iii) their relevance to society, industry and academics, (iv) the use and development of theoretical and experimental methods, and (v) the coverage of broader areas of the pharmacy. Faculty uses Rubrics for the assessment of projects for the internal assessment. Final evaluation of the project report is conducted in formal set up where the external examiner appointed by the university takes the viva.

Grading system for team project is based on

- Performance of each individual in viva.
- Comprehension about the subject knowledge.
- Weekly reporting of ongoing work to the guide.

E) Quality of completed projects/ working prototypes:

We encourage our students to present their work at various conferences/seminars in the form of poster. We also encourage them to publish their work in national/international scientific journals.

F) Evidences of paper published or awards received by projects

The following projects have been published at national/international journals.

List of publication

Sr. No	Title of Paper	Name of Authors	Type of journal
1	Diclofenac Sodium Loaded Nanosized Ethosomes: An Investigation on Z-Average, Polydispersity and Stability	Manwar JV, Patil SS, Patil B, Jadhao RJ, Kumbhar DD* and Bakal R	International
2	Thin layer chromatography of ibogaine from plant extracts of tabernanthe iboga	S. Rangari, B. Rane, S. Baviskar, S. Khatik, J. Jain, M. Sonawane	National

List of students projects 2016-2017

Roll No.	Name of student	Name of Topic	Name of Guide	Date	Relevance to PO's
1	Ab. Rahman Rangrez	Solubility enhancement techniques: An overview	Mr. Suraj S Patil	22/04/2016	1, 4, 11
2	Eshwar S Bajare	Solubility enhancement techniques: An overview	Mr. Suraj S Patil	22/04/2016	1, 4, 11
3	Amol S Bhalerao	Solubility enhancement techniques: An overview	Mr. Suraj S Patil	22/04/2016	1, 4, 11

4	Bushra Deshpande	Traditional use and recent finding of abelmos chusesculentus	Dr. Jagdish Manwar	22/04/2016	1, 9
5	Kalpesh Y Chaudhari	The herbal plant use for the treatment of rheumatoid	Dr. U.B.Gandagule	22/04/2016	1, 9
6	Pankaj Chaudhari	Traditional use and recent finding of abelmos chusesculentus	Dr. Jagdish Manwar	22/04/2016	1, 9
7	Pankaj Chaudhari	Diclofenac sodium loaded transethosomes	Dr. Dipak D. Kumbhar	22/04/2016	1, 4
8	Akshay Dusane	Stereochemistry and analysis of emitricitabine drug	Mr. S.W.Rangari	22/04/2016	1, 4
9	Akash Ingale	Stereochemistry and analysis of emitricitabine drug	Mr. S.W.Rangari	22/04/2016	1, 4
10	Sudarshan Ingale	Stereochemistry and analysis of emitricitabine drug	Mr. S.W.Rangari	22/04/2016	1, 4
11	Ishitiyaque Khan	Overview of irrational prescription of drug	Mr. Kundan .G. Ingale	22/04/2016	1, 9
12	Khan Mohammad Ahmad	Analytical method of vitamin c	Mrs. B.Y.Rane	22/04/2016	1, 4, 11
13	Kailas Gramak Naik	Analytical method of vitamin c	Mrs. B.Y. Rane	22/04/2016	1, 4, 11
14	Ankush Navalakhe	Public awareness survey about antibiotic use and resistance	Mr. A.B. Wadekar	22/04/2016	1, 9, 11
15	Mukesh Nikhumbh	Public awareness survey about antibiotic use and resistance	Mr. A. B.Wadekar	22/04/2016	1, 9, 11
16	Bhagyashri Patil	Diclofenac sodiun loaded transethosomes	Dr. Dipak D . Kumbhar	22/04/2016	1, 4
17	Chandrashekhar Patil	Traditional use and recent finding of abelmos chusesculentus	Dr. Jagdish Manwar	22/04/2016	1, 9
18	Kapil Arun Patil	Analytical method of vitamin c	Mrs. B.Y.Rane	22/04/2016	1, 4, 11
19	Mamta Patil	Diclofenac sodium loaded transethosomes	Dr. Dipak D. Kumbhar	22/04/2016	1, 4
20	Mayur Patil	Public awareness survey about antibiotic use and resistance	Mr. A.B.Wadekar	22/04/2016	1, 9, 11
21	Prashant S Patil	A review on thalassaemia	Mr. N.A.Sheikh	22/04/2016	1,9
22	Priya M Patil	A review on thalassaemia	Mr. N.A.Sheikh	22/04/2016	1,9
23	Priyanka D Patil	A review on thalassaemia	Mr. N.A.Sheikh	22/04/2016	1,9
24		Traditional use and recent finding of abelmos chusesculentus	Dr. U.B.Gandagule	22/04/2016	1, 9
25	Shubham S Patil	The herbal plant use for the treatment of rheumatoid	Dr. U.B.Gandagule	22/04/2016	1,9
26	Vasudev G Patil	Nanoparticle drug delivery system an overview	Mr. Vishal Gurumukhi	22/04/2016	1,4,9
27	Manoj R Pawar	Nanoparticle drug delivery	Mr. Vishal	22/04/2016	1,4,9

		system an overview	Gurumukhi		
28	Raghunath T Pawar	Nanoparticle drug delivery system an overview	Mr. Vishal Gurumukhi	22/04/2016	1,4,9
29	Reshma Bano Md Sharif	A review on emulgel novel tropical drug delivery system	Dr. Sameer Shaikh	22/04/2016	1,4
30	Rubina Bano Md Sharif	A review on medicated chewing gum a novel drug delivery system	Dr. Sameer Shaikh	22/04/2016	1,4
31	Akshay Salunke	Diclofenac sodium loaded transethosomes	Dr. Dipak D. Kumbhar	22/04/2016	1, 4
32	Sarfaraz Deshpande	A review on nutraceuticals	Mr. Sanjay A Nagdev	22/04/2016	1,4
33	Shaikh Asif Shaikh Sattar Bagwan	Design development and study of microbial activity of ayurvedic formulation	Mr. S.W.Rangari	22/04/2016	1,4, 11
34	Shaikh Aves	Mocuadhesive drug delivery system	Dr. Sameer Shaikh	22/04/2016	1,4
35	Shaikh Mohannad Azhar	Diclofenac sodiun loaded transethosomes	Dipak D. Kumbhar	22/04/2016	1, 4
36	Shaikh Vaquar Yunus	Overviwe of irrational prescription of drug	Mr. Kundan .G. Ingale	22/04/2016	1, 9
37	Trivedi Atul	Overviwe of irrational prescription of drug	Mr. Kundan .G. Ingale	22/04/2016	1, 9
38	Akash H Vatwani	The herbal palnt use for the treatment of rhematoid	U.B.Gandagule	22/04/2016	1,4
39	Diksha Warke	Quantitative estimation of zinc in drinking water from natural sources	Mr. Sanjay A Nagdev	22/04/2016	1,4
40	Zaid Khan	Transdermal drug delivery system - an overview	Mr. R.G.Jadhav	22/04/2016	1
41	Jayesh Sanjeev Zambare	A reivew of buccal drug delivery system	Sameer Shaikh	22/04/2016	1
42	Zubair Ahemead	Quantitative estimation of zinc in drinking water from natural sources	Mr. Sanjay A Nagdev	22/04/2016	1, 4
43	Rajendra Bavaskar	Quantitative estimation of zinc in drinking water from natural sources	Mr. Sanjay A Nagdev	22/04/2016	1, 4
44	Sadaf R Deshukh	Transdermal drug delivery system - an overview	Mr. R.G.Jadhav	22/04/2016	1
45	Shaikh Irfan	Transdermal drug delivery system - an overview	Mr. R.G.Jadhav	22/04/2016	1
46	Gaurav A Mahajan	A review on thalassaemia	Mr. N.A.Sheikh	22/04/2016	1, 9
47	Mayur Solanke	A review on nutraceuticals	Mr. Sanjay A Nagdev	22/04/2016	1,9

List of students projects 2017-2018

Roll No.	Name of student	Name of topic	Name Of Guide	Date	Relevance to PO's
1	Abdul Rahman Naseemuddin Shaikh	A review on Neutraceuticals	Dr. U B Gandagule	02/04/2018	1,11
2	Abrar Khan Akhtar Khan	A review Malaria	Mr. R G Jadhao	02/04/2018	1,11
3	Adhao Kalpesh Vithal	Propreties, Synthesis, Methods and Applications of Silver Nanoparticles: A review	Mr. S S Patil	02/04/2018	1, 4, 11
4	Bhivsane Pramod Sambhajee	Diabetic Induced Retinopathy: Epidemiology, Pathophysiology and Management	Mr. K G Ingale	02/04/2018	1, 11
5	Bhusare Umesh Narendra	Solid Lipid Nanoparticle: A review	Mrs. U M Sonawane	02/04/2018	1, 6, 11
6	Chaudhari Sagar Suresh	Green Synthesis : A review	Mrs. B Y Rane	02/04/2018	1, 11
7	Chaudhari Sharyu Sharad	Determination of drug content of pharmaceutical containing emtricitabine in non aqueous medium by micro titrimetric	Mr. S W Ragari	02/04/2018	1, 4, 11
8	Chaure Pavan Shantaram	Lipid nanoparticulate drug delivery systems: A revolution in dosage form design and development	Dr. J V Manwar	02/04/2018	1, 4, 11
9	Chavhan Shivram Uttam	Co- Crystallization in neutraceuticals: A novel approach to modify physicochemical properties	Mr. A B Wadekar	02/04/2018	1, 4, 11
10	Dabhade Aakash Baburao	A review on neutraceuticals	Dr. U B Gandagule	02/04/2018	1,11
11	Deshmukh Rukeshikesh Rajendra	A review Malaria	Mr. R G Jadhao	02/04/2018	1,11
12	Dhande Snehal Janardan	Propreties, Synthesis, Methods and Applications of Silver Nanoparticles: A review	Mr. S S Patil	02/04/2018	1, 4, 11
13	Dhage Sapana Rajendra	Ethosomes: An overview	Dr. D D Kumbhar	02/04/2018	1, 4, 11
14	Dhavade Pooja Dnyandeo	Pharmaceutical Polymorphs: Screening and Selection	Dr. D D Kumbhar	02/04/2018	1, 4, 11
15	Gayakwad Ashwini Anant	Pharmaceutical Polymorphs: Screening and Selection	Dr. D D Kumbhar	02/04/2018	1, 4, 11

16	Gangarde Rushikesh Ramdas	Ethosomes: An overview	Dr. D D Kumbhar	02/04/2018	1, 4, 11
17	Gite Gajanan Dileep	Diabetic Induced Retinopathy: Epidemiology, Pathophysiology and Management	Mr. K G Ingale	02/04/2018	1, 11
18	Hatkar Popat Shantaram	Solid Lipid Nanoparticle: A review	Mr. U M Sonawane	02/04/2018	1, 6, 11
19	Ingle Kishor Haridas	Green Synthesis : A review	Mrs. B Y Rane	02/04/2018	1, 11
20	Jadhav Ritesh Ramesh	Determination of drug content of pharmaceutical containing emtricitabine in non-aqueous medium by micro titrimetric	Mr. S W Rangari	02/04/2018	1, 4, 11
21	Kasar Krishna Madhukar	Co- Crystallization in neutraceuticals: A novel approach to modify physicochemical properties	Mr. A B Wadekar	02/04/2018	1, 4, 11
22	Khatik Sk Imran Sk Sharif	A review on neutraceuticals	Dr. U B Gandagule	02/04/2018	1,11
23	Kshirsagar Kishor Swaraj	A review Malaria	Mr. R G Jadhao	02/04/2018	1,11
24	Mahajan Nakul Ramesh	Diabetic Induced Retinopathy: Epidemiology, Pathophysiology and Management	Mr. K G Ingale	02/04/2018	1, 11
25	Mahajan Rajashri Jagannath	Propreties, Synthesis, Methods and Applications of Silver Nanoparticles: A review	Mr. S S Patil	02/04/2018	1, 4, 11
26	More Sushama Ashok	Lipid nanoparticulate drug delivery systems: A revolution in dosage form design and development	Dr. J V Manwar	02/04/2018	1, 4, 11
27	Paliwal Shubham Arun	Solid Lipid Nanoparticle: A review	Mr. U M Sonawane	02/04/2018	1, 6, 11
28	Patil Aaditya Pramod	Determination of drug content of pharmaceutical containing emtricitabine in non aqueous medium by micro titrimetric	Mr. S W Ragari	02/04/2018	1, 4, 11
29	Patil Bhushan Manohar	Green Synthesis : A review	Mrs. B Y Rane	02/04/2018	1, 11
30	Patil Jitendra Sanjay	Co- Crystallization in neutraceuticals: A novel approach to modify physicochemical properties	Mr. A B Wadekar	02/04/2018	1, 4, 11
31	Patil Abhishek Atmaram	Review on recent advances in lipid Nanoparticles formulation with solid matrix for oral drug delivery	Mr. R G Jadhao	02/04/2018	1, 11
32	Patil Mrunalini Kalidas	Ethosomes: An overview	Dr. D D Kumbhar	02/04/2018	1, 4, 11

33	Patil Pramod Eknath	Recent advances in novel drug delivery system	Mr. S S Patil	02/04/2018	1, 11
34	Patil Rakesh Walmik	Diabetes induced Alzhiemer disease: Epidemiology, Pathophysiology and management	Mr. K G Ingale	02/04/2018	1, 11
35	Patil Shubham Sanjay	Antiemetic drug use in cancer therapy: A review	Mrs. U M Sonawane	02/04/2018	1, 6, 11
36	Patil Mayur Nana	Antibacterial activity: A review	Mrs. B Y Rane	02/04/2018	1, 11
37	Patil Namrata Devsing	Pharmaceutical Polymorphs: Screening and Selection	Dr. D D Kumbhar	02/04/2018	1, 4, 11
38	Patil Niranjan Diwakar	Review on: Pharmacokinetic and pharmacodynamics and analytical study of some antipsychotic drugs	Mr. S W Ragari	02/04/2018	1, 11
39	Patil Prafulla Ananda	A review on the role of essential trace elements in health and disease	Mr. S A Nagdev	02/04/2018	1, 11
40	Patil Prashant Bhalerao	Review on recent advances in lipid Nanoparticles formulation with solid matrix for oral drug delivery	Mr. R G Jadhao	02/04/2018	1, 11
41	Patil Deepak Tejrao	Recent advances in novel drug delivery system	Mr. S S Patil	02/04/2018	1, 11
42	Patil Rupali Bhagwat	Diabetes induced Alzhiemer disease: Epidemiology, Pathophysiology and management	Mr. K G Ingale	02/04/2018	1, 11
43	Ranpise Diksha Dayanand	Lipid nanoparticulate drug delivery systems: A revolution in dosage form design and development	Dr. J V Manwar	02/04/2018	1, 4, 11
44	Rathod Ajay Bhivasing	Antiemetic drug use in cancer therapy: A review	Mrs. U M Sonawane	02/04/2018	1, 6, 11
45	Rizwan Ahmad Riyazuddin	Antibacterial activity: A review	Mrs. B Y Rane	02/04/2018	1, 11
46	Sarode Ajay Raju	Review on: Pharmacokinetic and pharmacodynamics and analytical study of some antipsychotic drugs	Mr. S W Ragari	02/04/2018	1, 11
47	Sheikh Nadimuddin Kalimoddin	A review on the role of essential trace elements in health and disease	Mr. S A Nagdev	02/04/2018	1, 11
48	Shaikh Zuber Bashir Shaikh	Review on recent advances in lipid Nanoparticles formulation with solid matrix for oral drug delivery	Mr. R G Jadhao	02/04/2018	1, 11
49	Shamsher Ali Sayyed Siraj Ahmad	Recent advances in novel drug delivery system	Mr. S S Patil	02/04/2018	1, 11

50	Shekh Soheb Shekh Shabbir	Diabetes induced Alzhiemer disease: Epidemiology, Pathophysiology and management	Mr. K G Ingale	02/04/2018	1, 11
51	Sonatakke Yuvraj Dattatray	Antiemetic drug use in cancer therapy: A review	Mrs. U M Sonawane	02/04/2018	1, 6, 11
52	Sonawane Ashwini Dhanraj	Antibacterial activity: A review	Mrs. B Y Rane	02/04/2018	1, 11
53	Sonone Saurabh Shalikram	Review on: Pharmacokinetic and pharmacodynamics and analytical study of some antipsychotic drugs	Mr. S W Ragari	02/04/2018	1, 11
54	Wagh Dipak Bhagwan	A review on the role of essential trace elements in health and disease	Mr. S A Nagdev	02/04/2018	1, 11
55	Zambare Sayali Revanand	Lipid nanoparticulate drug delivery systems: A revolution in dosage form design and development	Dr. J V Manwar	02/04/2018	1, 4, 11
56	Suryavanshi Harshal Hiralal 2012	A review: Solid lipid nanoparticles	Mr. S W Ragari	02/04/2018	1, 11

2.2.4. Initiatives related to industry interaction and/or hospital interaction 20

(Give details of the industry/ hospital involvement in the program such as industry-attached laboratories, partial delivery of appropriate courses by industry experts and/or collaborative initiatives with the hospitals etc. Mention the initiatives, implementation details and impact analysis)

A) Industry/ Hospital supported laboratory:

Hospital and clinical pharmacy lab has a long term tie up with hospital namely, Dr. Ulhas Patil Medical College and General Hospital. Under this activity research work in the lab is conducted. The students of pharmacy also visit these hospitals and take training on pharmacy practice as well as drug distribution.

B) Industry involvement in program designing and partial delivery of regular program:

Some of the projects undertaken by 8th semester project do seek guidance from Industry. In order to design various inputs on course delivery and beyond syllabus contents the institution consults the industry. Guest lectures on important topics of regular curriculum and interview techniques are delivered from time to time. Industry visits on a regular basis are organized once in a year and all students get an opportunity to interact with the industry and acquire exposure to real life practices. Industries like Haffkine Ajintha Pharma Ltd, Jalgaon, and Red Cross Aurangabad have been visited by students.

C) Hospital involvement in the program like collaborative initiatives with the hospital

Our College has made MOUwith hospital namely, Dr. Ulhas Patil Medical College and General Hospital for the purpose of exchange program beneficial to the respective educational institute and to promote the development of joint studies, research, training activities and offer educational exchanges of mutual interests.

2.2.5. Initiatives related to industry internship/summer training 10

(Mention the initiatives, implementation details and impact analysis)

A)Industrial training/tours for students:

A representative of the participation by student is given below. Complete detail student wise is available with the institution. It is noteworthy to mention that all B. Pharm. students undergo industrial training after completion of 6th semester, which is a mandatory part of their curriculum. The duration of the

training is 1month or more depending on the requirement of the industry. The student has to execute a project work preferably at industry/R&D institution. The industrial training is assessed by external and internal examiners through presentation and viva- voce.

B) Industrial/ internship/summer training of more than two weeks and post training assessment

All B. Pharm. students undergo industrial training after completion of 6th semester, which is a mandatory part of their curriculum. The duration of the training is 1month or more depending on the requirement of the industry. The student has to execute a project work preferably at industry/R&D institution

C) Student Feedback on initiatives:

Industrial visit report is made by the students and they are given chance to present the same in the form of a viva. Viva was analyzed by the faculty and the Principal and scoring is given. Students also submit a filled in questionnaire about their feedback regarding their training/summer internship on the basis of the following points:

- Experience of working in the industry.
- Independently handling the assignments.
- Hands on training on sophisticated equipments/instruments.
- Understanding the work culture.

List of students undergoneindustrial training for 2016-2017

Roll No.	Name of Student	Name of company
1	Badgujar Karishma Hemraj	Asuwaldi Pharmaceuticals, Dombivali
2	Bagre Preeti Govind	Global Herbs Pharmaceuticals, Pune
3	Bakhtani Neha Mohan	Unibios laboratories Ltd, Palghar, Thane
4	Baviskar Gopal Bhila	Nirmal quality products, Jalgaon
5	Bhangale Nikhil Shashikant	JCPL pharma Pvt. Ltd, Jalgaon
6	Bharambe Swapnapurti Vilas	Asuwaldi Pharmaceuticals, Dombivali
7	Borase Kundan Valmik	Khandesh Ayurvedic Pharmacy, Jalgaon
8	Chaudhari Rahul Prakash	JCPL Pharma Pvt. Ltd, Jalgaon
9	Chavhan Sunil Pralhad	JCPL Pharma Pvt. Ltd, Jalgaon
10	Dhande Nikhil Dilip	Khandesh Ayurvedic Pharmacy, Jalgaon
11	Jangale Vaibhav Vilas	Asuwaldi Pharmaceuticals, Dombivali
12	Joshi Tejaswini Lala	Asuwaldi Pharmaceuticals, Dombivali
13	Kale Dipak Raghunath	Hindustan Laboratories, Thane
14	Kapade Tarachand Dilip	Asuwaldi Pharmaceuticals, Dombivali
15	Khairnar Shraddha Vilas	Hindustan Laboratories, Thane
16	Koli Bhagyashri Kailas	Asuwaldi Pharmaceuticals, Dombivali
17	Kulkarni Sachin Chandrakant	Khandesh ayurvedic pharmacy, Jalgaon
18	Lahase Nilesh Dileep	JCPL Pharma Pvt. Ltd, Jalgaon
19	Madhani Komal Mukesh	Global Herbs Pharmaceuticals, Pune
20	Mahajan Amitkumar Madhukar	Khandesh Ayurvedic pharmacy, Jalgaon
21	Mahajan Rashmi Sanjay	Khandesh Ayurvedic pharmacy, Jalgaon
22	Mahajan Vishwashree Dinesh	Asuwaldi Pharmaceuticals, Dombivali
23	Mevati Samirkha Latipkha	Global Herbs Pharmaceuticals, Pune
24	Noor Mohammed Gul Mohammed	Hindustan Laboratories, Thane
25	Ojha Neha Ram Kumar	Khandesh Ayurvedic pharmacy, Jalgaon
26	Patil Ashwini Valmik	Khandesh Ayurvedic pharmacy, Jalgaon
27	Patil Prajakta Gokul	Serum Institute of India Pvt. Ltd, Pune

28	Patil Pranav Madhukar	Khandesh Ayurvedic Pharmacy, Jalgaon
29	Shaikh Aafreen Bi A Raheman	Hindustan Laboratories, Thane
30	Shaikh Arshiya Salim	Asuwaldi Pharmaceuticals, Dombivali
31	Shaikh Asif Shaikh Sattar Bagwan	Hindustan Laboratories, Thane
32	Shaikh Mujahid Shaikh Asgar	Hindustan Laboratories, Thane
33	Shinde Kajal Sunil	Khandesh Ayurvedic Pharmacy, Jalgaon
34	Singh Shivani Shivmohan	Hindustan Laboratories, Thane
35	Sonar Avinash Bhanudas	Khandesh Ayurvedic Pharmacy, Jalgaon
36	Thorat Swapnil Madhukar	Hindustan Laboratories, Thane
37	Tribhuvane Ankit Sahebrao	Hindustan Laboratories, Thane
38	Wagh Rahul Shriram	Khandesh Ayurvedic Pharmacy, Jalgaon
39	Chaudhari Dipak Shenpadu	Nirmal Quality Products, Jalgaon
40	Shinde Rajat Raju	Hindustan Laboratories, Thane
41	Pinjari Azaruddin Sk Abdul Gani	Hindustan Laboratories, Thane
42	Pawar Mumkesh Suresh.	Hindustan Laboratories, Thane
43	Bhoi Pravin Amrut	Hindustan Laboratories, Thane
44	Tayade Jayesh Ganesh	Nirmal Quality Products, Jalgaon
45	Kapadne Swati Narayan Nov 2015	JCPL Pharma Pvt. Ltd, Jalgaon
46	Shelke Vishal Surendra	JCPL Pharma Pvt. Ltd, Jalgaon

List of students undergoneindustrial training for 2017-2018

Roll No.	Name of Student	Name of company
1	Abdul Rahman Abdul Salam Rangrez	Siddharth Carbochem Products LTD., Jalgaon
2	Bajare Eshwar Sandip	Siddharth Carbochem Products LTD., Jalgaon
3	Bhalerao Amol Sanjay	Asuwaldi Pharmaceuticals, Dombivali.
4	Bushra Feroz Deshpande	Hindusthan Laboratories, Thane.
5	Chaudhari Kalpesh Yashwant	Rishabh Metals and Chemicals PVT. LTD. Mumbai
6	Chaudhari Pankaj Kailas	Siddharth Carbochem Products LTD., Jalgaon
7	Chaudhari Pankaj Kashinath	Nirmal Quality Products, Jalgaon.
8	Deshmukh Sadaf Rafique	Hindusthan Laboratories, Thane.
9	Dusane Akshay Mangaldas	Asuwaldi Pharmaceuticals, Dombivali.
10	Ingale Akash Sudhakar	Nirmal Quality Products, Jalgaon.
11	Ishtiyaque Khan Aslam Khan	NEM Laboratories, Thane.
12	Khan Mohammad Uzair Fayaz Ahmad	Siddharth Carbochem products LTD., Jalgaon
13	Naik Kailas Garmak	Nirmal Quality Products, Jalgaon.
14	Navalakhe Ankush Ramesh	Hindusthan Laboratories, Thane.
15	Nikumbh Mukesh Suresh	NEM Laboratories, Thane.
16	Patil Bhagyashri Deelip	Blue Cross Laboratoris PVT LTD, Nashik
17	Patil Chandrashekhar Shivaji	Nirmal Quality Products, Jalgaon.
18	Patil Kapil Arun	Siddharth Carbochem products LTD., Jalgaon
19	Patil Mamata Rajendra	Concept Pharmaceuticalsd LTD., Aurangabad.
20	Patil Mayur Subhash	Asuwaldi Pharmaceuticals, Dombivali.
21	Patil Prashant Shrikrishna	Nirmal Quality Products, Jalgaon.
22	Patil Priya Mohan	Concept Pharmaceuticalsd LTD., Aurangabad.
23	Patil Priyanka Dilip	Concept Pharmaceuticalsd LTD., Aurangabad.

24	Patil Shubham Sanjay	Nirmal Quality Products, Jalgaon.
25	Patil Vasudeo Govinda	Rishabh Metals and Chemicals PVT. LTD. Mumbai
26	Pawar Manoj Ramesh	Concept PharmaceuticalsLTD., Aurangabad.
27	Pawar Raghunath Tulshiram	Nirmal Quality Products, Jalgaon.
28	Reshma Bano Mohammed Sharif	Curex Pharma Products, Jalgaon.
29	Rubina Bano Mohammad Sharif	Curex Pharma Products, Jalgaon.
30	Sarfaraz A Wahab Deshpande	NEM Laboratories, Thane.
31	Shaikh Asif Shaikh Rauf	NEM Laboratories, Thane.
32	Shaikh Aves Shaikh Feroz	Siddharth Carbochem products LTD., Jalgaon
33	Shaikh Mohammad Azhar Shaikh Ismail Kasar	Rishabh Metals and Chemicals PVT. LTD. Mumbai
34	Shaikh Vaquar Yunus Shaikh Arif Ahmad Kasar	Rishabh Metals and Chemicals PVT. LTD. Mumbai
35	Shaikh Irfan Shaikh Ismail	NEM Laboratories, Thane.
36	Solanke Mayur Shantaram	Asuwaldi Pharmaceuticals, Dombivali.
37	Trivedi Atul Sureshprasad	Rishabh Metals and Chemicals PVT. LTD. Mumbai
38	Vatwani Akash Hansraj	Siddharth Carbochem products LTD., Jalgaon
39	Zaid Khan	Siddharth Carbochem products LTD., Jalgaon
40	Zambare Jayesh Sanjeev	Nirmal Quality Products, Jalgaon.
41	Zubair Ahemad Abdul Nasir	Siddharth Carbochem products LTD., Jalgaon
42	Asif Khan Dule Khan	Rishabh Metals and Chemicals PVT. LTD. Mumbai

2.2.6 Continuous Evaluation Process **10**

Continuous evaluation process is totally based on theory and practical evaluation

Theory Evaluation: for CGPA system

The Semester theory examination have 100 marks each for every subject of eight semesters divided as 80 marks for university exam and 20 marks for internal exam. The marks obtained out of 100 marks in the final university semester exam will be converted in to **Grade and Grade Points.** There will be one sessional examination during each semester of the academic year. Performance of student sessional examinations in each Theory paper will be taken into consideration. The marks obtained by student in each theory paper will be communicated to the University for Inclusion in his/her final result of the examination.

The improvement theory sessional examination shall be conducted by the college only for the failures students at sessional examination of respective subject heads in the immediate subsequent semester. However, the improvementsessional examination shall be held on entire syllabus of respective subjects. Furtherthe improvement sessional examination can be conducted for the candidates if theywish to appear, who are otherwise passed in the subjects but wanted to secure theprescribed aggregate of 50% marks,. The marks should be submitted to the university by college.

For PCI regulation

The Semester theory examination have 100 marks each for every subject of eight semesters divided as 75marks for university exam and 25 marks for internal exam for theory course. Two sessional exams shall be conducted for each theory / practical course. Sessional exam shall be conducted for 30 marks for theory and shall be computed for 15 marks and 10 marks of continuous mode was added to complete 25 marks of internal assesment. Similarly Sessional exam for practical shall be conducted for 40 marks and shall be computed for 10 marks and 5 marks of continuous mode.

Practical Evaluation:
For CGPA system
The Internal assessment for Practical will be of **20 marks**, based on attendance viva and practical performance.
Practical Evaluation:
For PCI regulation
Sessional exam for practical shall be conducted for 40 marks and shall be computed for 10 marks.
In advance we conduct VMedulife online examinations for all the years, which includes following process.

- Faculty receives an e mail or SMS from VMedulife.
- Faculty verify the question paper
- After verification faculty approves the module
- Once module is approved then students appear for the online exam
- Finally the result analysis is performed by VMedulife

2.2.7 Quality of Experiments 20
To develop technical skills in students, we engage students in various practical so that they get skilled. In practical, students get to know how to employ the theoretical knowledge in the practice. For this purpose, students performed their practical using various instruments. A list of instruments which are used in practical is given below:

- The experimental knowledge gain by students is further evaluated by the teacher using following methods
- Viva voce: Questions are asked related to the experiments performed which are answered by students.
- Synopsis: A questionnaire is given to students related to experimental knowledge as well as theoretical knowledge.
- Experiment: Monitoring the practical activities and the results of the experiments.
- Spotting: Students identified the apparatus or material used to perform the practical.

Contents of each Practical course
BP107P Human anatomy and physiology-I
Human anatomy and physiology practical course is designed to provide preliminary knowledge about anatomical features, histological features and physiological functioning various tissue (epithelial, connective, nervous, muscular). The course design provides significant understanding about identification of axial and appendicular bones.The students also gain adequate knowledge about techniques used for determination of haemoglobin content, total WBCs count, RBCs count, bleeding time, clotting time, blood group, techniques used for determination of haemoglobin content, total WBCs count, RBCs count, bleeding time, clotting time, blood group, erythrocytes sedimentation rate,heart rate and pulse rate & also helpful to correlate the theoretical concept of physiology by practical technique
BP108P Pharmaceutical Analysis-I
Pharmaceutical Analysis-I Practical course is designed to provide the knowledge of techniques of titrimetric analysis & electrochemical methods, preparation and standardization of solutions of different concentrations used in analysis. The students should be able to standardize the solutions and to find out the concentration of solutions and its purity levels.
BP109P Pharmaceutics I
This course is designed to impart a fundamental knowledge on the preparatory pharmacy with arts and science of preparing the different conventional dosage forms. Formulation of dosage forms includes

preparation of syrups, elixir, linctuses, suspension emulsion, solutions, suppositories, powders and granules. Students are also prepare semisolid dosage forms such as paste, ointment and gel.

BP110P Pharmaceutical Inorganic Chemistry

Pharmaceutical Inorganic Chemistry practical course is designed to provide basic knowledge about limit test, identification test, preparation of inorganic compound and test for purity in Inorganic compound. The students acquire knowledge about limit test for chloride, sulphate, iron, heavy metals and arsenic. The course design provides significant understanding about how to identify unknown substance. The course ensures the ability to assimilate the concepts of preparation of inorganic compound.

The students should be able to: (1) describe the limit test.

(2) How to identify unknown substance.

(3) How to perform test for purity

BP111P Communication skills

Practicals of communication skills are carried out on Wordsworth English language lab software. The practicals include basic communication (meeting people, asking questions, making friends. Student also learn pronunciation skills and advance learning.

BP112RBP Remedial Biology

To learn and understand the components of living world, structure and functional system of plant and animal kingdom. Upon completion of the course, the student shall be able to know the introduction to experimental biology. Students perform microscopic study and identification of tissues pertinent to Stem, Root Leaf, seed, fruit and flower. Students also know how to determine blood group, blood pressure, and tidal volume.

BP 207 P. Human Anatomy and Physiology

Practical physiology is complimentary to the theoretical discussions in physiology. Practicals allow the verification of physiological processes discussed in theory classes through experiments on living tissue, intact animals or normal human beings. This is helpful for developing an insight on the subject**.**

BP208P Pharmaceutical Organic Chemistry-I

Pharmaceutical Organic Chemistry theory course is designed to provide elementary knowledge about the identification of organic compounds. The students acquire knowledge about the general methods of preparation and reactions of some organic compounds. The course design provides significant understanding about the construction of molecular models. The course ensures the ability to assimilate the concepts of structure, name and the type of structural isomerism of the organic compound. It also describes the important physical& chemical properties. Focus is given to gain knowledge about the preliminary test for organic compounds. Focus is also given on detection of elements. The students also gain adequate knowledge about the identification of functional group. The course also imparts on the preparation of derivatives from organic compounds. The students should be able to: (1) describe the various structure, name and the type of isomerism of the organic compound, (2) explain various reaction, name the reaction and mechanism of reactions (3) explain reactivity or stability of compounds, and (4) acquire the knowledge regarding identification of organic compounds

BP209P Biochemistry

Biochemistry practical course is designed to provide basic knowledge about qualitative analysis of carbohydrates and quantitative analysis of reducing sugars and proteins. The students acquire knowledge about qualitative analysis of urine for abnormal constituents. The course design provides significant understanding about how to identify proteins (albumin and casein). The course ensures the ability to assimilate the how pathological conditions diagnosis.

The students should be able to: (1) describe the salivary amylase activity.

(2) How to determine blood creatinine and blood sugars.

(3) How to perform qualitative analysis of carbohydrates and quantitative analysis of reducing sugars and proteins.

BP210P Computer Applications in Pharmacy

This practical include to create a HTML web page to show personal information, creating mailing labels Using Label Wizard , generating label in MS WORD, create a database in MS Access to store the patient information with the required fields using access, generating report and printing the report from patient database, creating and working with queries in MS access.

BP305P Pharmaceutical Organic Chemistry-II

Upon completion of this course, the students should be able to:

1. Student perform experiments involving laboratory techniques

•Recrystallization

•Steam distillation

2. Students can perform systematic preparation of organic compound

3. Determination of following oil values (including standardization of reagents) i.e Acid, Saponification, Iodine value

BP306P Physical pharmaceutics I

Physical pharmaceutics-I practical course is designed to provide basic knowledge about Determination the solubility, pKa value, Partition co- efficient, surface tension, HLB number, stability constant, of drug. The practical course designed to provides significant understanding about estimation of drug substance. The course also gives the information about basic knowledge of Drug formulation along with evaluation techniques. The emphasis is also given on pharmaceutical formulation, Drug design, physiochemical properties, evolutionary parameters and many more.

The students should be able to:

(1) Give information about physiochemical properties of drug component.

(2) Evaluation techniques for drug substance.

BP307P Pharmaceutical Microbiology

Pharmaceutical Microbiology practical course is designed to impart fundamental knowledge various equipment used in pharmaceutical microbiology lab. Students acquire knowledge about the Sterilization of glassware & preparation and sterilization of media. The course design provides significant understanding about sub culturing of bacteria and fungi on slant and stab. The course ensures the ability to understand procedure of staining method of identification & morphology study of bacteria. It also describes procedure of standardization of pharmaceutical product by microbial assay. Acquire the basic knowledge of about motility of bacteria by hanging drop method. Student acquires the techniques of sterility test & biochemical test. . Students acquire knowledge about bacteriological analysis of water.

BP308P Pharmaceutical Engineering

Pharmaceutical Engineering practical course is designed to provide basic knowledge about Determination of radiation constant of brass, iron, unpainted and painted glass. The practical course designed to provides significant understanding about Moisture content, loss on drying, sieve analysis and heat transfer coefficient. The course also gives the information about the Description of Construction working and application of Pharmaceutical Machinery such as rotary tablet machine, fluidized bed coater, fluid energy mill, de humidifier, colloid mill, planetary mixer, fluidized bed dryer, and freeze dryer. The emphasis is also given on Factors affecting Rate of Filtration and Evaporation (Surface area, Concentration and Thickness/ viscosity). Course also give idea of laws of size reduction using ball mill and determining Kicks, Rittinger's, Bond's coefficients, power requirement and critical speed of Ball Mill.

The students should be able to: (1) It gives information about Distillation techniques, heat transfer coefficient and radiation constant of brass, iron and glass. (2) Gives idea of drying procedure and size separation procedures (3) principal and working of various instruments.

BP406P Medicinal chemistry I

Medicinal chemistry I course is designated to gain the knowledge about preparation of drug intermediate such as 1, 3-pyrazole, 1, 3-oxazole, Benzimidazole, Benztriazole, 2, 3- diphenyl quinoxaline, Benzocaine, Phenytoin, Phenothiazine, Barbiturate. To perform assay of drugs such as Chlorpromazine, Phenobarbitone, Atropine, Ibuprofen, Aspirin, Furosemide and determination of partition coefficient of any aforementioned drugs.

BP 407P Physical Pharmaceutics II

This practical course is designed to provide fundamental knowledge about determination of particle size, particle size distribution using sieving method and microscopic method. Determination of bulk density, true density and porosity, determine the angle of repose and influence of lubricant on angle of repose. Determination of viscosity of liquid using Ostwald's viscometer.Determination of sedimentation volume and reaction rate constant.

BP408 P Pharmacology I

Pharmacology I practical course is designed to introduce students to commonly used instrument in experimental pharmacology .This course provides primary knowledge of handling and uses of common laboratory animals. Student will able to understand how to maintain laboratory animal as per CPCSEA guideline. Also informs students regarding common laboratory techniques (blood withdrawal, serum and plasma separation, anesthetics and euthanasia used for animal. This course highlights the importance of knowledge different routes of drugs administration in mice/rats. Students acquire knowledge of effect of hepatic microsomal enzyme inducers on Phenobarbitone sleeping time in mice.This course provides primary knowledge of effect of drugs on ciliary motility of frog oesaphagus. Also, provide primary information drugs on rabbit's eye.Student will able to understand skeletal muscle relaxant using rota-rod apparatus &on locomotor activity using actophotometer. Student will able to understand anticonvulsant effect of drugs by MES &PTZ method.Students acquire knowledge of sterotype and anti-catatonic activity of drugs on ras/mice & anxiolytic activity ofdrugs using rats/mice. Also, local anaesthetics by different methods

BP409 P Pharmacognosy and Phytochemistry I

The subject involves the fundamentals of Pharmacognosy like Analysis of crude drugs by chemical tests Determination of stomatal number and index, vein islet number, vein islet termination and palisade ratio, size of starch grains, calcium oxalate crystals by eye piece micrometer Fiber length and width number of starch grains by Lycopodium spore method, Ash value, extractive values of moisture content of crude drugs, swelling index and foamingindex etc.

P 1.1.1 Pharmaceutics I(Dispensing Pharmacy)

This course is designed to impart a fundamental knowledge on the preparatory pharmacy with arts and science of preparing the different conventional dosage forms. Formulation of dosage forms includes preparation of syrups, elixir, linctuses, suspension emulsion, solutions, suppositories, powders and granules. Students are also prepare semisolid dosage forms such as paste, ointment and gel.

P. 1.1.2 Pharmacognosy I

This practical course of Pharmacognosy includes Morphological characteristics of plant families mentioned in theory.Microscopic measurements of cells and Cell contents such as starch grains, calcium oxalate crystals and phloem fibers.Determination of leaf constants such as stomatal index, stomatal number, vein islet number,vein termination number and palisade ratio. Identification of crude drugs belonging to carbohydrates and lipids.Preparation of herbarium sheets.

P.1.1.3 Pharmaceutical Chemistry I

This practical course includes systematic qualitative analysis of inorganic mixtures containing two anions and two cations. Limit test for chloride, sulphate, heavy metals, iron, arsenicas per the procedure given in Indian pharmacopoeia. Preparation of inorganic compounds such as copper sulphate, magnesium oxide and ferrous sulphate.

P.1.1.4. Biostatistics and Computer Application in Pharmacy

This practical course include Exercises based on the following

1. Computer operating systems like MS DOS, MS WINDOWS etc.
2. Study of soft-ware packages like MS Word, MS Excel, MS PowerPoint etc.
3. Browsing of Internet

P.1.2.1 Pharmaceutics – II (Unit Operation)

This course is intended to provide fundamental knowledge about the practical aspects of unit operations used in pharmaceutical industry**.** The course includesdetermination of rate of evaporation, rate of drying, free and bound moisture content. Besides, it covers experiments to illustrate the influence of various parameters on the rate of drying, and principles of size reduction.

The other aspects of the course include determination of humidity, evaluation of filter media, determination of rate of filtration, drying of wet granules and sieve analysis. In addition to this, particle size measurement by stokes law, methods of homogenizations, crystallization, distillation and extraction processes are included.

P. 1.2.2 - Pharmaceutical Chemistry – II (Inorganic &Physical Chemistry)

In this course students are intend to learn i. various identification tests for pharmacopoeial inorganic pharmaceuticals, and qualitative tests for cations and anions. ii. To determine molar mass by Rast method and cryoscopic method. iii. To determine molar mass of volatile liquids by Victor-Meyer method. iv. To determine the heat of solution, heat of hydration and heat of neutralization and v. To determine rate constant of simple reaction.

P.1.2.3. Pharmaceutical Chemistry – III (Organic Chemistry-I)

This course involves laboratory synthesis of selected organic compounds such as P-Nitroaniline, P-Bromoacetanilide, Benzanilide, Phenyl Benzoate, Anthraquinone, and 2, 4, 6 Tribromophenol. Besides, it covers the identification of organic compounds and their derivatisation, and an introduction to the use of stereomodels.

P.1.2.4- Anatomy, Physiology and Health Education-I

In this course students are intend to learn i. Identification of bones. ii. Model based understanding of nervous system, endocrine system, haemopoeitic system and lymphatic system iii. Different family planning devices. iv. Microscopic study of permanent slides. v. Determination of RBC, WBC,differential WBC,clotting time and bleeding time of blood, haemoglobin content of blood. vi. Estimation of ESR, blood group, and blood pressure.

P 2.3.1Pharmaceutics III (Physical Pharmacy I)

This practical course covers Determination of density of given unknown liquid samples, determination of specific gravity of given unknown liquid samples, determination of molecular weight of given substance by Rast's camphor method. This course includes determination of normality of given acid by conductometric titration, determination of partition coefficient of iodine between carbon tetrachloride and water. This course also include diffusion and dissolution studies.

P 2.3.2 Pharmaceutical Chemistry-IV (Organic Chemistry-II)

1. Students can perform systematic analysis of organic binary mixtures
2. Students can perform systematic preparation of medicinal agents
3. Students can perform the Quantitative analysis of organic compounds by functional group

To understand the preliminary testing, element detection, functional group determination & separation of binary mixture.

P2.3.3. Pharmacognosy II

Pharmacognosy II practical course is designed to provide knowledge about percolation and continuous extraction technology, chemical test of resinous crude drugs, histology and micro chemical test, extraction of capsicum oleo resin and Ginger oleo resin, identification of phytoconstituents by general chemical tests and study of fibers by chemical test.

P 2.3.4 Pharmaceutical Analysis I

This practical course gives knowledge about different titration methods namely acid base titrations, non-aqueous titrations, oxidation reduction titrations, complexometric titrations, precipitation titration which includes preparation and standardization process. Students also gain knowledge about gravimetric analysis and other methods.

P 2.3.5 Anatomy, Physiology and Health Education- II

Anatomy, physiology and health education practical course is designed to provide preliminary knowledge about anatomical features, histological features and physiological functioning of systems (cardiovascular, urinary, respiratory, and digestive). The course design provides significant understanding about normal and abnormal constituent of urine by doing qualitative analysis of urine by collection of sample, appearance, determination of P^H, urea, creatinine, bile salt, bile pigments, ketone body. It gives idea of various diagnosis test like SGPT & SGOT. It also provide knowledge about techniques and apparatus used for nerve muscle preparation. The students also gain adequate knowledge about the vital capacities and lung as volume by using spirometer.

P 2.4.1 Pharmaceutics IV (Physical Pharmacy II)

This course include determination of velocity, surface tension, critical micelle concentration of surfactant with stalagmometer, Viscosity and relative viscosity of liquids, HLB of glyceryl monosterate, specific surface area of charcoal by adsorption method, viscosity by Brookfield viscometer, particle size distribution, derived properties of powders.

P 2.4.2 Pharmaceutical microbiology

Pharmaceutical microbiology practical course covers the principle of microbiology with emphasis principle and working of lab apparatus like autoclave, hot air oven, incubator, P^H meter, Antibiotic zone reader, colony counter, refrigerator. The course design provides significant understanding preparation procedure and application of nutrient and macconkey agar. The course ensures the ability to assimilate the concepts of level of sterility of various environment by doing air micro flora technique. It also describes procedure and method of preparation of microbial culture (streak plate, pour plate, spread plate).The course design provides significant understanding about monochrome staining, grams staining and negative staining. This course explain procedure of various pharmaceutical microbiology test like sterility test, microbial assay of penicillin, (diffusion assay), Kirby Bauer antibiotic sensitivity test. The course design provides significant understanding about oligodynamic action and yeast, aspergillus, & penicillium protozoa by using permanent slides. The course ensures the ability of preparation of bacterial culture on nutrient agar slant.

P. 2.4.3 Pharmacognosy III

Pharmacognosy III practical course is designed to provide basic knowledge about traditional drug and their uses it also useful to identify variety of traditional crude drug on the basis of morphological character. The practical course designed to provides significant understanding about microscopy, morphology and powder characteristics of glycoside containing drug. The course also gives the information about the various traditional herbal formulation like asava, aristha, churna, taila and their preparation and standardization procedure. The emphasis is also given on different estimation procedure like estimation of saponin from gokharu and liquorice.

The students should be able to: (1) give information about morphology of traditional drug. (2) Microscopical information of glycosidal drug. (3) Standardization and preparation of aurvedic formulation.

P 2.4.4 Pharmaceutics -V

Pharmaceutics V practical course is designed to impart a fundamental knowledge of proforma for patient data collection, study of patient counseling interview techniques, calculation of cost of prescription. Students acquire the knowledge about role of hospital pharmacist in ward round participation, assessment of drug interactions in the given prescriptions, assessment of suspected adverse drug reactions in the given prescriptions. This course also provides knowledge about preparation of parenteral products by the following methods, aseptic technique, involving sterilization by filtration Involving terminal steam sterilization.

P.2.4.5 Pharmaceutical Chemistry-V (Biochemistry)

Pharmaceutical Chemistry-V (Biochemistry) practical course is designed to give knowledge about basic skills of identification and estimation of carbohydrates and proteins by different tests and methods and also gives knowledge about electrophoresis and separation of amino acids and lipids by chromatographic techniques

P 3.5.1 Pharmaceutical Chemistry-VI (Medicinal Chemistry-I)

The subject deals with the introduction to purification techniques of solvents/liquids &synthesized products by fractional distillation & distillation under vacuum & recrystallization.

The students should be able to:

1. Students can perform systematic preparation of medicinal agents
2. Students can understand reaction monitoring by TLC

Students can perform synthesis of medicinal agents by using microwave oven synthesis.

P 3.5.2Pharmaceutics VI(Pharmaceutical Technology I)

Pharmaceutics VI (Pharmaceutical Technology I)practical course is designed to provide fundamental knowledge about the practical aspects of formulation and evaluation of various dosage forms, such as tablets, capsule, emulsion, suspension, ointments, suppositories, dry syrups, gels, and aerosol etc.

P 3.5.3 Pharmacology I

Introduction to experimental animals and ethical issues related to their use (CPCSEA guidelines). Simulated practicals: isolated frog heart, Dose response curves (shapes, dose Vs response, Log Dose Vs Response, DRCs by agonists, partial agonist, effects of antagonist of DRC of agonist etc.)Concepts of bioassays. Simulated bioassays using suitable software for interpolation assay. Behavioral testing using video demonstrations- along with animations related to drug actions- related therapeutics (related to treatment/ poisoning etc)

P 3.5.4. Pharmacognosy

Pharmacognosypractical course is designed to provide fundamental knowledge about the practical aspects of phytoconstituents. This includes 1. Morphology,Microscopic and powder characteristics study of selected drugs given in theory, Isolation of total alkaloid (any two) , Estimation of total alkaloids, TLC study of alkaloids, Isolation and identification of papain or any one enzymes, Some experiments on plant tissue culture for production of secondary metabolites (Demonstration), Preparation of media, Formation of callus.

P 3.5.5. Pharmaceutical Analysis-II

Pharmaceutical Analysis-II practical course is designed to provide analytical knowledge about principal, instrumentation & working of different types of analytical methods such as potentiometry, conductometry etc. The course design provides significant understanding about the electrochemistry and electrochemical methods of analysis. The course ensures the ability to assimilate the equipment of refrctometer and polarimetry. It also describes the different electrode i.e. reference electrode and

indicator electrode. Focus is also given to the appreciation of nephelometry&turbidimetry. The students also gain adequate knowledge about the Karl fisher titration.The students should be able to: (1) describe the principle & working of various method of analytical techniques, (2) explain variousinstrumentation method of analytical techniques (3) explain perform water determination by Karl-Fischermethod of samples, and (4) acquire the knowledge & analytical techniques applied to drug quality control.

P 3.6.1 Pharmaceutical Chemistry VII (Medicinal Chemistry-II)

The subject deals with synthesis of medicinal agents i.e methyl red, benzylidine, acetophenone, benzocaine, benzhydrol, iodobenzine etc.

The students should be able to:

1. Students can understand Purification techniques of solvents/liquids and synthesized products by Fractional distillation and distillation under vacuum and recrystallization
2. Students can perform systematic preparation of medicinal agents
3. Students can perform synthesis of medicinal agents by using microwave oven synthesis.

P 3.6.2. Pharmaceutics VII

Pharmaceutics VII practical course is designed to impart a fundamental knowledge on dissolution and disintegration study of coated and uncoated tablets, effect of surfactant and pH on dissolution of tablet.Students acquire the knowledge about vitro diffusion study of drugs through one biological and two synthetic membranes, absorption of drugs using everted sac technique. This course also provides knowledge about demonstration of protein binding, demonstration of drug-drug interaction at protein bind sites, urinary excretion of Riboflavin in healthy volunteers, and Area under Curve (AUC) by trapezoidal rule from plasma concentration time profile.

P 3.6.3. Pharmacology –II

In Pharmacology –II practical course students learns about the following aspects. 1. Determination of effect of Physostigmine and atropine on DRC of acetylcholine using pig ileum OR rat ileum OR goat trachea OR chicken ileum. 2.Bio-assay of acetylcholine/histamine/atropine on guinea pig ileum OR rat ileum OR goat trachea OR chicken ileum by interpolation.3.Phases of estrous cycle in rats by microscopic examination of vaginal smears 4. Determination of antidepressant effect of drugs using forced swim test / tail suspension test in mice (Oral and IP administration of drug) 5.Effects of drugs on locomotor activity using Actophotometer (Oral and IP administration of drug) 6.Anticonvulsant activity using MES/ PTZ using simulated software (www.animalsimulator.com or any other suitable software) 7. Analgesic activity of drug using Hot Plate/ OR Tail Flick/ Or Caudal Immersion, method in rats/ OR mouse (Oral and IP administration of drug). 8. Haloperidol induced catalepsy in rats. 9. Pharmacokinetics of any one drug administered by oral route and intravenous route 10) Marble burying paradigm in mice to determine obsessive compulsive behaviour.11.Simulated experiment of determination of PA2 value using suitable software.

P 3.6.4. Pharmacognosy V(Chemistry of Natural Products)

Pharmacognosy V(Chemistry of Natural Products) practical course is designed to provide fundamental knowledge about 1. Laboratory experiments on isolation, separation, purification and spectroscopic analysis of various groups of chemical constituents of pharmaceutical significance.

2. Estimation of total flavonoids

P.3.6.6. Project report

Project report Practical course is designed to provide an opportunity to the student to develop an understanding of the nature and importance of research/review project, provide a foundation for future research activity and enhance the students' ability to work as members of a team and to present research findings.The course is that the students undertake it as members of a group of 3–4 students under the supervision of a member, of the academic staff. The course ensures the ability to assimilate the conceptsof research or review project. Focus is given to students working on a research project was also

seen to help ensure that a sufficient body of data would be obtained for subsequent analysis, discussion and conclusion of the research or review project.

The students should be able to:

(1) Need for undergraduate students to develop research skills,

(2) To recognize other person's skills and abilities and to be able to form effective working relationships with peers.

(3) To work as members of a research team, and

(4) Understand the concept of project and exhibit their presentation skills.

P 4.7.1 Pharmaceutical Technology II (Pharmaceutics –VIII)

Pharmaceutical Technology II practical course is designed to provide fundamental knowledge about the practical aspects of formulation,raw material specifications, preformulation, process controls, and documentation of sterile dosage forms such as parenteral and ophthalmic. This includes preparation & evaluationof SWFI, ascorbic acid injection, calcium gluconate injection, sodium chloride and dextrose injection, atropine sulphate injection, sodium thiosulphate injection, zinc sulphate eye drop, sulphacetamide sodium eye drop, chloramphenicol eye ointment, sulphacetamide sodium eye ointment. Besides, student shall learn about powdered glass test, water attack test, evaluation of plastic containers used for parenteral products, rubber closures used for glass containers containing parenteral products, accelerated stability testing of an injection.

P - 4.7.2 Pharmaceutical Chemistry VIII (Pharmaceutical Medicinal Chemistry III)

Pharmaceutical chemistry VIII (PMC III) practical course is designed to provide elementary knowledge about purification techniques of solvents/liquids by Fractional distillation and distillation under vacuum. The students acquire knowledge about the Friedal Craft acylation. The course design provides significant understanding about the esterification reaction. The course ensures the ability to assimilate the concepts of reduction reaction.Focus is given to gain knowledge about the microwave oven synthesis such as fluorescein,ethyl benzoate, and phenytoin. Focus is also given to the appreciation of basic cyclization reactions. The students should be able to: (1) describe the purification techniques of solvents/liquids by fractional distillation and distillation under vacuum, (2) explain the basic mechanism involved in the organic synthesis, (3) explain preparation of suitable microwave oven synthesis from organic compoundsand (4) acquire the knowledge regarding separation techniques (TLC), identification techniques (IR, etc.) for subsequent analysis of components.

P - 4.7.3 Pharmacology III

Pharmacology III practical course is designed to provide fundamental knowledge about the practical aspects of drug action, statistical approaches and the action of drug on isolated preparation like rat ileum, goat ileum, chick ileum. For the purpose the course is divided in two groups as major experiments and minor experiments. Major experiments include , determination of Na+ and K+ concentrations in urine samples using flame photometry, determination of effect of anti-cholinesterase on DRC of acetylcholine using any suitable isolated tissue preparation like rat ileum, goat ileum, chick ileum, determination effect of atropine on DRC of Acetylcholine using suitable isolated preparation, DNA electrophoresis/protein electrophoresis using pre-extracted/ready samples, Micronucleus assay using blood smear microscopy (in cyclophosphamide/acrolein treated mice), Irwin's Functional observational battery testing for neurobehavioral characterization of test drugs (caffeine/diazepam/pentylenetetrazole/ haloperidol).

P - 4.7.4 Pharmaceutical Analysis III

Pharmaceutical Analysis III practical course is designed to provide fundamental knowledge about the practical aspects of chromatography and other instrumental approaches. This includes identification of sample by ascending paper chromatography, radial paper chromatography, Thin layer Chromatography , Calibration of Visible spectrophotometer/Colorimeter and determination of lambda max of drug,

Colorimetric analysis of excipient/finished products, determination of quinine sulfate / riboflavin using fluorimeter, determination of Na+ and K+ by flame photometry after preparation of calibration curve, and H.P.T.L.C (DEMONSTRATION)

P - 4.8.1 Pharmaceutics IX

Pharmaceutics IX practical course is designed to provide fundamental knowledge about the practical aspects of formulation,raw material specifications, preformulation, process controls, and documentation of various dosage form. This includes formulation of nanoparticles by suitable technique, evaluation of prepared nanoparticles, formulation and evaluation of ocular inserts, transdermal patch, and floating tablets. The course also emphasize on dissolution study of marketed sustained release tablets, marketed enteric coated tablets, formulation and evaluation of gels, effect of concentration of effervescent agents on floating lag time, effect of polymer concentration on drug release in floating tablets, effect of polymer concentration on swelling in floating tablets etc.

P 4.8.2 Pharmaceutical Analysis IV (Practical)

The subject Pharmaceutical Analysis is the heart to pharmacy,without this subject,pharmacy failed, so pharmacist must respect the profession of chemistry not ignores it,everywhere in modern life. The practical of subject Pharmaceutical Analysis IV conveys an overview of important methods of analysis and enables the students to realistically learn the working techniques. The student is the fact that analysts in their capacity as problem-solvers perform services for certain groups. The subject presents experiments in analytical chemistry laboratory courses. They consist of the classical curriculum used at academic institutes, research institutes and pharmaceutical industries with chromatographic procedures, spectrometric methods, etc.The use of spectral visual approaches allowed students to investigate pharmaceutical drugs stability and interactions.This subject is therefore an indispensable for students, internship assistants and lecturers (in the area of chemistry, biotechnology, food technology and environmental technology) in the basic training Programme of analytics at institutes and pharma industries.

P 4.8.3 Pharmaceutical Chemistry IX (Medicinal Chemistry IV)

The students should be able to:

1. Determination of partition coefficient, dissociation constant, molar refractivity of compound from QSAR analysis (Demonstration)
2. Students can perform systematic preparation of medicinal agents
3. Students can perform synthesis of medicinal agents by using microwave oven synthesis.

P 4.8.4.Pharmacognosy VI

Pharmacognosy practical course is designed to provide basic knowledge about isolation of some component from herbal side. The practical course designed to provides significant understanding about estimation of volatile oil and their chromatographic study. The course also gives the information about the herbal skin care cosmetics like cold cream, lotions etc and herbal hair care like herbal shampoo, hair oil etc. The emphasis is also given on standardization crude drug, herbal extract, with different estimation procedure like total carbohydrate content etc. it is also related with preparation and standardization of herbal formulation like tablet or syrup. The students should be able to: (1) give information about isolation of different herbal component. (2) Isolation and estimation techniques for volatile oil (3) standardization of drug as well as formulations.

P 4.8.7. Industrial Training Report

Industrial training report practical course is designed towork for at least four weeks in a pharmaceutical industry, it includes production unit, Q. C department, Q. A department, analytical laboratory, chemical manufacturing unit, pharmaceutical R & D, hospital (Clinical Pharmacy), clinical research organization and wholesale drug store, etc. The students should be able to:

(1) Acquire the knowledge F&D, R&D, Q.A and Q.C. departments,

(2) To develop a student's sense of responsibility and good work habits.
(3) To build the strength, teamwork spirit and self-confidence in students life, and
(4) Develop an understanding of the nature and importance of industrial training, provide a foundation for future work activity

Criterion 3 Course Outcomes and Program Outcomes 100

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

Mapping of Program Educational Objectives with Program Outcomes

1. **Course Outcomes (SAR should include course outcomes of one course from each semester of study, however, should be prepared for all courses) 05**

The course outcomes are prepared for each course (each subject) after giving due consideration to the syllabus prescribed by the KBC North Maharashtra University. The syllabus did not prescribe learning outcomes, but each teacher attempts to formulate the course outcomes. These are drafted in the background of Mission Statement, PEOs prepared by the college for the B. Pharmacy programme and program outcomes envisaged by NBA. The following course outcome for each course in the B. Pharmacy program is given in the following table.

Course Code	Course Title	Course Outcomes
T 1.1.1	Pharmaceutics-I(Dispensing Pharmacy)	Know the history of profession of pharmacy
		Understand the basics of different dosage forms
		Understand the pharmaceutical incompatibilities and pharmaceutical calculations
		Understand the professional way of handling the prescription
T 1.1.2	Pharmacognosy-I	Students can describe History of Pharmacognosy along with sources and classification of drug.
		Students can describe Plant taxonomy and extraction methodology.
		Students can describe Cultivation, Collection, Processing and storage of crude drugs.
		Students can describe Quality control of crude drugs and syudy of Carbohydrate and lipid containing drugs.
T 1.1.3	Pharmaceutical Chemistry-I (Inorganic Pharmaceutical Chemistry)	Understand the uses and importance of Inorganic compound.
		To know the sources of impurities and limit test.
		Understand basis knowledge of acid base concept.
		To know cation and anion component of Inorganic drugs.
T 1.1.4	Applied Biostatistics & Computer Applications in Pharmacy	Ability to apply the knowledge of statistics in data collection as well as its analysis in pharmaceutics and clinical trails
		Apply the knowledge of testing of hypothesis in comparative analysis of data in pharmaceutics and clinical areas.
		Apply the knowledge of MS word, MS. Excel MS. Power point and network system in pharmaceutics and clinical trials.
		Apply of the knowledge of computer in preparation of programme for making ease in arithmation expression and calculation in pharmaceutics and clinical trials
T 1.1.5	Communicating skills & soft Skills development	To understand Importance of communication
		To know style of communication
		To understand steps before going to an Interview
		To learn and understand Communication skill in a Group Discussion and Essentials of Group discussion

T 1.2.1	Pharmaceutics –II (Unit Operations)	Understand Drying Theory & mechanism of drying, drying equipments
		Study of filtration, fluid flow, corrosion, fluidization with mechanism and equipments
		Study of evaporation extraction, crystallization and centrifugation with mechanism and equipments
		Understand Environmental control:- air conditioning ,refrigeration , size separation and Handling and Conveying: Solids
T 1.2.2	Pharmaceutical Chemistry –II (Inorganic &Physical Chemistry)	To learn and understand the radioisotopes, handling, storage and application of radiopharmaceuticals.
		To know quantum mechanics.
		Understand theory of gases.
		Understand the uses and importance of Inorganic compound.
T 1.2.3	Pharmaceutical Chemistry-III (Organic Chemistry-I)	An ability to gain detailed knowledge about classification, nomenclature and isomerism of organic compounds.
		Acquire knowledge on the reaction, name of reaction and orientation of reaction.
		Describe the theoretical aspects on preparation and reaction of compounds with functional groups, such as alkanes, alkenes, conjugated dienes, alkyl halide, alcohols, carbonyl compounds, carboxylic acid, and aliphatic amines.
		Understand and to appreciate the chemistry SN1 and SN2 reaction.
T 1.2.4	Anatomy, Physiology & Health Education (APHE) – I	Student will able to describe the various physiological aspect of the human body.
		Student will able to explain various systems in coordination with importance of various organs and tissues.
		Student will able to explain pathological and diseased process and repair mechanism of various systems.
		Student will able to acquire the knowledge regarding health education and family planning in human life.
T 1.2.5	Industrial Psychology	Gives knowledge about industrial atmosphere and working
		Gives knowledge about personnel selection, motivation, leadership qualities and management skills
		Gives knowledge about accident prevention and safety measure in industry
		Gives knowledge about Impact of Science & Technology on industry and society and role of industry in national development.
5555	Environmental Science	Motivate students to participate in environment protection and environment improvement.
		Acquire skills to help the concerned individuals in identifying and solving environmental problems.
		An ability to gain detailed knowledge about awareness about environmental problem.
		Acquire the knowledge & develop an attitude of concern for the environment.
T 2.3.1	Pharmaceutics III	Gain knowledge about techniques for determination of physicochemical properties.
		Understand the Quality control parameters in manufacturing of

		pharmaceutical dosage forms.
		Analyse and tackle problems encountered in formulation and development.
		Harmonize utility of physicochemical properties in designing of pharmaceutical dosage forms.
T 2.3.2	Pharmaceutical Chemistry-IV (Organic Chemistry-II)	An ability to write the structures & numbering of different heterocyclic compounds
		An ability to classify and explain the properties of carbohydrates, Amino Acids & Peptides
		An ability to classify rearrangement reaction to write the mechanism and application involved in the synthesis of compounds
		An ability to Concept and types of Tautomerism, Resonance and rules for Resonance, Electronegativity and concept of Aromaticity, Theories of Acidity and Basicity
T 2.3.3	Pharmacognosy II	Identify the crude drugs and utilisation of chemical constituents for medicinal use.
		Know about of different macroscopic and microscopic characters of crude drugs.
		Differentiate between different various extractions methods for isolation of active chemical substance.
		Ability to cultivate medicinal plants and increases the production of medicinal drugs.
T 2.3.4	Pharmaceutical Analysis-I	Gain knowledge about Basic principles & techniques of analysis.
		Development of analytical skills
		Application of analytical methods in standardization and purity determination
		Identification & determination of sources of errors in analytical methods
T 2.3.5	Anatomy physiology and health education-II	Ability to Recognize the anatomical structures and explain the physiological functions of various systems present in body.
		Ability to apply knowledge of anatomy and physiology with real-world situations, including healthy lifestyle decisions and homeostatic imbalances.
		Ability to use first aid in various emergency condition
		Apply knowledge of communicable diseases with reference to their epidemiology, spread, prevention and health policies.
T 2.3.6	Pathophysiology of Common Diseases-I	Explain functional changes associated with disease and injury.
		Understand the complications and sign symptoms of diseases.
		Explain the physiological processes, mechanisms of disease and correlate with their clinical course
		Identify the targets for the treatment of disease.
T 2.4.1	Pharmaceutics IV	Know the principles of chemical kinetics & to use them in assigning expiry date for formulation
		Demonstrate use of physicochemical properties in evaluation of dosage forms
		Appreciate physicochemical properties of drug molecules in formulation research and Development
		Understand various physicochemical properties of drug molecules in the designing the dosage form
		Ability to understand historical aspects of microbiology

T.2.4.2	Pharmaceutical Microbiology	Ability to describe different method of sterilization & analytical and clinical microbiological test
		Ability to understand morphology and cultivation of bacteria and viruses & immunity &defense mechanism
		Ability to describe cell types and production of vaccines,
T-2.4.3	Pharmacognosy-III	Students can describe the Pharmacognosy of gycosidal drug.
		Students can describe uses and chemical constituents of traditional drug
		Students can describe preparation, standardization of ayurvedic formulation.
		Students can describe marine drugs, natural pesticide and their role.
		Students can describe chemotaxonomic nomenclature.
T.2.4.4	Pharmaceutics-V	Know the Hospital - its Organization and functions
		Understand Drug Distribution system in Hospital (In-patient services& Out-patient services)
		Understand hospital formulary, hospital pharmacy services.
		Understand Manufacturing of Pharmaceuticals in Hospitals
T 2.4.5	Pharmaceutical Chemistry-V	Provides knowledge about Basics of cell its structure and functions of its Parts.
		Provides knowledge about roles of carbohydrates, vitamins, proteins, lipids, amino acids, enzymes and co-enzymes.
		Provides knowledge about mechanisms and pathways by which carbohydrates, proteins and lipids are metabolized.
		Provides knowledge about basics of genetics and functions of DNA in the synthesis of RNAs and proteins.
T-2.4.6	Pathophysiology-II	Students can describe the etiology and pathogenesis of the selected disease states
		Students can describe diagnosis of the selected disease states
		Students can describe management of the selected disease states
		Students can describe treatment of the selected disease states
		Ability to analyse normal and abnormal urine and liver function test
T 3.5.1	Pharmaceutical Chemistry-VI (Medicinal Chemistry-I)	Understand the concept of physio chemical properties of drug molecules in relation to drug activity
		To understand the structure activity relationship (SAR) of different classes of drugs
		To understand the different metabolic pathways of dugs
		an ability to classify, Mode of action, adverse effect, therapeutic uses of drugs
T 3.5.2	Pharmaceutics- V	Understand the preformulation parameters of drugs
		Study of manufacturing techniques of tablets capsules etc.
		Understand the evaluation of dosage forms
		Understand pilot plant scale up techniques and GMP and cGMP
T 3.5.3	Pharmacology I	Understand the principles of drug discovery and phases of drug development
		Understand the pharmacological aspects of drug action
		Ability to assess the mechanism of action of a drug

		Ability to assess the drug interaction.
T 3.5.4	Pharmacognosy IV	Student can able to know the Genus , species and family of the herbal plant
		Student can able to identify the drug on basis of physical and chemical properties
		Information of extraction techniques
		Information of plant tissue culture
T 3.5.5	Pharmaceutical Analysis-II	An ability to gain detailed knowledge about separation techniques for subsequent analysis of mixture.
		Explain the principle, instrumentation and application of different analyticalinstruments such as Refractometry, Nephelo-turbidimetry,and Polarimetry& Thermal analysis.
		Describe the theoretical aspects on electrochemistry and electrochemical methods of analysisof drugs by using Conductometry, Potentiometry, Polarography and Amperometry&Coulometry.
		Understandand determine the contents of the compound by using Karl-fisher titration method.
T 3.6.1	Pharmaceutical Chemistry-VII (Medicinal Chemistry-II)	Understand the structural activity relationship of chemotherapeutic agents.
		To understand the structure activity relationship (SAR) of different classes of drugs
		Apply the knowledge of medicinal chemistry for synthesis of new compounds
		Understand the biological sources and structures of some important antibiotics.
T 3.6.2	Pharmaceutics- VII	Understand the ADME of drugs
		Study the basic considerations of pharmacokinetics.
		Understand pharmacokinetic of one compartment model
		Study the bioavailability and bioequivalence, design of dosage regimens
T-3.6.3	Pharmacology II	Understanding of CNS pharmacology
		Understanding of various routes of drug administration
		Understanding of autacoids pharmacology
		Understanding of bioassays
T 3.6.4	Pharmacognosy V	Student can able to perform spectral characterization by modern analytical tools
		Student can able to know the stereochemistry of natural products
		Information of chemistry and biosynthesis of Terpenoids , Glycosides, Alkaloids
		Information of chemistry and biogenesis of carotenoids, antibiotics, lignans.
T.3.6.5	Pharmaceutical Jurisprudence & Ethics	Student can know and understand the Pharmaceutical legislations and their implications in the development and marketing
		Understand and follow the code of ethics during the pharmaceutical practice
		Know and understand various Indian pharmaceutical acts and laws
		Know about the process of drug discovery and developments
		Know the regulatory authorities and agencies governing the

		manufacture and sale of Pharmaceuticals
		Know the regulatory approval process and their registration in Indian and international markets
T 4.7.1	Pharmaceutics VIII	Design and evaluate sterile dosage form.
		Understand drug stability and degradation pathways.
		Design and evaluate control release dosage form.
		Gain the knowledge regarding microencapsulation and optimization technique
T 4.7.2	Pharmaceutical Chemistry-VIII (PMC-III)	Knowledge on classification, mechanism of action & structural features on biological activity of CNS acting medicinal drugs such as sedative & hypnotic, anticonvulsants, antipsychotic, antidepressants, antiparkinsonism, CNS-stimulants, etc.
		Describe the theoretical aspects on metabolic activity and clinical application of medicinal drugs.
		Understand the anti-viral drugs &structural activity relationship of anti-viral agents.
		Apply the knowledge of chemistry for synthetic pathway of selective medicinal compounds of each category.
T 4.7.3	Pharmacology III	Understanding of biostatistics
		Understand the significance of chemotherapeutic agents
		Understanding of treatment for poisoning
		Understanding of CVS pharmacology
T 4.7.4	Pharmaceutical Analysis –III	Gain knowledge about Fundamentals of modern instrumental method s of analysis.
		Gain Knowledge about modern analytical instruments that are used for drug testing
		Application of instrumental methods in qualitative and quantitative analysis.
		Development of analytical skills
T 4.7.5	Pharmaceutical Biotechnology	Develop new improve species of plant and animals.
		Increases the production of plants and animals which are tends to extinct.
		Highly improved quality of plant and animals species can produce.
		Newer techniques of genetic engineering apply.
T 4.7.6	Industrial Management	The students learn the different aspects of management and understand professional and ethical responsibility.
		Develop an understanding of the human resource practices in a business unit.
		It helps them with the overall managerial and leadership skills in the industry.
		Apply range of managerial techniques effectively to solve problems in Pharmaceutical industry.
		Understand and recall laws and acts depicted in Indian Patent act.
T 4.8.1	Pharmaceutics- IX	Know the Introduction to Targeted drug delivery systems
		Understand the Ocular drug delivery system, Transdermal drug delivery system
		Understand the Gastro retentive drug delivery system, Colon-specific drug delivery system, Mucosal drug delivery system
		Understand the Pulmonary drug delivery system, nasal and Intrauterine and Intravaginal drug delivery system

T - 4.8.2	Pharmaceutical Analysis –IV	Gives Basic Knowledge about basic as well as hyphenated techniques of analysis
		Gives knowledge about the interaction of matter with electromagnetic radiations
		Gives knowledge about the chromatographic separation
		Gives knowledge about the application of modern and hyphenated tools/ methods in analysis of drugs
T 4.8.3	Pharmaceutical Chemistry-IX (Medicinal Chemistry-IV)	To understand the concept of Computer Aided Drug Discovery
		Ability to assess different parameters involved in QSAR studies
		To understand the concept of Prodrug & its application
		To assess Structural Activity relationship of drugs of therapeutic interest
T-4.8.4	Pharmacognosy-VI	Students can describe World-wide trade in medicinal plants and their derived products.
		Students can describe A brief account of plant based industries and institutions involved in work on Medicinal and aromatic plants in India.
		Students can describe Indian trade in aromatic plants and Herbal cosmetics.
		Students can describe Quality control & standardization of herbal drugs.
T-4.8.5	Pharmacology IV(Clinical Pharmacy and Drug Interactions)	Ability to discuss the controversies in drug therapy
		Ability to perform the therapeutic approach to management of diseases
		Ability to identify the patient specific parameters relevant in monitoring therapy
		Understand the importance of individualized therapeutic plans based on diagnosis
T 4.8.6.3	Quality Assurance	Understand the GMP and cGMP aspects in a pharmaceutical industry.
		Appreciate the importance of documentation and Validation
		Understand the scope of quality certifications applicable to pharmaceutical industries
		Understand the responsibilities of QA & QC departments.
P 1.1.1	Pharmaceutics-I(Dispensing Pharmacy)	Preparation of various conventional dosage forms
		Understand the compounding and dispensing of dosage forms
		Understand the uses of pharmaceutical preparations
		Know the labelling and storage of dosage forms
P 1.1.2	Pharmacognosy-I	Students can describe Morphological characteristics of plant families.
		Students can describe Microscopic measurements of cells and Cell contents likeStarch grains, calcium oxalate crystals and phloem fibers.
		Students can describe Determination of leaf constants such as stomatal index, stomatal number, vein-islet number, vein-termination number and palisade ratio.
		Students can describe various chemical test for carbohyadrte and lipids.
P 1.1.3	Pharmaceutical Chemistry-I (Inorganic Pharmaceutical Chemistry)	Able to perform Limit tests.
		To know how to identify Inorganic compound.
		To understand concept of purity.
		To understand preparation method of inorganic compound..

P 1.1.4	Applied Biostatistics & Computer Applications in Pharmacy	Ability prepared a data by using MS Word, Ms Excel Ms powerpoint
		Perform theoretical implementation of Ms dos, Ms window.
		Ability to use of internet with various browsers and search engine
		Ability to communicate to people with the help of Email
P 1.2.1	Pharmaceutics –II (Unit Operations)	Determination of rate of evaporation , rate of drying, free moisture content and bound moisture and parameters affecting on the rate of drying
		Study principles of size reduction, determination of humidity, evaluation of filter media, determination of rate of filtration and study of factors affecting filtration
		Study Drying of wet granules with drying curves, use of sieve shaker and sieve analysis
		Know the methods of crystallization and extraction
P 1.2.2	Pharmaceutical Chemistry – II(Inorganic &Physical Chemistry)	To know how to identify Inorganic compound.
		To determine heat of solution.
		Understand heat of hydration.
		To determine molar mass by Rast camphor method.
P 1.2.3	Pharmaceutical Chemistry-III (Organic Chemistry-I)	An ability to gain detailed knowledge about classification, nomenclature and isomerism of organic compounds.
		Acquire knowledge on the reaction, name of reaction and orientation of reaction.
		Describe the theoretical aspects on preparation and reaction of compounds with functional groups, such as alkanes, alkenes, conjugated dienes, alkyl halide, alcohols, carbonyl compounds, carboxylic acid, and aliphatic amines.
		Understandand to appreciate the chemistry SN1 and SN2 reaction.
P 1.2.4	Anatomy, Physiology & Health Education (APHE) – I	Student will able to identify the various models/specimen/slides of human organs and tissue and bones.
		Student will able to performhaematology experiments.
		Student will able to explain various family planning devices and pregnancy diagnosis tests.
		Student will be able to handle compound microscope.
P 2.3.1	Pharmaceutics III	Gain knowledge about techniques for determination of physicochemical properties.
		Understand utility of physicochemical properties in design of stable pharmaceutical formulation.
		Understand use of physicochemical properties in evaluation of dosage forms
		Analyse and tackle problems encountered in formulation and development.
P 2.3.2	Pharmaceutical Chemistry-IV (Organic Chemistry-II)	Students can perform systematic analysis of organic binary mixtures
		Students can perform systematic preparation of medicinal agents
		Students can perform the Quantitative analysis of organic compounds by functional group
		To understand the preliminary testing, element detection, functional group determination & separation of binary mixture.
P 2.3.3	Pharmacognosy II	Extract the useful chemical constituent from the identified crude drug.
		Know the skills of section cuttings and staining and differentiate the cells for different chemical constituent.
		Extract the useful chemical ingredient from crude drug and can store them for further use.

		Knowledge about of different macroscopic and microscopic characters of crude drugs.
		Manufacture of ayurvedic preparations which have medicinal uses
P 2.3.4	Pharmaceutical Analysis-I	Gain knowledge about Basic practicalmethods of analysis.
		Development of analytical skills
		Analyse and tackle problems encountered in standardization and purity determination
		Identification & determination of sources of errors in analytical methods
P 2.3.5	Anatomy physiology and health education-II	Use anatomical knowledge to predict physiological consequences, and use knowledge of function to predict the features of anatomical structure of various systems.
		To perform physiological experiments on nerve muscle preparations.
		Ability to perform experiment on spirometer for determination of lungs volume and lungs capacity
		Ability to analyse normal and abnormal urine and liver function test
P 2.4.1	Pharmaceutics IV	Gain knowledge about techniques for determination of physicochemical properties.
		Understand utility of physicochemical properties in design of stable pharmaceutical formulation.
		Understand use of physicochemical properties in evaluation of dosage forms.
		Analyze and tackle problems encountered in formulation and development.
P.2.4.2	Pharmaceutical Microbiology	Ability to describe the apparatus used in microbiology lab
		Ability to describe the compound microscope
		Ability to describe the morphology of bacteria by using various staining methods
		Ability to describe techniques for preparation of bacterial culture and preparation of nutrient media.
P-2.4.3	Pharmacognosy-III	Students can describe morphology of traditional drug.
		Students can describe morphology, microscopy and powder characteristics of glucosidal drug.
		Students can describe standardization procedure for asava, aristha, taila and churna.
		Students can describe estimation procedure for saponins.
P.2.4.4	Pharmaceutics-V	Study the patient counselling interview techniques
		Understand the Calculation of cost of prescription
		Understand the sterilization of products
		Understand preparation of parenteral products
P 2.4.5	Pharmaceutical Chemistry-V	Provides practical knowledge of basic methods of identification of compounds like Carbohydrates, fats and proteins.
		Provides practical knowledge of some separation techniques for proteins, amino acids and lipids.
		Helps in determining safe limits of some compounds like glucose in body.
		Understand the role of nutrient molecules in pathological conditions.
		Students can understand Purification techniques of solvents/liquids and

P 3.5.1	Pharmaceutical Chemistry-VI (Medicinal Chemistry-I)	synthesized products
		Students can perform systematic preparation of medicinal agents
		Students can understand reaction monitoring by TLC
		Students can perform synthesis of medicinal agents by using microwave oven synthesis.
P 3.5.2	Pharmaceutics- V	Preparation of tablets by various granulation techniques
		Understand the coating of tablet
		Understand the uses and evaluation of pharmaceutical preparations
		Know the labelling and storage of dosage forms
P 3.5.3	Pharmacology I	Preparation of tablets by various granulation techniques
		Understand the coating of tablet
		Understand the uses and evaluation of pharmaceutical preparations
		Know the labelling and storage of dosage forms
P 3.5.4	Pharmacognosy IV	Student can able to identify the herbal drug by external characters
		Student can able to identify the drug on basis of microscopical characters
		By using extraction techniques extraction of drug is possible
		Analysis of extract can be carried out
P 3.5.5	Pharmaceutical Analysis-II	Describe the principle, instrumentation& types of conductometric andpotentiometric titrations.
		Explain the principle, instrumentation and application of RefractometryandPolarimetry.
		Describe the practical aspects on principle, instrumentation and application of Nephelo-turbidimetry.
		Determination of water contents of a compound by using Karl-fisher method.
P 3.6.1	Pharmaceutical Chemistry-VII (Medicinal Chemistry-II)	Students can understand Purification techniques of solvents/liquids and synthesized products by Fractional distillation and distillation under vacuum and recrystalization
		Students can perform systematic preparation of medicinal agents
		Students can perform synthesis of medicinal agents by using microwave oven synthesis.
		Interpretation of medicinal agents by using FTIR.
P 3.6.2	Pharmaceutics- VII	Study the effect of enzymes / surfactant on dissolution of Tablet
		In vitro diffusion study of drugs through one biological and two synthetic Membrane
		Study the absorption of drugs using everted sac technique
		Study the urinary excretion of Riboflavin in healthy volunteers
P-3.6.3	Pharmacology II	Ability to handle animals like frog, mice, rat and rabbit
		Ability to administer drugs for animals by various routes
		Ability to perform experiments on isolated preparations such as isolated frog heart and rectus abdominus muscle preparation of frog
		To perform bioassays
P 3.6.4	Pharmacognosy V	Student can able to isolate the chemical constituent
		Student can able to separate the chemical constituent
		By using extraction techniques extraction of drug is possible

		Analysis of extract can be carried out
P 3.6.6	Project report	Students should develop an understanding of the nature and importance of research/review project.
		Acquire knowledge & concept of project and exhibit their presentation skill.
		Student an ability to work as member of a team.
		To enhance the ability to improve student creativity skill & sharing ideas about project work.
P 4.7.1	Pharmaceutics VIII	To study the preparation and evaluation of injectable.
		Know the preparation and evaluation Ophthalmic Products.
		Understand the uses and evaluation of glass & plastic containers used for parenteral products.
		Understand the accelerated stability testing of an injection
P 4.7.2	Pharmaceutical Chemistry-VIII (PMC-III)	Explain the purification techniques of solvents/liquids by fractional distillation and distillation under vacuum.
		Outline the synthetic pathway for the medicinal compounds such as hydantoin, dichloramine-T, iso-nicotinic acid, 1,2,4-triazole, etc.
		Gain detailed knowledge about microwave synthesis of medicinal compounds such as fluorescein, ethyl benzoate & phenytoin.
		Describe the practical aspects on separation, interpretation analysis by IR and application of medicinal compounds.
P 4.7.3	Pharmacology III	Ability to study antagonism by performing tissue experiments
		Understand the biostatistics in pharmacology
		Ability to assess the case study of diseases
		Ability to perform multipoint assays
P 4.7.4	Pharmaceutical Analysis –III	Gain knowledge about Fundamentals of modern instrumental method of analysis.
		Gain knowledge about Handling and use of modern analytical instruments.
		Use of modern instruments in qualitative and quantitative analysis.
		Development of analytical skills
P 4.8.1	Pharmaceutics- IX	Know the Introduction to Targeted drug delivery systems
		Understand preparation and evaluation of nanoparticles, ocular inserts transdermal patch.
		Understand the preparation and evaluation of floating tablet, enteric and sustained release tablet
		Understand the preparation and evaluation of gels and various techniques of preparation of gels
P 4.8.2	Pharmaceutical Analysis –IV	Practical Knowledge about the interaction of matter with electromagnetic radiations and its applications in drug analysis
		Gives Knowledge about quantitative & qualitative analysis of drugs using various analytical instruments.
		Practical knowledge of chromatographic separation and analysis of drugs.
		Gives Knowledge about determination of purity levels of drugs by analytical techniques
P 4.8.3	Pharmaceutical Chemistry-IX (Medicinal Chemistry-IV)	Determination of partition coefficient, dissociation constant, molar refractivity of compound from QSAR analysis
		Students can perform systematic preparation of medicinal agents
		Students can perform synthesis of medicinal agents by using microwave

		oven synthesis.
P 4.8.4	Pharmacognosy-VI	Students can describe Isolation procedure of some phytoconstituents and analysis volatile oil.
		Students can describe Preparation of herbal skin and hair care cosmetics.
		Students can describe Standardization of herbal crude drugs & extract by physical & chemical method.
		Students can describe Preparation & Standardization of different Herbal formulation.
P 4.8.7.	Industrial Training Report	An ability to gain detailed knowledge about skills and techniques directly applicable to their career.
		Understand to assess the efficiency of the operating processes.
		To develop industrial skills on the basis of theoretical & practical knowledge
		Students will be able instilled with good moral values such as responsibility, commitment and trustworthy during their training.
BP101T	Human anatomy and physiology-I	Ability to describe the structure and function of various organs
		Ability to describe the various homeostatic mechanisms and their imbalances
		Ability to the various tissues and organs of different systems of human body.
		Ability to describe cell organelles and cell communication which is important in drug designing
BP102T	Pharmaceutical Analysis-I	Gain knowledge about Basic principles & techniques of analysis.
		Development of analytical skills
		Application of analytical methods in standardization and purity determination
		Identification & determination of sources of errors in analytical methods
BP103T	Pharmaceutics- I	Know the history of profession of pharmacy
		Understand the basics of different dosage forms
		Understand the pharmaceutical incompatibilities and pharmaceutical calculations
		Understand the professional way of handling the prescription
BP104T	Pharmaceutical Inorganic Chemistry	Understand the uses and importance of Inorganic compound.
		To know the sources of impurities and limit test.
		Understand basis knowledge of acid base concept.
		To learn and understand the radioisotopes, handling, storage and application of radiopharmaceuticals.
BP105T	Communication Skills	To understand Importance of communication
		To know style of communication
		To understand steps before going to an Interview
		To learn and understand Communication skill in a Group Discussion and Essentials of Group discussion

BP106RBT	Remedial Biology	Understand the basic component of anatomy of plant.
		Student knows the application of human anatomy in pharmacy.
		Know understand the basic components of anatomy & physiology animal with special reference to human.
		To learn and understand the components of living world, structure and functional
BP106RMT	Remedial mathematics	Know the importance of math in Pharmacy.
		Student knows the application of problems in pharmacy.
		Solve the different types of problems in applying theory.
		Student knows the accuracy about problem.
BP 201T	Human anatomy and physiology-II	Understand gross morphology, structure and functions of various organs of the human body.
		Understand and describe the various homeostatic mechanisms and their imbalances.
		Identify the various tissues and organs of different systems of human body and perform the hematological tests like blood cell counts, hemoglobin estimation, bleeding/clotting time etc.
		Understand the interlinked mechanisms in the maintenance of normal functioning (homeostasis) of human body and coordinated working pattern of different organs of each system.
BP202T	Pharmaceutical Organic Chemistry-I	An ability to gain detailed knowledge about classification, nomenclature and isomerism of organic Compounds.
		Acquire knowledge on the reaction, name of reaction and orientation of reaction.
		Describe the theoretical aspects on preparation and reaction of compounds with functional groups, such as alkanes, alkenes, conjugated dienes, alkyl halide, alcohols, carbonyl compounds, carboxylic acid, and aliphatic amines.
		Understand and to appreciate the chemistry of E1, E2, SN1 and SN2 reaction.
BP203T	Biochemistry	Provides knowledge abouttherapeutic and diagnostic applications of enzymes and isoenzymes.
		Provides knowledge about biological roles of carbohydrates, proteins, lipids, amino acids.
		Provides knowledge about mechanisms and pathways by which carbohydrates, amino acids and lipids are metabolized.
		Provides knowledge about basics of genetics and functions of DNA in the synthesis of RNAs and proteins.
BP204T	Pathophysiology	Ability to understand the etiology and pathogenesis of the selected diseases states.
		Ability to describe name sign and symptoms of diseases.

		Ability to understand complications of diseases.
		Ability to describe basic principle of cell injury and inflammation.
BP205T	Computer Applications in Pharmacy	Provides knowledge about information system and software.
		Provides knowledge about web technologies tools.
		Provides knowledge about application of computers in pharmacy.
		Provides knowledge about Bioinformatics.
BP206T	Environmental Sciences	Motivate students to participate in environment protection and environment improvement.
		Acquire skills to help the concerned individuals in identifying and solving environmental problems.
		An ability to gain detailed knowledge about awareness about environmental problem.
		Acquire the knowledge &develop an attitude of concern for the environment.
BP301T	Pharmaceutical Organic Chemistry II	To understand the concept general methods of preparation and reactions of some organic compounds.
		Emphasizes on mechanisms and orientation of reactions
		To understand the concept of Reactivity of organic compounds
		To understand the concept of Chemistry of fats and oils
BP302T	Physical pharmaceutics-I	Understand various physicochemical properties of drug molecules in the designing the dosage forms
		Know the principles of chemical kinetics & to use them for stability testing and determination of expiry date of formulations
		Demonstrate use of physicochemical properties in the formulation development and evaluation of dosage forms.
		Surface and interfacial phenomenon help to develop new formulation.
BP303T	Pharmaceutical Microbiology	Explain anatomy and microscopic structure of microbes(Bacteria , Virus , Fungi)
		Applying staining culture, nutritional, physiological, biochemical, cultivation characteristic for classification
		Applying the knowledge of microscope like dark field, bright field, phase contrast & electron
		Explain use of physical and chemical method of microbial control life
BP 304T	Pharmaceutical Engineering	To know various unit operations used in Pharmaceutical industries.
		To understand the material handling techniques.

		To perform various processes involved in pharmaceutical manufacturing process.
		To appreciate the various preventive methods used for corrosion control in Pharmaceutical industries.
BP305P	Pharmaceutical Organic Chemistry-II	Student perform experiments involving laboratory techniques Recrystallization and steam distillation
		Students can perform systematic preparation of organic compound
		Determination of following oil values (including standardization of reagents) i.e Acid, Saponification, Iodine value
		Quantitative analysis of unknown organic compound
BP306P	Physical Pharmaceutics I	Understand various physicochemical properties of drug molecules in the designing the dosage forms
		Know the principles of chemical kinetics & to use them for stability testing and determination of expiry date of formulations
		Demonstrate use of physicochemical properties in the formulation development and evaluation of dosage forms.
		Surface and interfacial phenomenon help to develop new formulation.
BP307P	Pharmaceutical Microbiology	Applying staining to identify anatomy microscopic , physiological, biochemical, cultivation characteristic for classification bacteria,&fungi
		Explain the use of apparatus
		Can implement the use of sterility test of pharmaceutical product
		Able to standardized the pharmaceuticals by microbiologically &also analysed the water
BP308P	Pharmaceutical Engineering	To understand various techniques and procedure utilised in Pharmaceutical industry.
		Utilization and applications of various theories and principal in Instrumentation
		Understand how different factors affect the different processes.
		To appreciate and comprehend significance of plant lay out design for optimum use of resources.
BP406P	Medicinal Chemistry I	Students can understand Purification techniques of solvents/liquids.
		Students can perform assay by using different drug sample
		Students can perform systematic preparation of medicinal agents
		Students can perform determination of partition coefficient of drug sample
BP407P	Physical Pharmaceutics II	Understands the methods of determinations of particle size using different techniques
		Determination of physicochemical properties.

		Understand the viscosity determination methods
		Understand accelerated stability testing
BP408P	Pharmacology I	Understood instrument used in experimental lab
		Knowledge about the commonly used animal in experimental lab& its maintenance as per CPCSEA guideline
		Apply the knowledge of common laboratory techniques.
		Apply the knowledge of effect of drug on animal
BP409 P	Pharmacognosy and Phytochemistry I	To know the techniques in quantitative microcopy.
		To know chemical nature of crude drugs.
		To know the evaluation techniques for the herbal drugs
		To carry out the microscopic and morphological evaluation of crude drugs

PCI Syllabus for F. Y. B. Pharm from 2017-18

3.1.2 CO-PO matrices of courses selected in 3.1.1 (four matrices to be mentioned; oneper semester from 1st to 8th semester; at least one per year) 05

The POs are assigned to each course outcomes, for each course (subject) in each year.The POs matrixing with the course outcomes are made by the individual teacher afterthoroughly understanding the program outcomes. These are reviewed three to four times.Each PO was given the high (3), moderate (2) and slight (1) attainment levels. These areassigned based on the feasibility of assessment and their content in the context of the coursedetails. Such course outcomes are made average on the scale of high (3) for each PO andfurther averaged for consolidated course outcomes. These are documented below for B.Pharmacy first year, and first semester in each subsequent year. These are detailed in theMatrixing of the CO-POs. The following table contains observations.

Course code	Course name	Course outcomes **(max 3.00)**	Program outcomes										
			1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
T.1.1.1	Pharmaceutics -I(Dispensing Pharmacy)	CO1	2	-	-	1	-	1	-	-	-	-	1
		CO2	3	-	-	2	-	1	-	2	2		2
		CO3	3	-	-	3	-	2	-	2	3	-	2
		CO4	3	-	-	1	-	2	-	2	2	-	3
		Average = **2.05**	**2.75**	**-**	**-**	**1.75**	**-**	**1.50**	**-**	**2**	**2.33**	**-**	**2**
T.1.1.2	Pharmacognosy-I	CO1	3	---	--	--	--	--	2	--	2	2	2
		CO2	3	--	--	2	--	--	2	--	2	2	2
		CO3	3	2	--	--	--	--	2	--	2	2	2
		CO4	3	1	--	2	--	--	2	--	2	2	2
		Average	**3**	**1.50**	**-**	**2**	**-**	**-**	**2**	**-**	**2**	**2**	**2**

		= **2.07**											
T.1.1.3	Pharmaceutical Chemistry-I (Inorganic Pharmaceutical Chemistry)	CO1	3	-	3	-	-	-	-	-	3	3	3
		CO2	3	-	2	-	-	-	-	-	2	2	2
		CO3	3	-	3	-	-	-	-	-	2	3	3
		CO4	3	-	3	-	-	-	-	-	2	2	3
		Average = **2.65**	**3**	**-**	**2.75**	**-**	**-**	**-**	**-**	**-**	**2.25**	**2.50**	**2.75**
T.1.1.4	Applied Biostatistics & Computer Applications in Pharmacy	CO1	2	-	1	3		2				2	3
		CO2	2	-	1	3		2				2	3
		CO3	1	-	1	3		2				2	3
		CO4	1	-	1	3		2				2	3
		Average = **2.08**	**1.50**	**-**	**1**	**3**	**-**	**2**	**-**	**-**	**-**	**2**	**3**
T.1.1.5	Communicating skills & soft Skills development	CO1	-	2	3	3	3	3	-	3	-	-	3
		CO2	-	3	2	3	2	3	-	3	-	-	3
		CO3	-	2	2	2	3	2	-	2	-	-	3
		CO4	-	2	2	2	2	2	-	2	-	-	3
		Average = **2.3**	**-**	**2.25**	**2.25**	**2.25**	**2.25**	**2**	**-**	**2.25**	**-**	**-**	**3**
T.1.2.1	Pharmaceutics -II(Unit Operations)	CO1	1	-	-	1	-	1	-	-	1	-	3
		CO2	3	-	-	2	-	1	-	2	1	-	3
		CO3	1	-	-	2	-	1	-	2	1	-	3
		CO4	3	-	-	1	-	1	-	2	1	-	3
		Average = **1.66**	**2**	**-**	**-**	**1.5**	**-**	**1**	**-**	**1.5**	**1**	**-**	**3**
T.1.2.2	Pharmaceutical Chemistry – II (Inorganic &Physical Chemistry)	CO1	3	-	3	-	-	-	-	-	3	3	3
		CO2	3	-	2	-	-	-	-	-	2	2	3
		CO3	3	-	3	-	-	-	-	-	3	3	3
		CO4	3	-	3	-	-	-	-	-	3	3	3
		Average = **2.85**	**3**	**-**	**2.75**	**-**	**-**	**-**	**-**	**-**	**2.75**	**2.75**	**3**
T.1.2.3	Pharmaceutical Chemistry-III (Organic Chemistry-I)	CO1	2	-	-	2	-	-	-	-	1.5	-	2
		CO2	2	-	-	2	-	-	-	-	1.5	-	2
		CO3	2	-	-	2	-	-	-	-	1.5	-	2
		CO4	2	-	-	2	-	-	-	-	1.5	-	2
		Average = **1.88**	**2**	**-**	**--**	**2**	**-**	**-**	**-**	**-**	**1.5**	**-**	**2**
T.1.2.4	Anatomy, Physiology & Health Education (APHE) – I	CO1	2	-	-	-	-	3	3	2	2	-	2
		CO2	2	-	-	-	-	2	2	2	2		2
		CO3	2	-	-	-	-	2	2	2	2	-	2
		CO4	2	-	-	-	-	2	2	2	2	-	3
		Average = **2.13**	**2**	**-**	**-**	**-**	**-**	**2.25**	**2.25**	**2**	**2**	**-**	**2.25**

T.1.2.5	Industrial Psychology	CO1	-	-	-	-	2	1	3	-	-	-	3
		CO2	-	3	-	-	3	1	3	-	-	-	3
		CO3	-	1	-	-	-	-	-	-	-	-	3
		CO4	-	-	-	-	1	1	3	-	-	2	3
		Average = **2.17**	**-**	**2**	**-**	**-**	**2**	**1**	**3**	**-**	**-**	**2**	**3**
5555	Environmental Science	CO1	-	3	3	-	3	-	-	-	-	3	3
		CO2	-	3	3	-	3	-	-	-	-	3	3
		CO3	-	3	3	-	3	-	-	-	-	3	3
		CO4	-	2	2	-	3	-	-	-	-	3	3
		Average = **2.90**	**-**	**2.75**	**2.75**	**-**	**3**	**-**	**-**	**-**	**-**	**3**	**3**
T 2.3.1	Pharmaceutics III	CO1	3	-	2	2	-	-	-	1	-	1	2
		CO2	3	-	2	2	-	-	-	1	-	2	3
		CO3	3	-	3	2	-	-	-	1	-	1	3
		CO4	3	-	2	3	-	-	-	-	-	1	2
		Average = **2.04**	**3**	**-**	**2.25**	**2.25**	**-**	**-**	**-**	**1**	**-**	**1.25**	**2.50**
T 2.3.2	Pharmaceutical Chemistry-IV (Organic Chemistry-II)	CO1	2	-	-	1	-	1	-	-	1	-	2
		CO2	2	-	-	1	-	2	-	-	1	-	2
		CO3	2	-	-	2	-	1	-	-	2	-	2
		CO4	2	-	-	2	-	2	-	-	2	-	2
		Average = **1.70**	**2**	**-**	**-**	**1.50**	**-**	**1.50**	**-**	**-**	**1.50**	**-**	**2**
T 2.3.3	Pharmacognosy II	CO1	3	-	1	-	-	-	1	1	2	-	3
		CO2	2	-	2	-	-	-	2	2	1	-	1
		CO3	2	-	3	-	-	-	1	3	1	-	1
		CO4	1	-	1	-	-	-	3	3	3	-	1
		Average = **1.83**	**2**	**-**	**1.75**	**-**	**-**	**-**	**1.75**	**2.25**	**1.75**	**-**	**1.50**
T 2.3.4	Pharmaceutical Analysis-I	CO1	2	-	-	-	-	-	-	-	-		3
		CO2	2	2	3	-	-	-	-	-	-	-	3
		CO3	2	2	3	3	-	-	1	-	2	-	3
		CO4	2	2	3	3	-	-	1	-	2	-	3
		Average = **2.28**	2	2	3	3	-	-	1	-	2	-	3
T 2.3.5	Anatomy physiology and health education-II	CO1	1	-	-	-	1	-	-	-	1	2	3
		CO2	1	-	-	-	2	-	-	-	1	2	3
		CO3	1	-	-	2	2	-	-	-	1	2	2
		CO4	1	-	-	2	1	-	-	-	1	2	3
		Average = **1.70**	**1**	**-**	**-**	**2**	**1.50**	**-**	**-**	**-**	**1**	**2**	**2.75**
	Pathophysiolo	CO1	3	-	2	3	-	1	-	2	1	-	2
		CO2	3	-	1	2	-	1	-	1	2	-	2
		CO3	3	-	2	2	-	1	-	2	1	-	3

T 2.3.6	gy of Common Diseases-I	CO4	3	-	3	3	-	1	-	-	1	-	3
		Average = **1.98**	**3**	**-**	**2**	**2.50**	**-**	**1**	**-**	**1.66**	**1.25**	**-**	**2.50**
T 2.4.1	Pharmaceutics IV	CO1	3	-	-	3	-	-	-	-	-	3	3
		CO2	2	-	-	1	-	-	-	-	-	1	2
		CO3	1	-	-	2	-		-	-	-	3	1
		CO4	3	-	-	3	-		-	-	-	2	3
		Average = **2.25**	**2.25**	**-**	**--**	**2.25**	**-**	**-**	**-**	**-**	**-**	**2.25**	**2.25**
T 2.4.2	Pharmaceutical Microbiology	CO1	3	-	-	2	-	-	-	-	1	1	3
		CO2	2	-	-	2	-	-	-	-	2	2	3
		CO3	3	-	-	2	-	-	-	-	2	2	3
		CO4	3	-	-	2	-	-	-	-	2	2	3
		Average = **2.25**	**2.75**	**-**	**-**	**2**	**-**	**-**	**-**	**-**	**1.75**	**1.75**	**3**
T 2.4.3	Pharmacognosy-III	CO1	3	---	---	2	--	--	1	--	2	2	2
		CO2	3	--	--	2	--	--	2	--	2	1	2
		CO3	3	--	--	2	--	--	2	--	2	--	--
		CO4	3	--	--	2	--	--	2	--	2	--	2
		CO5	3	--	--	2	--	--	2	--	2	--	2
		Average = **2.05**	**3**	**-**	**--**	**2**	**-**	**-**	**1.80**	**-**	**2**	**1.5**	**2**
T 2.4.4	Pharmaceutics -V	CO1	3	-	-	-	-	1	1	2	2	-	2
		CO2	3	-	-	-	-	1	1	2	2		2
		CO3	3	-	-	-	-	2	2	2	2	-	2
		CO4	3	-	-	-	-	1	1	2	2	-	2
		Average = **1.91**	**3**	**-**	**-**	**-**	**-**	**1.25**	**1.25**	**2**	**2**	**-**	**2**
T 2.4.5	Pharmaceutical Chemistry-V	CO1	3	-	-	-	-		-	-	-	-	3
		CO2	3	2	2	-	-	2	-	-	2	-	3
		CO3	3	-	-	-	-		-	-	-	-	3
		CO4	3	-	-	2	-	-	-	-	-	-	3
		Average = **2.28**	**3**	**2**	**2**	**2**	**-**	**2**	**-**	**-**	**2**	**-**	**3**
T 2.4.6	Pathophysiology-II	CO1	3	---	---	2	--	--	1	--	2	--	--
		CO2	3	--	--	2	--	--	1	--	2	--	--
		CO3	3	--	--	2	--	--	2	--	2	--	--
		CO4	3	--	--	2	--	--	2	--	2	--	--
		Average = **2.13**	**3**	**-**	**--**	**2**	**-**	**-**	**1.5**	**-**	**2**	**-**	**-**
T 3.5.1	Pharmaceutical Chemistry-VI (Medicinal Chemistry-I)	CO1	3	-	-	3	-	3	-	-	3	-	2
		CO2	3	-	-	3	-	3	-	-	2	-	2
		CO3	3	-	-	3	-	3	-	-	2	-	2
		CO4	3	-	-	3	-	3	-	-	3	-	2
		Average	**3**	**-**	**-**	**3**	**-**	**3**	**-**	**-**	**2.5**	**-**	**2**

		= **2.70**											
T 3.5.2	Pharmaceutics - V	CO1	1	-	-	1	-	1	-	-	-	-	1
		CO2	3	-	-	2	-	1	-	2	2	-	2
		CO3	1	-	-	2	-	2	-	2	3	-	2
		CO4	3	-	-	1	-	2	-	2	2	-	3
		Average = **1.88**	**2**	**-**	**-**	**1.50**	**-**	**1.50**	**-**	**2**	**2.33**	**-**	**2**
T 3.5.3	Pharmacology I	CO1	3	---	1	1	--	--	1	--	--	--	--
		CO2	3	--	2	1	--	--	1	--	--	--	--
		CO3	3	--	2	1	--	--	1	--	--	--	--
		CO4	2	--	1	1	--	--	1	--	--	--	--
		Average = **1.5**	**2.75**	**-**	**1.5**	**1**	**-**	**-**	**1**	**-**	**-**	**-**	**-**
T 3.5.4	Pharmacognosy IV	CO1	3	-	-	1	-	-	-	-	-	-	
		CO2	3	-	-	2	-	-	-	-	-	-	
		CO3	3	-	-	3	-	-	-	-	-	-	
		CO4	3	-	-	3	-	-	-	-	-	-	
		Average = **2.33**	**3**	**-**	**-**	**2.25**	**-**	**-**	**-**	**-**	**-**	**-**	
T 3.5.5	Pharmaceutical Analysis-II	CO1	2	-	3	3	-	-	-	-	1	1	
		CO2	3	-	3	3	-	-	-	-	2	2	
		CO3	3	-	3	3	-	-	-	-	2	2	
		CO4	2	-	2	2	-	-	-	-	1	1	
		Average = **2.20**	**2.50**	**-**	**2.75**	**2.75**	**-**	**-**	**-**	**-**	**1.50**	**1.50**	
T 3.6.1	Pharmaceutical Chemistry-VII (Medicinal Chemistry-II)	CO1	2	-	-	2	-	2	-	-	1	-	2
		CO2	2	-	-	2	-	2	-	-	2	-	2
		CO3	2	-	-	2	-	2	-	-	2	-	2
		CO4	2	-	-	2	-	2	-	-	3	-	2
		Average = **2**	**2**	**-**	**-**	**2**	**-**	**2**	**-**	**-**	**2**	**-**	**2**
T. 3.6.2	Pharmaceutics - VII	CO1	3	-	-	1	-	1	-	2	1	-	2
		CO2	3	-	-	3	-	1	-	2	1	-	2
		CO3	3	-	-	3	-	1	-	2	1	-	2
		CO4	3	-	-	3	-	1	-	2	1	-	2
		Average = **1.92**	**3**	**-**	**-**	**2.5**	**-**	**1**	**-**	**2**	**1**	**-**	**2**
T.3.6.3	Pharmacology II	CO1	3	---	1	1	--	--	1	--	--	--	--
		CO2	4	--	1	1	--	--	1	--	--	--	--
		CO3	3	--	1	1	--	--	1	--	--	--	--
		CO4	2	--	1	1	--	--	1	--	--	--	--

		Average = **1.50**	**3**	**-**	**1**	**1**	**-**	**-**	**1**	**-**	**-**	**-**	**-**
T 3.6.4	Pharmacognosy V	CO1	3	-	-	1	-	-	-	-	-	-	1
		CO2	3	-	-	2	-	-	-	-	-	-	2
		CO3	3	-	-	3	-		-	-	-	-	2
		CO4	3	-	-	3	-		-	-	-	-	2
		Average = **2.33**	**3**	**-**	**-**	**2.25**	**-**	**-**	**-**	**-**	**-**	**-**	**1.75**
T .3.6.5	Pharmaceutical Jurisprudence & Ethics	CO1	3	2	-	-	3	2	3	-	2	-	3
		CO2	3	2	-	-	2	2	2	2	2	-	3
		CO3	3	1	-	-	3	2	1	2	2	-	3
		CO4	3		-	-	2	2	3	2	2	-	3
		CO5	3	2	-	-	2	2	1	2	2	-	3
		CO6	3	2	-	-	2	1	1	2	2	-	3
		Average = **2.21**	**3**	**1.8**	**-**	**-**	**2.3**	**1.8**	**1.8**	**2**	**2**	**-**	**3**
T 4.7.1	Pharmaceutics VIII	CO1	3	-	2	3	-	-	3	-	-	-	3
		CO2	3	-	2	3	-	-	2	-	-	-	3
		CO3	3	-	3	3	-	-	2	-	-	-	3
		CO4	3	-	3	3	-	-	2	-	-	-	3
		Average = **2.75**	**3**	**-**	**2.50**	**3**	**-**	**-**	**2.25**	**-**	**-**	**-**	**3**
T 4.7.2	Pharmaceutical Chemistry-VIII (PMC-III)	CO1	2	-	2	-	-	-	-	-	1	-	2
		CO2	2	-	2	-	-	-	-	-	2	-	1
		CO3	2	-	3	-	-	-	-	-	3	-	3
		CO4	2	-	2	-	-	-	-	-	3	-	2
		Average = **2.1**	**2**	**-**	**2.25**	**-**	**-**	**-**	**-**	**-**	**2.25**	**-**	**2**
T 4.7.3	Pharmacology III	CO1	2	---	2	1	--	--	1	--	--	--	--
		CO2	3	--	1	2	--	--	2	--	--	--	--
		CO3	3	--	2	1	--	--	1	--	--	--	--
		CO4	2	--	1	2	--	--	1	--	--	--	--
		Average = **1.75**	**2.50**	**-**	**1.5**	**1.5**	**-**	**-**	**1.5**	**-**	**-**	**-**	
T 4.7.4	Pharmaceutical Analysis –III	CO1	3	-	3	2	-	-	-	-	-	-	2
		CO2	2	-	2	2	-	-	-	-	-	-	2
		CO3	3	-	3	2	-	-	-	-	-	-	2
		CO4	2	-	2	2	-	-	-	-	-	-	2
		Average = **2.2**	**2.5**	**-**	**2.5**	**2**	**-**	**-**	**-**	**-**	**-**	**-**	**2**
T 4.7.5	Pharmaceutical Biotechnology	CO1	3	-	1	-	-	-	1	-	3	-	3
		CO2	3	-	2	-	-	-	2	-	3	-	2
		CO3	2	-	2	-	-	-	2	-	1	-	1
		CO4	2	-	3	-	-	-	2	-	1	-	1
		Average = **2.00**	**2.50**	**-**	**2**	**-**	**-**	**-**	**1.75**	**-**	**2**	**-**	**1.75**
		CO1	3	3	2	-	3	2	3	2	-	2	3
		CO2	2	2	1	-	1	2	2	-	-	1	2
		CO3	2	1	-	-	3	1	2	2	-	1	2

T 4.7.6	Industrial Management	CO4	2	1	3	-	1	1	2	2	-	1	2
		CO5	2	1	-	-	1	1	2	-	-	1	2
		Average = **1.84**	**2.20**	**1.60**	**2**	**-**	**1.80**	**1.40**	**2.20**	**2**	**-**	**1.20**	**2.20**
T 4.8.1	Pharmaceutics - IX	CO1	3	-	-	-	-	3	-	2	1	-	3
		CO2	3	-	-	2	-	1	-	2	2		3
		CO3	3	-	-	2	-	1	-	2	1	-	3
		CO4	3	-	-	2	-	1	-	2	2	-	3
		Average **= 2.16**	**3**	**-**	**-**	**2**	**-**	**1.5**	**-**	**2**	**1.5**	**-**	**3**
T - 4.8.2	Pharmaceutical Analysis –IV	CO1	3	-	2	3	-	-	-	-	1	-	3
		CO2	3	-	2	3	-	-	-	-	1	-	3
		CO3	3	-	2	3	-	-	-	-	1	-	3
		CO4	3	-	2	3	-	-	-	-	1	-	3
		Average = **2.40**	**3**	**-**	**2**	**3**	**-**	**-**	**-**	**-**	**1**	**-**	**3**
T 4.8.3	Pharmaceutical Chemistry-IX (Medicinal Chemistry-IV)	CO1	2	-	-	2	-	3	-	-	2	-	1
		CO2	3	-	-	2	-	3	-	-	1	-	3
		CO3	2	-	-	3	-	2	-	-	2	-	2
		CO4	1	-	-	3	-	2	-	-	3	-	2
		Average = **2.1**	**2**	**-**	**-**	**2.25**	**-**	**2.25**	**-**	**-**	**2**	**-**	**2**
T-4.8.4	Pharmacognosy-VI	CO1	3	---	---	1	--	--	1	--	3	2	3
		CO2	3	--	--	2	--	--	2	--	2	2	2
		CO3	3	--	--	2	--	--	2	--	2	2	2
		CO4	3	--	--	3	--	--	3	--	2	2	2
		Average = **2.25**	**3**	**-**	**--**	**2**	**-**	**-**	**2**	**-**	**2.25**	**2**	**2.25**
T-4.8.5	Pharmacology IV(Clinical Pharmacy and Drug Interactions)	CO1	3	---	2	2	--	--	1	--	--	--	--
		CO2	4	--	2	2	--	--	1	--	--	--	--
		CO3	3	--	2	2	--	--	1	--	--	--	--
		CO4	2	--	2	2	--	--	1	--	--	--	--
		Average = **2**	**3**	**-**	**2**	**2**	**-**	**-**	**1**	**-**	**-**	**-**	**-**
T 4.8.6.3	Quality Assurance	CO1	3	-	2	-	-	-	-	-	-	-	3
		CO2	3	-	-	-	-	-	-	2	-	-	3
		CO3	3	2	2	-	-	-	-	2	-	-	3
		CO4	3	-	2	-	-	-	2	-	-	-	3
		Average = **2.33**	**3**	**2**	**2**	**-**	**-**	**-**	**2**	**2**	**-**	**-**	**3**
P.1.1.1	Pharmaceutics -I(Dispensing Pharmacy)	CO1	2	-	-	3	-	3	-	2	2	-	1
		CO2	2	-	-	2	-	3	-	3	3	-	2
		CO3	2	-	-	2	-	2	-	3	3	-	2
		CO4	2	-	-	3	-	2	-	2	2	-	3
		Average = **2.4**	**2**	**-**	**--**	**2.5**	**-**	**2.5**	**-**	**2.5**	**2.5**	**-**	**2.5**
P.1.1.2	Pharmacognosy-I	CO1	3	---	--	--	--	--	2	--	--	2	2
		CO2	3	--	--	3	--	--	2	--	--	2	2
		CO3	3	--	--	3	--	--	2	--	--	2	2
		CO4	3	--	--	3	--	--	2	--	--	2	2

		Average = **2.40**	**3**	**-**	**-**	**3**	**-**	**-**	**2**	**-**	**-**	**2**	**2**
P.1.1.3	Pharmaceutical Chemistry-I (Inorganic Pharmaceutical Chemistry)	CO1	3	-	3	-	-	-	-	-	3	1	3
		CO2	3	-	3	-	-	-	-	-	3	3	3
		CO3	3	-	3	-	-	-	-	-	3	3	3
		CO4	3	-	3	-	-	-	-	-	2	2	3
		Average = **2.80**	**3**	**-**	**3**	**-**	**-**	**-**	**-**	**--**	**2.75**	**2.25**	**3**
P.1.1.4	Applied Biostatistics & Computer Applications in Pharmacy	CO1	3	3	-	3	-	2	-	-	-	2	3
		CO2	3	3	-	3	-	2	-	-	-	2	3
		CO3	3	3	-	3	-	2	-	-	-	2	3
		CO4		3	-	3	-	2	-	-	-	2	3
		Average = **2.68**	**3**	**3**	**--**	**3**	**-**	**2**	**-**	**-**	**-**	**2**	**3**
P.1.2.1	Pharmaceutics -II(Unit Operations)	CO1	3	-	-	3	-	3	-	3	2	-	3
		CO2	3	-	-	3	-	3	-	2	2	-	3
		CO3	3	-	-	3	-	3	-	2	2	-	3
		CO4	3	-	-	3	-	3	-	3	2	-	3
		Average = **2.75**	**3**	**-**	**-**	**3**	**-**	**3**	**-**	**2.5**	**2**	**-**	**3**
P.1.2.2	Pharmaceutical Chemistry – II (Inorganic &Physical Chemistry)	CO1	3	-	3	-	-	-	-	-	3	3	3
		CO2	3	-	3	-	-	-	-	-	2	2	2
		CO3	3	-	3	-	-	-	-	-	2	2	2
		CO4	3	-	3	-	-	-	-	-	2	2	3
		Average = **2.6**	**3**	**-**	**3**	**-**	**-**	**-**	**-**	**--**	**2.25**	**2.25**	**2.50**
P.1.2.3	Pharmaceutical Chemistry-III(Organic Chemistry-I)	CO1	3	-	3	3	-	-	-	-	3	-	3
		CO2	3	-	3	3	-	-	-	-	3	-	2
		CO3	3	-	3	3	-	-	-	-	2	-	3
		CO4	2	-	1	2	-	-	-	-	1	-	1
		Average = **2.50**	**2.75**	**-**	**2.50**	**2.75**	**-**	**-**	**-**	**-**	**2.25**	**-**	**2.25**
P.1.2.4	Anatomy, Physiology & Health Education (APHE) – I	CO1	3	3	3	3	2	3	2	3	3	--	--
		CO2	3	2	2	3	1	2	2	2	3	--	--
		CO3	3	2	2	3	2	2	2	2	3	--	--
		CO4	3	3	3	3	1	3	2	3	3	-	-
		Average = **2.47**	**3**	**2.50**	**2.50**	**3**	**1.5**	**2.50**	**2**	**2.50**	**3**	**-**	**-**
P. 2.3.1	Pharmaceutics III)	CO1	3	-	2	2	-	-	-	1	-	1	2
		CO2	3	-	2	2	-	-	-	1	-	2	3
		CO3	3	-	1	2	-	-	-	1	-	1	3
		CO4	3	-	3	3	-	-	-	-	-	1	2
		Average = **2**	**3**	**-**	**2**	**2.25**	**-**	**-**	**-**	**1**	**-**	**1.25**	**2.50**
P.2.3.2	Pharmaceutical Chemistry-IV (Organic Chemistry-II)	CO1	3	-	-	3	-	3	-	-	3	-	3
		CO2	3	-	-	3	-	3	-	-	3	-	3
		CO3	3	-	-	3	-	3	-	-	3	-	3
		CO4	3	-	-	3	-	3	-	-	3	-	3
		Average	**3**	**-**	**-**	**3**	**-**	**3**	**-**	**-**	**3**	**-**	**3**

		= **3**											
P.2.3.3	Pharmacognosy II	CO1	3	-	3	-	-	-	3	3	3	-	3
		CO2	3	-	3	-	-	-	3	2	1	-	3
		CO3	3	-	3	-	-	-	3	2	3	-	3
		CO4	3	-	3	-	-	-	3	3	3	-	3
		CO5	3	-	3	-	-	-	3	3	2	-	3
		Average = **3**	**3**	**-**	**3**	**-**	**-**	**-**	**3**	**3**	**3**	**-**	**3**
P.2.3.4	Pharmaceutical Analysis-I	CO1	3	-	-	-	-	-	-	-		-	3
		CO2	3	-	-	-	-	-	-	-		-	3
		CO3	3	3	3	3	-	-	1	-	2	-	3
		CO4	3	2	3	3	-	-	1	-	2	-	3
		Average = **2.50**	**3**	**2.50**	**3**	**3**	**-**	**-**	**1**	**-**	**2**	**-**	**3**
P.2.3.5	Anatomy physiology and health education-II	CO1	1	-	-	-	2	-	-	-	1	2	1
		CO2	1	-	-	1	2	-	-	-	-	2	-
		CO3	1	-	-	1	2	-	-	-	2	2	1
		CO4	1	-	-		2	-	-	-	2		1
		Average = **2.41**	**2.5**	**-**	**-**	**2.5**	**2.5**	**-**	**-**	**-**	**2.5**	**2**	**2.5**
P.2.4.1	Pharmaceutics IV	CO1	3	-	3	3	-	-	-	1	-	2	3
		CO2	3	1	3	3	-	-	-	1	-	2	3
		CO3	3	1	3	3	-	-	-	1	-	2	3
		CO4	3	1	3	3	-	-	-	1	-	2	3
		Average = **2.25**	**3**	**0.75**	**3**	**3**	**-**	**-**	**-**	**1**	**-**	**2**	**3**
P.2.4.2	Pharmaceutical Microbiology	CO1	3	-	1	1	-	-	-	-	3	2	3
		CO2	3	-	2	3	-	-	-	-	3	2	3
		CO3	3	-	2	3	-	-	-	-	3	2	3
		CO4	3	-	2	3	-	-	-	-	3	2	3
		Average = **2.54**	3	-	1.75	2.50	-	-	-	--	3	2	3
P.2.4.3	Pharmacognosy-III	CO1	3	---	---	3	--	--	3	--	3	3	3
		CO2	3	--	--	3	--	--	3	--	--	3	3
		CO3	3	--	--	3	--	--	3	--	3	--	3
		CO4	3	--	--	3	--	--	3	--	3	--	3
		Average = **3**	3	-	--	3	-	-	3	-	3	3	3
P.2.4.4	Pharmaceutics -V	CO1	3	-	-	-	-	3	3	3	3	-	3
		CO2	3	-	-	-	-	3	3	3	3	-	3
		CO3	3	-	-	-	-	3	3	3	3	-	3
		CO4	3	-	-	-	-	3	3	3	3	-	3
		Average = **3**	3	-	-	-	-	3	3	3	3	-	3
P.2.4.5	Pharmaceutical Chemistry-V	CO1	3	-	-	2	-	-	-	-	-	-	3
		CO2	3	-	-	2	-	-	-	-	-	-	3
		CO3	3	-	2	-	-	-	-	-	1	-	3
		CO4	3	-	2	-	-	-	-	-	1	-	3
		Average = **2.2**	3	-	2	2	-	-	-	-	1	-	3

P.3.5.1	Pharmaceutical Chemistry-VI (Medicinal Chemistry-I)	CO1	3	-	-	3	-	3	-	-	3	-	3
		CO2	3	-	-	3	-	3	-	-	3	-	3
		CO3	3	-	-	3	-	3	-	-	3	-	3
		CO4	3	-	-	3	-	3	-	-	3	-	3
		Average = **3**	**3**	**-**	**-**	**3**	**-**	**3**	**-**	**-**	**3**	**-**	**3**
P 3.5.2	Pharmaceutics - V	CO1	3	-	-	3	-	3	-	3	-	-	3
		CO2	3	-	-	2	-	3	-	3	2	-	3
		CO3	3	-	-	3	-	2	-	3	3	-	3
		CO4	3	-	-	3	-	3	-	3	2	-	3
		Average = **2.90**	**3**	**-**	**-**	**2.75**	**-**	**2.75**	**-**	**3**	**3**	**-**	**3**
P 3.5.3	Pharmacology I	CO1	3	---	2	2	--	--	2	--	--	--	--
		CO2	3	--	2	2	--	--	2	--	--	--	--
		CO3	3	--	2	2	--	--	2	--	--	--	--
		CO4	3	--	2	2	--	--	2	--	--	--	--
		Average = **2.25**	**3**	**-**	**2**	**2**	**-**	**-**	**2**	**-**	**-**	**-**	**-**
P 3.5.4	Pharmacognosy IV	CO1	3	-	-	1	-	-	-	-	-	-	2
		CO2	3	-	-	2	-	-	-	-	-	-	2
		CO3	3	-	-	3	-	-	-	-	-	-	2
		CO4	3	-	-	3	-		-	-	-	-	2
		Average = **2.41**	**3**	**-**	**-**	**2.25**	**-**	**-**	**-**	**-**	**-**	**-**	2
P.3.5.5	Pharmaceutical Analysis-II	CO1	3	-	3	3	-	-	-	-	3	-	-
		CO2	3	-	3	3	-	-	-	-	3	-	-
		CO3	3	-	3	3	-	-	-	-	2	-	-
		CO4	2	-	2	2	-	-	-	-	1	-	-
		Average = **2.62**	**2.75**	**-**	**2.75**	**2.75**	**--**	**-**	**-**	**-**	**2.25**	**-**	**-**
P.3.6.1	Pharmaceutical Chemistry-VII (Medicinal Chemistry-II)	CO1	3	-	-	3	-	3	-	-	2	-	2
		CO2	3	-	-	3	-	3	-	-	2	-	2
		CO3	3	-	-	3	-	3	-	-	2	-	2
		CO4	3	-	-	3	-	3	-	-	2	-	2
		Average = **2.6**	3	-	-	3		3	-	-	2	-	2
P .3.6.2	Pharmaceutics - VII	CO1	3	-	-	1	-	3	-	2	3	-	3
		CO2	3	-	-	3	-	3	-	2	3	-	3
		CO3	3	-	-	3	-	3	-	2	3	-	3
		CO4	3	-	-	3	-	3	-	2	3	-	3
		Average = **2.75**	**3**	**---**	**-**	**2.50**	**--**	**3**	**-**	**2**	**3**	**-**	**3**
P.3.6.3	Pharmacology II	CO1	3	---	3	2	--	--	2	--	--	--	--
		CO2	3	--	3	2	--	--	2	--	--	--	--
		CO3	3	--	3	2	--	--	2	--	--	--	--
		CO4	3	--	3	2	--	--	2	--	--	--	--
		Average = **2.50**	**3**	**-**	**3**	**2**	**-**	**-**	**2**	**-**	**-**	**-**	**-**
		CO1	3	-	-	1	-	-	-	-	-	-	2
		CO2	3	-	-	2	-	-	-	-	-	-	2

P 3.6.4	Pharmacognosy V	CO3	3	-	-	3	-		-	-	-	-	2
		CO4	3	-	-	3	-		-	-	-	-	2
		Average = **2.41**	3	-	-	2.25	-	-	-	-	-	-	2
P.3.6.6	Project report	CO1	3	3	3	3	-	-	3	-	3	-	3
		CO2	3	3	3	3	-	-	3	-	3	-	3
		CO3	3	2	2	2	-	-	2	-	2	-	3
		CO4	3	3	3	3	-	-	3	-	3	-	3
		Average = **2.82**	**3**	**2.75**	**2.75**	**2.75**	**-**	**-**	**2.75**	**-**	**2.75**	**-**	**3**
P.4.7.1	Pharmaceutics - VIII	CO1	3	-	3	3	-	-	3		-	-	3
		CO2	3	-	2	3	-	-	3	-	-	-	3
		CO3	3	-	3	3	-	-	3	-	-	-	3
		CO4	3	-	3	3	-	-	3	-	-	-	3
		Average = **3**	**3**	**-**	**3**	**3**	**-**	**-**	**3**	**-**	**-**	**-**	**3**
P.4.7.2	Pharmaceutical Chemistry-VIII (PMC-III)	CO1	2	-	-	2	-	-	-	-	2	-	2
		CO2	3	-	-	2	-	-	-	-	3	-	2
		CO3	3	-	-	3	-	-	-	-	3	-	3
		CO4	2	-	-	3	-	-	-	-	2	-	3
		Average = **2.5**	**2.50**	**-**	**-**	**2.50**	**-**	**-**	**-**	**-**	**2.5**	**-**	**2.50**
P 4.7.3	Pharmacology III	CO1	3	---	2	3	--	--	2	--	--	--	--
		CO2	3	--	2	2	--	--	2	--	--	--	--
		CO3	2	--	2	3	--	--	2	--	--	--	--
		CO4	2	--	2	2	--	--	2	--	--	--	--
		Average = **2.25**	**2.5**	**-**	**2**	**2.5**	**-**	**-**	**2**	**-**	**-**	**-**	**-**
P 4.7.4	Pharmaceutical Analysis –III	CO1	3	-	3	3	-	-	-	-	-	-	3
		CO2	3	-	3	3	-	-	-	-	-	-	3
		CO3	3	-	3	3	-	-	-	-	-	-	3
		CO4	3	-	3	3	-	-	-	-	-	-	3
		Average = 3	**3**	**-**	**3**	**3**	**-**	**-**	**-**	**-**	**-**	**-**	**3**
P.4.8.1	Pharmaceutics - IX	CO1	3	-	-	-	-	3	-	3	-	-	3
		CO2	3	-	-	3	-	3	-	3	3		3
		CO3	3	-	-	3	-	3	-	3	3	-	3
		CO4	3	-	-	3	-	3	-	3	3	-	3
		Average **= 3**	**3**	**-**	**-**	**3**	**-**	**3**	**-**	**3**	**3**	**-**	**3**
P.4.8.2	Pharmaceutical Analysis –IV	CO1	3	-	3	3	-	-	-	-	2	-	3
		CO2	3	-	3	3	-	-	-	-	2	-	3
		CO3	3	-	3	3	-	-	-	-	2		3
		CO4	3	-	3	3	-	-	-	-	2	-	3
		Average = **2.80**	**3**	**-**	**3**	**3**	**-**	**-**	**-**	**-**	**2**	**-**	**3**
P.4.8.3	Pharmaceutical Chemistry-IX (Medicinal	CO1	3	-	-	3	-	3	-	-	3	-	3
		CO2	3	-	-	3	-	3	-	-	3	-	3
		CO3	3	-	-	3	-	3	-	-	3	-	3
		CO4	3	-	-	3	-	3	-	-	3	-	3

	Chemistry-IV)	Average = **3**	**3**	**-**	**-**	**3**	**-**	**3**	**-**	**-**	**3**	**-**	**3**
P 4.8.4	Pharmacognosy-VI	CO1	3	--	---	3	--	--	3	--	3	3	3
		CO2	3	--	--	3	--	--	3	--	3	3	3
		CO3	3	--	--	3	--	--	3	--	3	3	3
		CO4	3	--	--	3	--	--	3	--	3	3	3
		Average = **3**	**3**	**-**	**--**	**3**	**-**	**-**	**3**	**-**	**3**	**3**	**3**
P 4.8.7.	Industrial Training Report	CO1	3	-	3	3	3	-	3	-	3	-	3
		CO2	3	-	3	3	3	-	3	-	3	-	3
		CO3	3	-	3	3	3	-	3	-	3	-	3
		CO4	3	-	3	3	3	-	3	-	3	-	3
		Average **= 3**	3	-	3	3	3	-	3	-	3	-	3
BP101 T	Human anatomy and physiology-I	CO1	1	-	-	1	2	1	-	-	2	1	2
		CO2	1	-	-	-	2	1	-	-	2	2	2
		CO3	1	-	-	1	2	-	-	-	1	1	1
		CO4	3	-	-	1	2	1	-	-	2	2	2
		Average = **1.5**	**1.50**	**-**	**-**	**1**	**2**	**1**	**-**	**-**	**1.75**	**1.5**	**1.75**
BP102 T	Pharmaceutical Analysis-I	CO1	2	-	-	-	-	-	-	-	-	-	3
		CO2	2	2	2	-	-	-	-	-	-	-	3
		CO3	2	2	2	2	-	-	1	-	2	-	3
		CO4	2	2	2	2	-	-	1	-	2	-	3
		Average = **2.1**	**2**	**2**	**2**	**3**	**-**	**-**	**1**	**-**	**2**	**-**	**3**
BP103 T	Pharmaceutics - I	CO1	2	-	-	1	-	1	-	-	-	-	1
		CO2	3	-	-	2	-	1	-	2	2		2
		CO3	3	-	-	3	-	2	-	2	3	-	2
		CO4	3	-	-	1	-	2	-	2	2	-	3
		Average = **1.95**	**2.75**	**-**	**-**	**1.75**	**-**	**1.50**	**-**	**2**	**1.75**	**-**	**2**
BP104 T	Pharmaceutical Inorganic Chemistry	CO1	2	-	2	-	-	-	-	-	2	2	3
		CO2	2	-	2	-	-	-	-	-	2	2	3
		CO3	2	-	2	-	-	-	-	-	2	2	3
		CO4	2	-	2	-	-	-	-	-	2	2	3
		Average = **2.2**	**2**	**-**	**2**	**-**	**-**	**-**	**-**	**-**	**2**	**2**	**3**
BP105 T	Communication Skills	CO1	-	3	3	3	3	3	-	3	-	-	3
		CO2	-	3	2	3	2	3	-	3	-	-	3
		CO3	-	2	3	2	3	2	-	2	-	-	3
		CO4	-	2	2	3	3	2	-	3	-	-	3
		Average = **1.2**	**-**	**1**	**1**	**1**	**1.5**	**2**	**-**	**1**	**-**	**-**	**1**
BP106 RBT	Remedial Biology	CO1	2	2	2	2	-	2	-	-	-	-	1
		CO2	2	2	1	2	-	2	-	-	-	-	1
		CO3	2	1	1	2	-	2	-	-	-	-	1
		CO4	2	1	2	2	-	1	-	-	-	-	1
		Average = **1.6**	**2**	**1.5**	**1.5**	**2**	**-**	**2**	**-**	**-**	**-**	**-**	**1**

BP106 RMT	Remedial mathematics	CO1	-	1	1	1	-	-	-	-	-	-	1
		CO2	-	1	2	2	-	-	-	-	-	-	1
		CO3	-	2	2	2	-		-	-	-	-	2
		CO4	-	2	1	1	-		-	-	-	-	2
		Average = **1.5**	-	1.5	1.5	1.5	-	-	-	-	-	-	1.5
BP201 T	Human anatomy and physiology-II	CO1	3	-	2	2	-	-	-	-	2	-	2
		CO2	2	-	2	2	-	-	-	-	2	-	2
		CO3	2	-	2	2	-	-	-	-	2	-	2
		CO4	3	-	2	2	-	-	-	-	2	-	2
		Average = **2.1**	**2.5**	**-**	**2**	**2**	**-**	**-**	**-**	**-**	**2**	**-**	**2**
BP202 T	Pharmaceutical Organic Chemistry-I	CO1	2	-	-	2	-	-	-	-	2	-	3
		CO2	2	-	-	2	-	-	-	-	3	-	3
		CO3	2	-	-	2	-	-	-	-	3	-	2
		CO4	2	-	-	2	-	-	-	-	2	-	2
		Average = **2.2**	**2**	**-**	**-**	**2**	**-**	**-**	**-**	**-**	**2.5**	**-**	**2.5**
BP203 T	Biochemistry	CO1	3	-	3	-	-	3	-	-	-	2	3
		CO2	3	-	3	-	-	3	-	-	3	3	3
		CO3	3	-	3	-	-	3	-	-	-	2	3
		CO4	3	-	2	-	-	2	-	-	-	2	3
		Average = **2.79**	**3**	**-**	**2.75**	**-**	**-**	**2.75**	**-**	**-**	**3**	**2.25**	**3**
BP204 T	Pathophysiology	CO1	3	-	-	-	-	2	-	-	2	2	3
		CO2	3	-	-	-	-	2	-	-	2	2	3
		CO3	3	-	-	-	-	2	-	-	2	2	3
		CO4	3	-	-	-	-	2	-	--	2	2	3
		Average = **2.40**	**3**	**-**	**-**	**-**	**-**	**2**	**-**	**-**	**2**	**2**	**3**
BP205 T	Computer Application in Pharmacy	CO1	2	-	-	2	-	1	-	-	-	1	1
		CO2	-	-	-	2	-	-	-	1	-	-	1
		CO3	2	-	2	1	-	-	-	1	1	-	1
		CO4	-	-	-	1	-	1	-	-	1	1	1
		Average = **1.31**	**2**	**-**	**2**	**1.5**	**-**	**1**	**-**	**1**	**1**	**1**	**1**
BP 206T	Environmental Sciences	CO1	-	2	2	-	1	-	-	-	-	1	1
		CO2	-	2	2	-	1	-	-	-	-	1	1
		CO3	-	2	2	-	1	-	-	-	-	1	1
		CO4	-	2	2	-	1	-	-	-	-	1	1
		Average = **1.4**	**-**	**2**	**2**	**-**	**1**	**-**	**-**	**-**	**-**	**1**	**1**
BP301 T	Pharmaceutical Organic Chemistry II	CO1	3	-	-	2	-	2	-	-	3	-	3
		CO2	3	-	-	3	-	3	-	-	3	-	3
		CO3	3	-	-	2	-	3	-	-	2	-	3
		CO4	3	-	-	3	-	3	-	-	3	-	3
		Average = **2.80**	**3**	**-**	**-**	**2.5**	**-**	**2.75**	**-**	**-**	**2.75**	**-**	**3**
BP302	Physical	CO1	3	2	3	-	3	3	2	-	-	-	3
		CO2	3	2	3	-	3	3	2	-	-	-	3

T	pharmaceutics - I	CO3	3	2	3	-	3	3	2	-	-	-	3
		CO4	3	2	3	-	3	3	2	-	-	-	3
		Average = **2.71**	**3**	**2**	**3**	**-**	**3**	**3**	**2**	**-**	**-**	**-**	**3**
BP303 T	Pharmaceutical Microbiology	CO1	3	-	-	2	-	-	-	-	2	2	3
		CO2	3	-	-	2	-	-	-	-	2	2	3
		CO3	3	-	-	2	-	-	-	-	2	2	3
		CO4	3	-	-	2	-	-	-	-	2	2	3
		Average = **2.4**	**3**	**-**	**-**	**2**	**-**	**-**	**-**	**-**	**2**	**2**	**3**
BP304 T	Pharmaceutical Engineering	CO1	3	2	2	3	-	-	2	-	-	-	-
		CO2	3	2	2	3	-	-	2	-	-	-	-
		CO3	3	2	2	3	-	-	2	-	-	-	-
		CO4	3	2	2	3	-	-	2	-	-	-	-
		Average = **2.4**	**3**	**2**	**2**	**3**	**-**	**-**	**2**	**-**	**-**	**-**	**-**
BP401 T	Pharmaceutical Organic Chemistry III	CO1	3	-	-	3	-	-	-	-	2	-	3
		CO2	3	-	-	2	-	-	-	-	3	-	3
		CO3	3	-	-	2	-	-	-	-	3	-	3
		CO4	2	-	-	2	-	-	-	-	2	-	2
		Average = **2.56**	**2.75**	**-**	**-**	**2.25**	**-**	**-**	**-**	**-**	**2.50**	**-**	**2.75**
BP402 T	Medicinal Chemistry I	CO1	3	-	-	3	-	2	-	-	2	-	3
		CO2	3	-	-	3	-	3	-	-	3	-	3
		CO3	3	-	-	2	-	3	-	-	2	-	3
		CO4	3	-	-	2	-	2	-	-	3	-	3
		Average = **2.70**	**3**	**-**	**-**	**2.5**	**-**	**2.5**	**-**	**-**	**2.5**	**-**	**3**
BP403 T	Physical Pharmaceutics II	CO1	3	-	-	3	-	-	-	-	2	-	3
		CO2	3	-	-	3	-	-	-	-	2	-	3
		CO3	3	-	-	3	-	-	-	-	2	-	3
		CO4	3	-	-	3	-	-	-	-	2	-	3
		Average = **2.75**	**3**	**-**	**-**	**3**	**-**	**-**	**-**	**-**	**2**	**-**	**3**
BP404 T	Pharmacology I	CO1	3	-	-	2	-	1.5	-	-	2	-	3
		CO2	3	-	-	2	-	1.5	-	-	2	-	3
		CO3	3	-	-	2	-	1.5	-	-	2	-	3
		CO4	3	-	-	2	-	1.5	-	-	2	-	3
		Average = **2.30**	**3**	**-**	**-**	**2**	**-**	**1.5**	**-**	**-**	**2**	**-**	**3**
BP405 T	Pharmacognosy I	CO1	3	-	-	3	-	-	-	-	2	-	3
		CO2	3	-	-	3	-	-	-	-	2	-	3
		CO3	3	-	-	3	-	-	-	-	2	-	3
		CO4	3	-	-	3	-	-	-	-	2	-	3
		Average = **2.75**	**3**	**-**	**-**	**3**	**-**	**-**	**-**	**-**	**2**	**-**	**3**
BP107 P	Human anatomy and	CO1	2	-	-	2	2	-	-	-	2	2	2
		CO2	2	-	-	-	2	-	-	-	2	2	2
		CO3	21	-	-	-	2	-	-	-	2	2	2
		CO4	2	-	-	2	2	-	-	-	2	2	2

	physiology-I	Average = **2**	**2**	**-**	**-**	**2**	**2**	**-**	**-**	**--**	**2**	**2**	**2**
BP108 P	Pharmaceutical Analysis-I	CO1	2	-	-	-	-	-	-	-		-	3
		CO2	2	-	-	-	-	-	-	-		-	3
		CO3	2	2	2	2	-	-	1	-	2	-	3
		CO4	2	2	2	2	-	-	1	-	2	-	3
		Average = **2**	**2**	**2**	**2**	**2**	**-**	**-**	**1**	**-**	**2**	**-**	**3**
BP109 P	Pharmaceutics - I	CO1	2	-	-	2	-	2	-	-	-	-	1
		CO2	2	-	-	2	-	2	-	2	2	-	2
		CO3	2	-	-	2	-	2	-	2	2	-	2
		CO4	2	-	-	2	-	2	-	2	2	-	2
		Average = **2**	**2**	**-**	**-**	**2**	**-**	**2**	**-**	**2**	**2**	**-**	**2**
BP110 P	Pharmaceutical Inorganic Chemistry	CO1	2	-	2	-	-	-	-	-	2	2	2
		CO2	2	-	2	-	-	-	-	-	2	2	2
		CO3	2	-	2	-	-	-	-	-	2	2	2
		CO4	2	-	2	-	-	-	-	-	2	2	2
		Average = **2**	**2**	**-**	**2**	**-**	**-**	**-**	**-**	**-**	**2**	**2**	**2**
BP111 P	Communication Skills	CO1	-	1	1	1	1	1	-	1	-	-	2
		CO2	-	1	1	1	1	1	-	1	-	-	2
		CO3	-	1	1	1	1	1	-	1	-	-	2
		CO4	-	1	1	1	1	1	-	1	-	-	2
		Average = **1.1**	**-**	**1**	**1**	**1**	**1**	**1**	**-**	**1**	**-**	**-**	**2**
BP112 RBP	Remedial Biology	CO1	2	3	3	3	-	3	-	-	-	-	3
		CO2	3	3	3	3	-	3	-	-	-	-	3
		CO3	3	2	3	2	-	3	-	-	-	-	3
		CO4	2	2	3	3	-	3	-	-	-	-	3
		Average = **2.79**	**2.50**	**2.50**	**3**	**2.75**	**-**	**3**	**----**	**-**	**-**	**-**	**3**
BP207 P	Human anatomy and physiology-II	CO1	2	-	2	2	-	-	-	-	2	-	2
		CO2	2	-	2	2	-	-	-	-	2	-	2
		CO3	2	-	2	2	-	-	-	-	2	-	2
		CO4	2	-	2	2	-	-	-	-	2	-	2
		Average = 2	**2**	**-**	**2**	**2**	**-**	**-**	**-**	**-**	**2**	**-**	**2**
BP208 P	Pharmaceutical Organic Chemistry-I	CO1	2	-	3	3	-	-	-	-	2	-	3
		CO2	2	-	2	1	-	-	-	-	2	-	2
		CO3	2	-	2	2	-	-	-	-	2	-	2
		CO4	2	-	1	2	-	-	-	-	2	-	1
		Average = **2**	**2**	**-**	**2**	**2**	**-**	**-**	**-**	**-**	**2**	**-**	**2**
BP209 P	Biochemistry	CO1	3	-	2	-	-	-	-	-	2	2	3
		CO2	3	-	3	-	-	-	-	-	3	3	3
		CO3	3		3	-	-	-	-	-	3	3	3
		CO4	3	-	2	-	-	-	-	-	2	-	3
		Average = **2.1**	**2**	**-**	**2**	**-**	**-**	**-**	**-**	**-**	**2.50**	**2**	**2**

BP210 P	Computer Application in Pharmacy	CO1	1	-	-	1	-	-	-	-	-	1	1
		CO2	1	-	-	1	-	-	-	-	1	1	1
		CO3	-		-	1	-	1	-	1	-	-	1
		CO4	-	-	-	1	-	1	-	1	-	-	1
		Average = 1	**1**	**-**	**-**	**1**	**-**	**1**	**-**	**1**	**1**	**1**	**1**
BP305 P	Pharmaceutical Organic Chemistry-II	CO1	3	-	-	3	-	2	-	-	2	-	3
		CO2	3	-	-	3	-	3	-	-	3	-	3
		CO3	3	-	-	3	-	3	-	-	3	-	3
		CO4	3	-	-	3	-	3	-	-	3	-	3
		Average = **2.95**	**3**	**-**	**-**	**3**	**-**	**3**	**-**	**-**	**2.75**	**-**	**3**
BP306 P	Physical Pharmaceutics I	CO1	3	2	2	-	3	3	2	-	-	-	3
		CO2	3	2	2	-	3	3	2	-	-	-	3
		CO3	3	2	2	-	3	3	2	-	-	-	3
		CO4	3	2	2	-	3	3	2	-	-	-	3
		Average = **2.57**	**3**	**2**	**2**	**-**	**3**	**3**	**2**	**-**	**-**	**-**	**3**
BP307 P	Pharmaceutical Microbiology	CO1	3	-	-	2	-	1	-	-	-	3	3
		CO2	3	-	-	2	-	1	-	-	-	3	3
		CO3	3	-	-	2	-	1	-	-	-	3	3
		CO4	3	-	-	2	-	1	-	--	-	3	3
		Average = **2.40**	**3**	**-**	**--**	**2**	**-**	**1**	**-**	**-**	**-**	**3**	**3**
BP308 P	Pharmaceutical Engineering	CO1	3	2	2	3	-	-	2	-	2	-	-
		CO2	3	2	2	3	-	-	2	-	2	-	-
		CO3	3	2	2	3	-	-	2	-	2	-	-
		CO4	3	2	2	3	-	-	2	-	2	-	-
		Average = **2.33**	**3**	**2**	**2**	**3**	**-**	**-**	**2**	**-**	**2**	**-**	**-**
BP406 P	Medicinal Chemistry I	CO1	3	-	2	-	-	3	-	-	2	-	3
		CO2	3	-	3	-	-	3	-	-	2	-	3
		CO3	3	-	3	-	-	2	-	-	2	-	2
		CO4	3	-	2	-	-	2	-	-	2	-	2
		Average = **2.5**	**3**	**-**	**2.5**	**-**	**-**	**2.5**	**-**	**-**	**2**	**-**	**2.5**
BP407 P	Physical Pharmaceutics II	CO1	3	-	-	3	-	-	-	-	2	-	3
		CO2	3	-	-	3	-	-	-	-	2	-	3
		CO3	3	-	-	3	-	-	-	-	2	-	3
		CO4	3	-	-	3	-	-	-	-	2	-	3
		Average =**2.75**	**3**	**-**	**-**	**3**	**-**	**-**	**-**	**-**	**2**	**-**	**3**
		CO1	2	-	-	2	-	3	-	-	2	-	3

BP408 P	Pharmacology I	CO2	2	-	-	2	-	3	-	-	2	-	3
		CO3	2	-	-	2	-	3	-	-	2	-	3
		CO4	2	-	-	2	-	3	-	-	2	-	3
		Average = **2.40**	**2**	**-**	**-**	**2**	**-**	**3**	**-**	**-**	**2**	**-**	**3**
BP409 P	Pharmacognosy and Phytochemistry I	CO1	3	-	2	-	-	3	-	-	2	-	3
		CO2	3	-	3	-	-	3	-	-	2	-	3
		CO3	3	-	3	-	-	2	-	-	2	-	2
		CO4	3	-	2	-	-	2	-	-	2	-	2
		Average = **2.50**	**3**	**-**	**2.5**	**-**	**-**	**2.5**	**-**	**-**	**2**	**-**	**2.5**

3.1.3 Course-PO matrix of courses for all years of study **10**

In the above table, the matrixing of course outcomes and program outcomes was attempted. This table contained several details and given for four semesters. The details of all semesters are abstracted, made concise analysis and documented in following table. All the information is consistent with the above table. For each course objective, POs are assigned. Then each PO is averaged on the scale of 1 to 3 (slight to high) and reported. Then all such averages of each PO are again averaged to report course outcome averages, again on the scale of 1 to 3 (slight to high).

The following are the observations from the following table

1. PO 1 has high attainable value followed by PO 3 and PO 4 for theory subjects.
2. For laboratory components, PO 1 to PO 4 and several other POs are attainable.
3. Laboratory component has become the key course or attaining maximum number of POs. Thus the average level is near 2.5 (against the maximum of 3). In other words,83% attainable, however measurements may give 100% results or 100%attainability.
4. For most of the theory subjects, the values varied from 2 to 2.3 (against themaximum 3). In other words, 66 to 83% is attainable.

Given the scope andopportunities for assessment, this level is considered as appropriate and significant.This range falls betweenthe awards of, first class and distinction.

5. These level forms a basis of attainment against which the achieved attainment isanalyzed.Theoretical values for a theory and practical course is obtained by specifying the course outcomes separately. For a single course outcome, several programme outcomes are satisfied.

Course-PO matrix of courses for all years of study

Course Code	Course Title	1	2	3	4	5	6	7	8	9	10	11	Average
B. Pharmacy First Year Semester - I													
T 1.1.1	Pharmaceutics-I(Dispensing Pharmacy)	2.75	-	-	1.75	-	1.50	-	2	2.33	-	2	2.05
T 1.1.2	Pharmacognosy-I	3	1.50	-	2	-	-	2	-	2	2	2	2.07
T 1.1.3	Pharmaceutical Chemistry-I (Inorganic	3	-	2.75	-	-	-	-	-	2.25	2.50	2.75	2.65

	Pharmaceutical Chemistry)												
T 1.1.4	Applied Biostatistics & Computer Applications in Pharmacy	1.50	-	1	3	-	2	-	-	-	2	3	2.08
T 1.1.5	Communication Skills	-	2.25	2.25	2.25	2.25	2	-	2.25	-	-	3	2.3
P 1.1.1	Pharmaceutics-I(Dispensing Pharmacy)	2	-	--	2.5	-	2.5	-	2.5	2.5	-	2.5	2.4
P 1.1.2	Pharmacognosy-I	3	-	-	3	-	-	2	-	-	2	2	2.40
P 1.1.3	Pharmaceutical Chemistry-I (Inorganic Pharmaceutical Chemistry)	3	-	3	-	-	-	-	--	2.75	2.25	3	2.80
P 1.1.4	Applied Biostatistics & Computer Applications in Pharmacy	3	3	--	3	-	2	-	-	-	2	3	2.68
	B. Pharmacy First Year Semester - II												
T 1.2.1	Pharmaceutics - II(Unit Operations)	2	-	-	1.5	-	1	-	1.5	1	-	3	1.66
T 1.2.2	Pharmaceutical Chemistry –II (Inorganic &Physical Chemistry)	3	-	2.75	-	-	-	-	-	2.75	2.75	3	2.85
T 1.2.3	Pharmaceutical Chemistry-III (Organic Chemistry-I)	2	-	--	2	-	-	-	-	1.5	-	2	1.88
T 1.2.4	Anatomy, Physiology & Health Education (APHE) – I	2	-	-	-	-	2.25	2.25	2	2	-	2.25	2.13
T 1.2.5	Industrial Psychology	-	2	-	-	2	1	3	-	-	2	3	2.17
5555	Environmental Science	-	2.75	2.75	-	3	-	-	-	-	3	3	2.90
P 1.2.1	Pharmaceutics - II(Unit Operations)	3	-	-	3	-	3	-	2.5	2	-	3	2.75
P 1.2.2	Pharmaceutical	3	-	3	-	-	-	-	--	2.25	2.25	2.50	

	Chemistry –II (Inorganic &Physical Chemistry)												2.6
P 1.2.3	Pharmaceutical Chemistry-III (Organic Chemistry-I)	2.75	-	2.50	2.75	-	-	-	-	2.25	-	2.25	2.50
P 1.2.4	Anatomy, Physiology & Health Education (APHE) – I	3	2.50	2.50	3	1.5	2.50	2	2.50	3	-	-	2.47
B. Pharmacy Second Year Semester - III													
T 2.3.1	Pharmaceutics III	3	-	2.25	2.25	-	-	-	1	-	1.25	2.50	2.04
T 2.3.2	Pharmaceutical Chemistry-IV (Organic Chemistry-II)	2	-	-	1.50	-	1.50	-	-	1.50	-	2	1.70
T 2.3.3	Pharmacognosy II	2	-	1.75	-	-	-	1.75	2.25	1.75	-	1.50	1.83
T 2.3.4	Pharmaceutical Analysis-I	2	2	3	3	-	-	1	-	2	-	3	2.28
T 2.3.5	Anatomy physiology and health education-II	1	-	-	2	1.50	-	-	-	1	2	2.75	1.70
T 2.3.6	Pathophysiology of Common Diseases-I	3	-	2	2.50	-	1	-	1.66	1.25	-	2.50	1.98
P 2.3.1	Pharmaceutics III	3	-	2	2.25	-	-	-	1	-	1.25	2.50	2
P 2.3.2	Pharmaceutical Chemistry-IV (Organic Chemistry-II)	3	-	-	3	-	3	-	-	3	-	3	3
P 2.3.3	Pharmacognosy II	3	-	3	-	-	-	3	3	3	-	3	3
P 2.3.4	Pharmaceutical Analysis-I	3	2.50	3	3	-	-	1	-	2	-	3	2.50
P 2.3.5	Anatomy physiology and health education-II	2.5	-	-	2.5	2.5	-	-	-	2.5	2	2.5	2.41
B. Pharmacy Second Year Semester - IV													
T 2.4.1	Pharmaceutics IV	2.25	-	--	2.25	-	-	-	-	-	2.25	2.25	2.25
T 2.4.2	Pharmaceutical Microbiology	2.75	-	-	2	-	-	-	-	1.75	1.75	3	2.25

T 2.4.3	Pharmacognosy-III	3	-	--	2	-	-	1.80	-	2	1.5	2	2.05
T 2.4.4	Pharmaceutics-V	3	-	-	-	-	1.25	1.25	2	2	-	2	1.91
T 2.4.5	Pharmaceutical Chemistry-V	3	-	2	2	-	-	-	-	1	-	3	2.2
T 2.4.6	Pathophysiology of Common Diseases-II	3	-	--	2	-	-	1.5	-	2	-	-	2.13
P 2.4.1	Pharmaceutics IV	3	0.75	3	3	-	-	-	1	-	2	3	2.25
P 2.4.2	Pharmaceutical Microbiology	3	-	1.75	2.50	-	-	-	--	3	2	3	2.54
P 2.4.3	Pharmacognosy-III	3	-	--	3	-	-	3	-	3	3	3	3
P 2.4.4	Pharmaceutics-V	3	-	-	-	-	3	3	3	3	-	3	3
P 2.4.5	Pharmaceutical Chemistry-V	3	-	2	2	-	-	-	-	1	-	3	2.2
B. Pharmacy Third Year Semester - V													
T 3.5.1	Pharmaceutical Chemistry-VI (Medicinal Chemistry-I)	3	-	-	3	-	3	-	-	2.5	-	2	2.70
T 3.5.2	Pharmaceutics-V	2	-	-	1.50	-	1.50	-	2	2.33	-	2	1.88
T 3.5.3	Pharmacology I	2.75	-	1.5	1	-	-	1	-	-	-	-	1.5
T 3.5.4	Pharmacognosy IV	3	-	-	2.25	-	-	-	-	-	-	1.75	2.33
T 3.5.5	Pharmaceutical Analysis-II	2.50	-	2.75	2.75	-	-	-	-	1.50	1.50	-	2.20
P 3.5.1	Pharmaceutical Chemistry-VI (Medicinal Chemistry-I)	3	-	-	3	-	3	-	-	3	-	3	3
P 3.5.2	Pharmaceutics-V	3	-	-	2.75	-	2.75	-	3	3	-	3	2.90
P 3.5.3	Pharmacology I	3	-	2	2	-	-	2	-	-	-	-	2.25
P 3.5.4	Pharmacognosy IV	3	-	-	2.25	-	-	-	-	-	-	2	2.41
P 3.5.5	Pharmaceutical Analysis-II	2.75	-	2.75	2.75	-	-	-	-	2.25	-	-	2.62
B. Pharmacy Third Year Semester - VI													
T 3.6.1	Pharmaceutical Chemistry-VII (Medicinal Chemistry-II)	2	-	-	2	-	2	-	-	2	-	2	2
T 3.6.2	Pharmaceutics-VII	3	-	-	2.5	-	1	-	2	1	-	2	1.92
T 3.6.3	Pharmacology II	3	-	1	1	-	-	1	-	-	-	-	1.50

T 3.6.4	Pharmacognosy V	3	-	-	2.25	-	-	-	-	-	-	1.75	2.33
T 3.6.5	Pharmaceutical Jurisprudence & Ethics	3	1.80	-	-	2.3	1.80	1.80	2	2	-	3	2.21
P 3.6.1	Pharmaceutical Chemistry-VII (Medicinal Chemistry-II)	3	-	-	3		3	-	-	2	-	2	2.6
P 3.6.2	Pharmaceutics-VII	3	---	-	2.50	--	1	-	2	1	--	2	2.75
P 3.6.3	Pharmacology II	3	-	3	2	-	-	2	-	-	-	-	2.50
P 3.6.4	Pharmacognosy V	3	-	-	2.25	-	-	-	-	-	-	2	2.41
P 3.6.6	Project report	3	2.75	2.75	2.75	-	-	2.75	-	2.75	-	3	2.82
B. Pharmacy Final Year Semester - VII													
T 4.7.1	Pharmaceutics VIII	3	-	3	3	-	-	3	-	-	-	3	3
T 4.7.2	Pharmaceutical Chemistry-VIII(PMC-III)	2	-	2.25	-	-	-	-	-	2.25	-	2	2.1
T 4.7.3	Pharmacology III	2.50	-	1.5	1.5	-	-	1.5	-	-	-		1.75
T 4.7.4	Pharmaceutical Analysis –III	2.5	-	2.5	2	-	-	-	-	-	-	2	2.2
T 4.7.5	Pharmaceutical Biotechnology	2.50	-	2	-	-	-	1.75	-	2	-	1.75	2.00
T 4.7.6	Industrial Management	2.20	1.60	2	-	1.80	1.40	2.20	2	-	1.20	2.20	1.84
P 4.7.1	Pharmaceutics-VIII	3	-	2.50	3	-	-	2.25	-	-	-	3	2.75
P 4.7.2	Pharmaceutical Chemistry-VIII(PMC-III)	2.50	-	-	2.50	-	-	-	-	2.50	-	2.50	2.50
P 4.7.3	Pharmacology III	2.50	-	2	2.50	-	-	2	-	-	-	-	2.25
P 4.7.4	Pharmaceutical Analysis –III	3	-	3	3	-	-	-	-	-	-	3	3
B. Pharmacy Final Year Semester - VIII													
T 4.8.1	Pharmaceutics-IX	3	-	-	2	-	1.5	-	2	1.5	-	3	2.16
T 4.8.2	Pharmaceutical Analysis –IV	3	-	2	3	-	-	-	-	1	-	3	2.40
T 4.8.3	Pharmaceutical Chemistry-IX (Medicinal Chemistry-IV)	2	-	-	2.25	-	2.25	-	-	2	-	2	2.1
T 4.8.4	Pharmacognosy-VI	3	-	--	2	-	-	2	-	2.25	2	2.25	2.25
T 4.8.5	Pharmacology	3	-	2	2	-	-	1	-	-	-	-	2

	IV(Clinical Pharmacy and Drug Interactions)												
T 4.8.6.3	Quality Assurance	3	2	2	-	-	-	2	2	-	-	3	2.33
P 4.8.1	Pharmaceutics-IX	3	-	-	3	-	3	-	3	3	-	3	3
P 4.8.2	Pharmaceutical Analysis –IV	3	-	3	3	-	-	-	-	2	-	3	2.80
P 4.8.3	Pharmaceutical Chemistry-IX (Medicinal Chemistry-IV)	3	-	-	3	-	3	-	-	3	-	3	3
P 4.8.4	Pharmacognosy-VI	3	-	--	3	-	-	3	-	3	3	3	3
P 4.8.7.	Industrial Training Report	3	-	3	3	3	-	3	-	3	-	3	3

PCI Syllabus for F. Y. B. Pharm from 2017-18

Course Code	Course Title	1	2	3	4	5	6	7	8	9	10	11	Average
B. Pharmacy First Year Semester - I													
BP101T	Human Anatomy andPhysiology-I	1.50	-	-	1	2	1	-	-	1.75	1.5	1.75	1.5
BP102T	Pharmaceutical Analysis-I	2	2	2	3	-	-	1	-	2	-	3	2.1
BP103T	Pharmaceutics- I	2.75	-	-	1.75	-	1.50	-	2	1.75	-	2	1.95
BP104T	Pharmaceutical Inorganic Chemistry	2	-	2	-	-	-	-	-	2	2	3	2.2
BP105T	Communication Skills	-	1	1	1	1.5	2	-	1	-	-	1	1.2
BP106RBT	Remedial Biology	**2**	**1.5**	**1.5**	**2**	-	**2**	-	-	-	-	**1**	1.6
BP106RMT	Remedial Mathematics	-	1.5	1.5	1.5	-	-	-	-	-	-	1.5	1.5
BP107P	Human Anatomy and Physiology-I	2	-	-	2	2	-	-	--	2	2	2	2
BP108P	Pharmaceutical Analysis-I	2	2	2	2	-	-	1	-	2	-	3	2
BP109P	Pharmaceutics- I	2	-	-	2	-	2	-	2	2	-	2	2
BP110P	Pharmaceutical Inorganic Chemistry	2	-	2	-	-	-	-	-	2	2	2	2
BP111P	Communication Skills	-	1	1	1	1	1	-	1	-	-	2	1.1
BP112RBP	Remedial Biology	1	1	1.5	2	-	1	-	-	-	-	1	1.2
B. Pharmacy First Year Semester - II													

BP201T	Human Anatomy and Physiology-II	2.5	-	2	2	-	-	-	-	2	-	2	2.1
BP202T	Pharmaceutical Organic Chemistry-I	2	-	-	2	-	-	-	-	2.5	-	2.5	2.2
BP203T	Biochemistry	3.00	-	2.75	-	-	2.75	-	-	3	2.25	3.00	2.79
BP204T	Pathophysiology	3	-	-	-	-	2	-	-	2	2	3	2.40
BP205T	Computer Application in Pharmacy	2	-	2	1.5	-	1	-	1	1	1	1	1.31
BP206T	Environmental Sciences	-	2	2	-	1	-	-	-	-	1	1	1.40
BP207P	Human anatomy and Physiology-II	2	-	2	2	-	-	-	-	2	-	2	2
BP208P	Pharmaceutical Organic Chemistry-I	2	-	2	2	-	-	-	-	2	-	2	2
BP209P	Biochemistry	2	-	2	-	-	-	-	-	2.50	2	2	2.1
BP210P	Computer Application in Pharmacy	1	-	-	1	-	1	-	1	1	1	1	1
B. Pharmacy Second Year Semester – III													
BP301T	Pharmaceutical Organic Chemistry II	3	-	-	2.5	-	2.75	-	-	2.75	-	3	2.80
BP302T	Physical Pharmaceutics I	3	2	3	-	3	3	2	-	-	-	3	2.71
BP303T	Pharmaceutical Microbiology	3	-	2	-	-	-	-	-	2	2	3	2.4
BP304T	Pharmaceutical Engineering	3	2	2	3	-	-	2	-	-	-	-	2.40
BP305P	Pharmaceutical Organic Chemistry II	3	-	-	3	-	3	-	-	2.75	-	3	2.95
BP306P	Physical Pharmaceutics I	3	2	2	-	3	3	2	-	-	-	3	2.57
BP307P	Pharmaceutical Microbiology	3	-	--	2	-	1	-	-	-	3	3	2.40
BP308P	Pharmaceutical Engineering	3	2	2	3	-	-	2	-	2	-	-	2.33
B. Pharmacy Second Year Semester - IV													
BP401T	Pharmaceutical Organic Chemistry III–	2.75	-	-	2.25	-	-	-	-	2.50	-	2.75	2.56
BP402T	Medicinal Chemistry I	3	-	-	2.5	-	2.5	-	-	2.5	-	3	2.70
BP403T	Physical Pharmaceutics II	3	-	-	3	-	-	-	-	2	-	3	2.75
BP404T	Pharmacology I	3	-	-	2	-	1.5	-	-	2	-	3	2.30

BP405T	Pharmacognosy I	3	-	-	3	-	-	-	-	2	-	3	2.75
BP406P	Medicinal Chemistry I	3	-	2.5	-	-	2.5	-	-	2	-	2.5	2.50
BP407P	Physical Pharmaceutics II	3	-	-	3	-	-	-	-	2	-	3	2.75
BP408P	Pharmacology I	2	-	-	2	-	3	-	-	2	-	3	2.40
BP409P	Pharmacognosy I	3	-	2.5	-	-	2.5	-	-	2	-	2.5	2.50

3.2 Attainment of Course Outcomes **40**

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

(Examples of data collection processes may include, but are not limited to, specificexam/tutorial questions, assignments, laboratory tests, project evaluation, studentportfolios (A portfolio is a collection of artifacts that demonstrate skills, personalcharacteristics, and accomplishments created by the student during study period),internally developed assessment exams, project presentations, oral exams, focusgroups etc. It is expected that each theory subject taught should impart specificknowledge and make a foundation for a set of Basic Concepts related to it. Similarlythe laboratory experiments should have some predetermined and predefined skillswhich can be developed during the study)

Data were collected from internal examinations (theory, practicals, seminars, assignments and presentations) and university examinations (theory and practicals). The details are given in the following table

Internal Assessment-Tools

Component	Components of Evaluation	Nature of exam
Theory	First Sessional Exam.	Short essay and long essay questions
	MCQ's	Multiple choice questions
	Second Sessional Exam.	Short essay and long essay questions
Practicals	Daily evaluation	Planning, analysis of lab skills, finishing the experiment
	Practical examination	Synopsis, spotting and viva-voce, major experiment and minor experiment
	Laboratory manual	Communication, data interpretation

Semester End Assessment-Tools

Component	Components of Evaluation	Nature of exam
Theory	University end exams	MCQ's, Short essays, long essays, numericals, etc.
	University end exams	Synopsis, spotting, major experiment,minor experiment, data analysis, calculations, viva voce.

- Course performance history
- End of course surveys

Quality of internal semester:

As per the KBCNorth Maharashtra University regulations, the marks allotted to theory are 20% and practicals 20% for internal assessment. The remaining 80% is done at university end assessment. The university end examinations are conducted at a center other than this college. Though the percentage of

internal assessment is low, it is to be covering a large number of course objectives. The internal examination and the prescribed marks are to be complied with the regulation. Therefore, the scope for comprehensive assessment is less. In this frame work, the college conducts the following components.

1. Multiple choice questions test
2. Assignments
3. Attendance

The internal assessment evaluation is separately compiled and graded to understand the process. The attainment of course outcomes of all courses are given in the following section. The above description allows us to evaluate the course outcomes achieved. In the present analysis, the targets for assessment were set using the standards prescribed by the KBCNorth Maharashtra University, as follows

1. First class with distinction > 70 marks, attainment level is 3 (substantial)
2. First class 60 to 70 marks, attainment level is 2 (moderate)
3. Pass class 50 to 59 marks, attainment level is 1 (low)

The same yardsticks are applied to both sessional and university results. The number of students of all the above three categories are considered (rather than the criteria: as 80% students scoring more than 60% marks of the relevant maximum marks (is considered) for the attainment of 3). The calculation is as follows.

Internal marks:

The total internal marks are 20% for theory as per KBC North Maharashtra University regulations. However, as per NBA suggestion, only 20% marks are considered for calculation.

Example: B. Pharmacy **I year** course (subject) – Pharmaceutics-I (General and Dispensing pharmacy, T & P.2.3.1.) in **2017-18** year. The following are the marks of theory internal.

Total Students in class are 60	Students with First class (>66%)	Students with First class (55 to65 %)	Students with Pass class (< 55%)
Attainment Level	3	2	1
No of students	20	20	20
No of students X value	20 X 3=60	20 X 2=40	20 X 1=20
Total		60 + 40 + 20 =120	
Ratio		Total/ Number of students= 120/60 = 2	
Level 20%for internal exams		2 X 20% = 0.40	

For the practical exams the internal marks are 20% as per KBCNorth Maharashtra University regulations.However, as per NBA suggestion, only 20% is considered for the calculation. The same example of Pharmaceutics-I is considered. The calculation is as follows.

Total Students in class are 60	Students with First class (>66%)	Students with Pass class (55 to 65 %)	Students with Pass class (< 55%)
Attainment Level	3	2	1
No of students	38	20	02
No of students X value	38 X 3=114	20 X 2=40	2 X 1=2
Total		114 + 40 + 2 =156	
Ratio		Total/ Number of students= 156/60 = 2.6	
Level 20%for internal exams		2.6 X 20% = 0.52	

For University theory exams, the University marks are 80% as per KBCNorth Maharashtra University regulations. However, as per NBA suggestion, only 80% is considered for the calculations.
The calculation is as follows.

Total Students in class are 60	Students with First class (>66%)	Students with Pass class (55 to 65 %)	Students with Pass class (< 55%)
Attainment Level	3	2	1
No of students	5	20	20
No of students X value	5 X 3=15	20 X 2=40	20 X 1=20
Total		15 + 40 + 20 =120	
Ratio		Total/ Number of students= 75/60 = 1.25	
Level 80%for External exams		1.25 X 80% = 1	

For University practical exams, the University marks are 65% as per KBCNorth Maharashtra University, regulations. However, as per NBA suggestion, only 80% is considered for the calculation.The calculations are as follows.

Total Students in class are 60	Students with First class (>66%);	Students with Pass class (55 to 65 %);	Students with Pass class (< 55%);
Attainment Level	3	2	1
No of students	5	20	20
No of students X value	5 X 3=15	20 X 2=40	20 X 1=20
Total		15 + 40 + 20 =120	
Ratio		Total/ Number of students= 75/60 = 1.25	
Level 80%for External exams		1.25 X 80% = 1	

For conducting practical examination of KBCNorth Maharashtra University, external examiner is appointed by the KBC North Maharashtra University. The above calculated values are tabulated as follows

Course code	Course name	University attainment		Sessional attainment		Attainment level		%Attainment (Achieved / required) X 100	Attainment in scale 3
		100%	80% (100% X0.8)	100%	20% (100% X 0.2)	Achieved	Required		
BP101T	Human Anatomy & Physiology-I	1.06	0.85	1.5	0.3	1.15	2.05	56.09	1.68
Theoretical attainment = 2.05 % attainment of outcomes = 1.15 / 2.05 X 100 = 56.09% or 1.68 (against the scale Max = 3)									
BP107P	Human Anatomy & Physiology-I	2.31	1.85	2.5	0.5	2.35	2.45	95.91	2.87
Practical attainment = 2.45 % attainment of outcomes = 2.35 / 2.45 X 100 = 95.91% or 2.87 (against the scale Max = 3)									

Similar calculations are made for all courses for the previous academic years (2015-16, 2016-17 and 2017-18). The current year (2018-19) has not completed for the purpose of calculation. The details of all courses are given below for all subjects and 3 academic years (2015-16, 2016-17and 2017-18) and first semester of 2018-19.
Thus, attainable outcomes and attained outcomes are matrixed to obtain the percent attainment.

3.2.2 Record the attainment of Course Outcomes of all courses with respect to set attainment level 30
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 the course outcomes of a course in addition to the performance in the University examination)
Example related to attainment levels vs. targets: (The examples indicated are for reference only. Program may appropriately define levels)
Attainment Level 1: below than 55% students scoring more than University average percentage marks or set attainment level in the final examination is considered to be attainment of "1"
Attainment Level 2: 55 to 65 %students scoring more than University average percentage marks or set attainment level in the final examination is considered to be attainment of "2"
Attainment Level 3: greater than 65% students scoring more than University average percentage marks or set attainment level in the final examination is considered to be attainment of "3"
1. Attainment is measured in terms of actual percentage of students getting set percentage of marks.
2. If targets are achieved then all the course outcomes are attained for that year.
Program is expected to set higher targets for the following years as a part of continuous improvement.
3. If targets are not achieved the program should put in place an action plan to attain the target in subsequent years.
Measuring CO attainment through Internal Assessments: (The examples indicated are for reference only. Program may appropriately define levels)
Target may be stated in terms of percentage of students getting more than class average marks or set by the program in each of the associated COs in the assessment instruments (Sessional exam. assignments, mini projects, reports and presentations etc. as mapped with the COs)
Example
Mid-term test 1 addresses T.2.3.1.and T.2.3.2. Out of the maximum 20 marks for this test 12 marks are associated with T.2.3.1 and 8 marks are associated with T.2.3.2.
Examples related to attainment levels vs. targets:
Attainment Level 1: 60% students scoring less than 55% marks out of the relevant maximum marks is considered to be attainment of "1"
Attainment Level 2: 70% students scoring more than 55% to 65% marks out of the relevant maximum marks is considered to be attainment of "2"
Attainment Level 3: 80% students scoring more than 65% marks out of the relevant maximum marks is considered to be attainment of "3"
i. Attainment is measured in terms of actual percentage of students getting set percentage of marks.
ii. If targets are achieved then the T.2.3.1.andT.2.3.2 are attained for that year. Program is expected to set higher targets for the following years as a part of continuous improvement.
iii. If targets are not achieved the program should put in place an action plan to attain the target in subsequent years.
Similar targets and achievement are to be stated for the internal assessment
Course Outcome Attainment:
For example:
Attainment through University Examination: Substantial i.e. 3

Attainment through Internal Assessment: Moderate i.e. 2
Assuming 80% weightage to University examination and 20% weightage to internalassessment, the attainment calculations will be
(80% of University level) + (20% of internal level)
I.e. 80% of 3 + 20% of 2 = 2.4 + 0.4 = 2.8.
Note: Weightage of 80% to University exams is only an example. Programs may decide weightages appropriately for University exams and internal assessment with due justification.

Consolidated: University + Internal Marks 2015-16

Course code	Course name	University attainment		Sessional attainment		Attainment level		%Attainment (Achieved / required) X 100	Attainment in scale 3
		100 %	80% (100 % X 0.8)	100 %	20 % (100 % X 0.2)	Achieved	Required		
T.1.1.1.	Pharmaceutics-I (Dispensing Pharmacy)	1.06	0.85	1.50	0.30	1.15	2.05	56.09	1.68
T.1.1.2.	Pharmacognosy-I	1.48	1.18	1.68	0.33	1.51	2.07	72.94	2.18
T.1.1.3.	Pharmaceutical Chemistry-I (Inorg. Pharm. Chemistry)	1	0.8	1.53	0.30	1.10	2.65	41.73	1.25
T.1.1.4.	Applied Biostatistics & Computer Applications in Pharmacy	1.2	0.96	2.1	0.42	1.38	2.08	66.34	1.99
T.1.1.5.	Communicating Skills and soft skill development	1.13	0.90	2.33	0.46	1.37	2.3	59.65	1.78
T 1.2.1.	Pharmaceutics -II(Unit operation)	1.28	1.02	2.15	0.43	1.45	1.66	87.71	2.63
T 1.2.2.	Pharmaceutical Chemistry -II(Inorganic & Physical Chemistry)	2.73	2.18	2.73	0.54	2.72	2.85	95.43	2.86
T 1.2.3.	Pharmaceutical Chemistry-III(Organic Chemistry-I)	1	0.8	1.38	0.27	1.07	1.88	57.06	1.71
T 1.2.4.	Anatomy, Physiology & Health Education (APHE)	1.20	0.96	1.67	0.33	1.29	2.13	60.56	1.81
T 1.2.5.	Industrial Psychology	1.25	1	2	0.4	1.4	2.17	64.51	1.93
5555	Environmental Science	2.75	2.2	2.13	0.42	2.62	2.9	90.34	2.71
T.2.3.1	Pharmaceutics -III (I Physical Pharmacy-I)	1.09	0.87	1.56	0.31	1.18	2.04	58.03	1.74
T.2.3.2.	Pharmaceutical Chemistry-IV (Organic Chemistry - II)	1.56	1.24	1.54	0.30	1.54	1.70	91.05	2.73
T.2.3.3.	Pharmacognosy –II	1.21	0.96	1.13	0.22	1.18	1.83	64.86	1.94

T.2.3.4.	Pharmaceutical Analysis – I	1.24	0.99	1.59	0.31	1.30	2.285	57.24	1.71
T.2.3.5.	A P H E-II	1.43	1.15	1.48	0.29	1.44	1.70	85.05	2.55
T.2.3.6.	Pathophysiology of Common Diseases-I	1.88	1.50	1.96	0.39	1.89	1.98	95.45	2.86
T.2.4.1.	Pharmaceutics – IV (Physical Pharmacy-II)	1.25	1.00	1.34	0.26	1.26	2.29	55.41	1.66
T.2.4.2.	Pharmaceutical Microbiology	1.30	1.04	1.59	0.31	1.35	2.25	60.35	1.81
T.2.4.3.	Pharmacognosy – III	1.24	0.99	1.39	0.27	1.27	2.05	62.00	1.86
T.2.4.4.	Pharmaceutics –V (Hospital Pharmacy)	1.12	0.90	1.78	0.35	1.25	1.91	65.91	1.97
T.2.4.5.	Pharmaceutical Chemistry – V (Biochemistry)	1.66	1.32	2.61	0.52	1.84	2.28	80.70	2.42
T.2.4.6.	Pathophysiology of Common Diseases-II	1.12	0.90	1	0.2	1.1	2.13	51.64	1.54
T 3.5.1.	Pharmaceutical Chemistry - VI (Medicinal Chemistry - I)	1.08	0.86	2.65	0.53	1.39	2.70	51.81	1.55
T 3.5.2.	Pharmaceutics - VI (Pharmaceutical Technology I)	1.10	0.88	1.51	0.30	1.18	1.88	63.13	1.89
T 3.5.3.	Pharmacology – I	0.97	0.78	1.25	0.25	1.03	1.50	68.86	2.06
T 3.5.4.	Pharmacognosy –IV	1.53	1.22	2.02	0.40	1.62	2.33	69.52	2.08
T 3.5.5.	Pharmaceutical Analysis-II	1.12	0.90	1.40	0.28	1.18	2.20	53.72	1.61
T 3.6.1.	Pharmaceutical Chemistry - VII (Medicinal Chemistry - II)	1.14	0.91	2.17	0.43	1.34	2.00	67.00	2.01
T 3.6.2.	Pharmaceutics - VII(Biopharmaceutics & Pharmacokinetics)	1.56	1.24	1.54	0.30	1.54	1.92	80.62	2.41
T 3.6.3.	Pharmacology –II	1.21	0.96	1.13	0.22	1.18	1.50	79.13	2.37
T 3.6.4.	Pharmacognosy - V (Chemistry of Natural Products)	1.24	0.99	1.59	0.31	1.30	2.33	56.13	1.68
T 3.6.5.	Pharmaceutical Jurisprudence & Ethics	1.12	0.90	1.29	0.25	1.15	2.21	52.12	1.56
T 4.7.1.	Pharmaceutics – VIII (Pharmaceutical Technology - II)	1.66	1.33	1.93	0.38	1.71	2.75	62.43	1.87
T 4.7.2.	Pharmaceutical Chemistry _ VIII(Medicinal	0.95	0.76	1.18	0.23	1.00	2.1	47.76	1.43

	Chemistry – III								
T 4.7.3.	Pharmacology – III	1.66	1.33	1.39	0.27	1.60	1.75	91.94	2.75
T 4.7.4.	Pharmaceutical Analysis – III	0.95	0.76	2.08	0.41	1.18	2.20	53.72	1.61
T 4.7.5.	Pharmaceutical Biotechnology	1.68	1.35	1.77	0.35	1.70	2.00	85.20	2.55
T 4.7.6.	Pharmaceutical Industrial Management	1.29	1.03	1.20	0.24	1.27	1.84	69.07	2.07
T 4.8.1.	Pharmaceutics – IX	1.70	1.36	1.91	0.38	1.74	2.16	80.69	2.42
T 4.8.2.	Pharmaceutical Analysis – IV	1.25	1	2.45	0.49	1.49	2.40	62.08	1.86
T 4.8.3.	Pharmaceutical Chemistry –IX (Medicinal Chemistry-IV)	1.02	0.81	1.77	0.35	1.16	2.10	55.42	1.66
T 4.8.4.	Pharmacognosy – VI	1.20	0.96	1.89	0.37	1.34	2.25	59.77	1.79
T 4.8.5.	Pharmacology - IV (Clinical Pharmacy & Drug Interactions)	1.06	0.85	1.39	0.27	1.12	2.00	56.45	1.69
T 4.8.6.	Quality Assurances (Elective)	1.45	1.16	1.08	0.21	1.37	2.33	58.66	1.77
P.1.1.1.	Pharmaceutics-I (Dispensing Pharmacy)	2.31	1.85	2.5	0.5	2.35	2.45	95.91	2.87
P.1.1.2.	Pharmacognosy-I	1.93	1.54	2.68	0.53	2.08	2.40	86.66	2.60
P.1.1.3.	Pharmaceutical Chemistry-I (Inorg. Pharm. Chemistry)	2.01	1.61	2.48	0.49	2.10	2.80	75.32	2.25
P.1.1.4.	Applied Biostatistics & Computer Applications in Pharmacy	2.36	1.89	2.43	0.48	2.37	2.68	88.76	2.66
P 1.2.1.	Pharmaceutics -II(Unit operation)	2.61	2.09	2.45	0.49	2.58	2.75	93.81	2.79
P 1.2.2.	Pharmaceutical Chemistry -II(Inorganic & Physical Chemistry)	2.18	1.74	2.36	0.47	2.21	2.60	85.11	2.55
P 1.2.3.	Pharmaceutical Chemistry-III(Organic Chemistry-I)	2.03	1.62	2.03	0.40	2.02	2.50	81.04	2.43
P 1.2.4.	Anatomy, Physiology & Health Education (APHE)	2.38	1.90	2.01	0.40	2.30	2.47	93.23	2.79
P.2.3.1	Pharmaceutics -III (I Physical Pharmacy-I)	1.36	1.09	2.03	0.40	1.49	2.00	74.80	2.24
P.2.3.2.	Pharmaceutical Chemistry-IV (Organic Chemistry - II)	2.13	1.70	2.12	0.42	2.12	3.00	70.80	2.12

P.2.3.3.	Pharmacognosy –II	2.03	1.62	1.96	0.39	2.01	3.00	67.10	2.01
P.2.3.4.	Pharmaceutical Analysis – I	2.45	1.96	1.46	0.29	2.25	2.50	90.12	2.70
P.2.3.5.	A P H E-II	2.04	1.63	2.29	0.45	2.09	2.41	86.84	2.60
P.2.4.1.	Pharmaceutics – IV (Physical Pharmacy-II)	1.74	1.39	2.03	0.40	1.79	2.29	78.42	2.35
P.2.4.2.	Pharmaceutical Microbiology	1.69	1.35	2.10	0.42	1.77	2.54	69.72	2.09
P.2.4.3.	Pharmacognosy – III	1.74	1.39	1.86	0.37	1.76	3.00	58.73	1.76
P.2.4.4.	Pharmaceutics –V (Hospital Pharmacy)	2.07	1.66	2.30	0.46	2.12	3.00	70.66	2.12
P.2.4.5.	Pharmaceutical Chemistry – V (Biochemistry)	2.55	2.04	2.53	0.50	2.54	2.20	97.54	2.92
P 3.5.1.	Pharmaceutical Chemistry - VI (Medicinal Chemistry - I)	2.59	2.07	2.70	0.54	2.61	3.00	87.00	2.70
P 3.5.2.	Pharmaceutics - VI (Pharmaceutical Technology I)	2.12	1.70	2.59	0.51	2.21	2.90	76.51	2.95
P 3.5.3.	Pharmacology – I	1.65	1.32	2.36	0.47	1.79	2.25	79.64	2.23
P 3.5.4.	Pharmacognosy –IV	2.48	1.99	1.91	0.38	2.37	2.41	98.46	2.95
P 3.5.5.	Pharmaceutical Analysis-II	2.13	1.70	2.12	0.42	2.12	2.62	81.06	2.43
P 3.6.1.	Pharmaceutical Chemistry - VII (Medicinal Chemistry - II)	2.04	1.63	2.29	0.45	2.09	2.60	80.50	2.41
P 3.6.2.	Pharmaceutics - VII(Biopharmaceutics & Pharmacokinetics)	2.23	1.78	2.63	0.52	2.30	2.75	83.89	2.51
P 3.6.3.	Pharmacology –II	1.80	1.44	2.25	0.45	1.89	2.50	75.64	2.26
P 3.6.4.	Pharmacognosy - V (Chemistry of Natural Products)	1.76	1.41	2.34	0.46	1.87	2.41	77.92	2.33
P 3.6.6	Project report	2.76	-	-	-	2.76	2.82	97.87	2.93
P 4.7.1.	Pharmaceutics – VIII (Pharmaceutical Technology - II)	2.75	2.2	2.85	0.57	2.77	3.00	92.50	2.77
P 4.7.2.	Pharmaceutical Chemistry – VIII(Medicinal Chemistry - III	2.14	1.71	2	0.4	2.11	2.50	84.40	2.53
P 4.7.3.	Pharmacology – III	1.91	1.53	1.52	0.30	1.83	2.25	81.51	2.44

P 4.7.4.	Pharmaceutical Analysis – III	2.03	1.62	1.96	0.39	2.01	3.00	67.10	2.01
P 4.8.1.	Pharmaceutics – IX	2.75	2.2	2.85	0.57	2.77	3.00	92.50	2.77
P 4.8.2.	Pharmaceutical Analysis – IV	2.45	1.96	1.46	0.29	2.25	2.80	80.46	2.41
P 4.8.3.	Pharmaceutical Chemistry –IX (Medicinal Chemistry-IV)	2.04	1.63	2.29	0.45	2.09	3.00	69.76	2.09
P 4.8.4.	Pharmacognosy – VI	2.33	1.86	2.39	0.47	2.34	3.00	78.16	2.34
P 4.8.7.	Industrial training report	2.75	-	-	-	2.75	3.00	91.66	2.75

Consolidated: University + Internal Marks 2016-17

Course code	Course name	University attainment		Sessional attainment		Attainment level		%Attainment (Achieved / required) X 100	Attainment in scale 3
		100 %	**80% (100 % X0.8)**	**100 %**	**20% (100 % X 0.2)**	**Achieved**	**Required**		
T.1.1.1.	Pharmaceutics-I (Dispensing Pharmacy)	1.06	0.85	1.50	0.30	1.15	2.05	56.09	1.68
T.1.1.2.	Pharmacognosy-I	0.96	0.77	1.58	0.31	1.08	2.07	52.17	1.56
T.1.1.3.	Pharmaceutical Chemistry-I (Inorg. Pharm. Chemistry)	1.00	0.80	1.53	0.31	1.11	2.65	41.73	1.25
T.1.1.4.	Applied Biostatistics & Computer Applications in Pharmacy	1.20	0.96	2.10	0.42	1.38	2.08	66.34	1.99
T.1.1.5.	Communicating Skills and soft skill development	1.13	0.91	2.33	0.47	1.37	2.30	59.65	1.78
T 1.2.1.	Pharmaceutics - II(Unit operation)	1.28	1.03	2.15	0.43	1.46	1.66	87.71	2.63
T 1.2.2.	Pharmaceutical Chemistry - II(Inorganic & Physical Chemistry)	1.08	0.87	1.81	0.36	1.23	2.85	43.12	1.29
T 1.2.3.	Pharmaceutical Chemistry-III(Organic	1.00	0.80	1.38	0.27	1.07	1.88	57.06	1.71

	Chemistry-I)								
T 1.2.4.	Anatomy, Physiology & Health Education (APHE)	1.48	1.19	1.83	0.37	1.55	2.13	73.03	2.19
T 1.2.5.	Industrial Psychology	1.13	0.91	1.38	0.28	1.18	2.17	54.57	1.63
5555	Environmental Science	2.75	2.20	2.13	0.43	2.63	2.90	90.55	2.71
T.2.3.1	Pharmaceutics - III (Physical Pharmacy-I)	1.09	0.87	1.56	0.31	1.18	2.04	58.03	1.74
T.2.3.2.	Pharmaceutical Chemistry-IV (Organic Chemistry - II)	1.09	0.87	1.84	0.37	1.24	1.70	73.00	2.19
T.2.3.3.	Pharmacognosy – II	1.57	1.26	1.42	0.28	1.54	1.83	84.37	2.53
T.2.3.4.	Pharmaceutical Analysis – I	1.01	0.81	1.28	0.26	1.07	2.28	46.88	1.40
T.2.3.5.	A P H E-II	1.27	1.08	1.63	0.33	1.41	1.70	82.76	2.48
T.2.3.6.	Pathophysiology of Common Diseases-I	1.21	0.96	1.13	0.23	1.19	1.98	59.94	1.79
T.2.4.1.	Pharmaceutics – IV (Physical Pharmacy-II)	1.24	0.99	1.59	0.32	1.31	2.29	57.24	1.71
T.2.4.2.	Pharmaceutical Microbiology	1.43	1.15	1.48	0.30	1.45	2.25	64.26	1.92
T.2.4.3.	Pharmacognosy – III	1.04	0.84	1.66	0.33	1.17	2.05	56.87	1.68
T.2.4.4.	Pharmaceutics – V (Hospital Pharmacy)	1.25	1.00	1.34	0.27	1.27	1.91	66.54	1.99
T.2.4.5.	Pharmaceutical Chemistry – V (Biochemistry)	1.30	1.04	1.59	0.32	1.36	2.28	59.56	1.78
T.2.4.6.	Pathophysiology of Common Diseases-II	1.24	0.99	1.39	0.28	1.27	2.13	59.81	1.79
T 3.5.1.	Pharmaceutical Chemistry - VI (Medicinal Chemistry - I)	1.12	0.90	1.78	0.36	1.26	2.70	46.62	1.39
T 3.5.2.	Pharmaceutics - VI (Pharmaceutical Technology I)	1.02	0.82	1.91	0.38	1.20	1.88	63.67	1.91
T 3.5.3.	Pharmacology – I	1.12	0.90	1.00	0.20	1.10	1.50	73.33	2.19
T 3.5.4.	Pharmacognosy –	1.08	0.87	2.65	0.53	1.40	2.33	60.04	1.80

	IV								
T 3.5.5.	Pharmaceutical Analysis-II	1.10	0.89	1.51	0.30	1.19	2.20	53.95	1.61
T 3.6.1.	Pharmaceutical Chemistry - VII (Medicinal Chemistry -II)	0.98	0.78	1.25	0.25	1.03	2.00	51.65	1.54
T 3.6.2.	Pharmaceutics - VII(Biopharmaceutics &Pharmacokinetics)	1.25	1.00	2.04	0.41	1.41	1.92	73.48	2.20
T 3.6.3.	Pharmacology –II	1.12	0.90	1.40	0.28	1.18	1.50	78.80	2.36
T 3.6.4.	Pharmacognosy - V (Chemistry of Natural Products)	1.14	0.91	2.17	0.43	1.34	2.33	57.51	1.72
T 3.6.5.	Pharmaceutical Jurisprudence & Ethics	1.12	0.90	1.29	0.25	1.15	2.21	52.12	1.56
T 4.7.1.	Pharmaceutics – VIII (Pharmaceutical Technology - II)	1.66	1.33	1.93	0.39	1.72	2.75	62.43	1.87
T 4.7.2.	Pharmaceutical Chemistry – VIII(Medicinal Chemistry – III	0.96	0.77	1.18	0.24	1.00	2.10	47.76	1.43
T 4.7.3.	Pharmacology – III	1.66	1.33	1.39	0.28	1.61	1.75	91.94	2.75
T 4.7.4.	Pharmaceutical Analysis – III	0.95	0.77	2.08	0.42	1.18	2.20	53.72	1.61
T 4.7.5.	Pharmaceutical Biotechnology	1.68	1.35	1.77	0.35	1.70	2.00	85.20	2.55
T 4.7.6.	Pharmaceutical Industrial Management	1.29	1.03	1.20	0.24	1.27	1.84	69.07	2.07
T 4.8.1.	Pharmaceutics – IX	1.70	1.36	1.91	0.38	1.74	2.16	80.69	2.42
T 4.8.2.	Pharmaceutical Analysis – IV	1.25	1.00	2.45	0.49	1.49	2.40	62.08	1.86
T 4.8.3.	Pharmaceutical Chemistry –IX (Medicinal Chemistry- IV)	1.02	0.81	1.77	0.35	1.16	2.10	55.42	1.66
T 4.8.4.	Pharmacognosy – VI	1.20	0.97	1.89	0.38	1.35	2.25	59.77	1.79
T 4.8.5.	Pharmacology - IV (Clinical Pharmacy & Drug	1.06	0.85	1.39	0.28	1.13	2.00	56.45	1.69

	Interactions)								
T 4.8.6.	Quality Assurances (Elective)	1.45	1.16	1.08	0.22	1.38	2.33	59.05	1.77
P.1.1.1.	Pharmaceutics-I (Dispensing Pharmacy)	2.31	1.85	2.50	0.50	2.35	2.45	95.91	2.87
P.1.1.2.	Pharmacognosy-I	1.93	1.55	2.68	0.54	2.08	2.40	86.66	2.59
P.1.1.3.	Pharmaceutical Chemistry-I (Inorg. Pharm. Chemistry)	2.01	1.61	2.48	0.50	2.11	2.80	75.32	2.25
P.1.1.4.	Applied Biostatistics & Computer Applications in Pharmacy	2.36	1.89	2.43	0.49	2.38	2.68	88.76	2.66
P 1.2.1.	Pharmaceutics - II(Unit operation)	2.61	2.09	2.45	0.49	2.58	2.75	93.81	2.79
P 1.2.2.	Pharmaceutical Chemistry - II(Inorganic & Physical Chemistry)	2.18	1.74	2.36	0.47	2.21	2.60	85.11	2.55
P 1.2.3.	Pharmaceutical Chemistry-III(Organic Chemistry-I)	2.03	1.62	2.03	0.41	2.03	2.50	81.04	2.43
P 1.2.4.	Anatomy, Physiology & Health Education (APHE)	2.38	1.90	2.01	0.40	2.30	2.47	93.23	2.79
P.2.3.1	Pharmaceutics - III (I Physical Pharmacy-I)	1.36	1.09	2.03	0.41	1.50	2.00	74.80	2.24
P.2.3.2.	Pharmaceutical Chemistry-IV (Organic Chemistry - II)	2.37	1.90	2.57	0.52	2.42	3.00	80.50	2.41
P.2.3.3.	Pharmacognosy – II	2.13	1.70	2.12	0.42	2.12	3.00	70.80	2.12
P.2.3.4.	Pharmaceutical Analysis – I	2.03	1.62	1.96	0.39	2.01	2.50	80.52	2.41
P.2.3.5.	A P H E-II	2.45	1.96	1.46	0.29	2.25	2.41	93.48	2.80
P.2.4.1.	Pharmaceutics – IV (Physical Pharmacy-II)	1.53	1.22	1.86	0.37	1.59	2.29	69.67	2.09
P.2.4.2.	Pharmaceutical Microbiology	1.74	1.39	2.03	0.41	1.80	2.54	70.70	2.12
P.2.4.3.	Pharmacognosy –	1.69	1.35	2.10	0.42	1.77	3.00	59.03	1.77

	III								
P.2.4.4.	Pharmaceutics – V (Hospital Pharmacy)	1.74	1.39	1.86	0.37	1.76	3.00	58.73	1.76
P.2.4.5.	Pharmaceutical Chemistry – V (Biochemistry)	2.07	1.66	2.30	0.46	2.12	2.20	96.36	2.89
P 3.5.1.	Pharmaceutical Chemistry - VI (Medicinal Chemistry - I)	2.55	2.04	2.53	0.51	2.55	3.00	84.86	2.54
P 3.5.2.	Pharmaceutics - VI (Pharmaceutical Technology I)	2.59	2.07	2.70	0.54	2.61	2.90	90.00	2.70
P 3.5.3.	Pharmacology – I	2.12	1.70	2.59	0.52	2.22	2.25	98.62	2.95
P 3.5.4.	Pharmacognosy – IV	1.65	1.32	2.36	0.47	1.79	2.41	74.35	2.23
P 3.5.5.	Pharmaceutical Analysis-II	2.48	1.99	1.91	0.38	2.37	2.62	90.57	2.71
P 3.6.1.	Pharmaceutical Chemistry - VII (Medicinal Chemistry -II)	2.04	1.63	2.29	0.46	2.09	2.60	80.50	2.41
P 3.6.2.	Pharmaceutics - VII(Biopharmaceutics & Pharmacokinetics)	2.23	1.78	2.63	0.53	2.31	2.75	83.89	2.51
P 3.6.3.	Pharmacology –II	1.80	1.44	2.25	0.45	1.89	2.50	75.64	2.26
P 3.6.4.	Pharmacognosy - V (Chemistry of Natural Products)	1.76	1.41	2.34	0.47	1.88	2.41	77.92	2.33
P 3.6.6	Project report	2.76	-	-	-	2.76	2.82	97.87	2.93
P 4.7.1.	Pharmaceutics – VIII (Pharmaceutical Technology - II)	2.08	1.66	1.75	0.35	2.01	3.00	67.00	2.01
P 4.7.2.	Pharmaceutical Chemistry – VIII(Medicinal Chemistry - III	2.14	1.71	2.00	0.40	2.11	2.50	84.40	2.53
P 4.7.3.	Pharmacology – III	1.91	1.53	1.52	0.30	1.83	2.25	81.51	2.44
P 4.7.4.	Pharmaceutical Analysis – III	2.33	1.87	2.39	0.48	2.35	3.00	78.16	2.34
P 4.8.1.	Pharmaceutics – IX	2.75	2.20	2.85	0.57	2.78	3.00	92.50	2.77

P 4.8.2.	Pharmaceutical Analysis – IV	2.72	2.18	2.87	0.58	2.76	2.80	98.39	2.95
P 4.8.3.	Pharmaceutical Chemistry –IX (Medicinal Chemistry- IV)	2.75	2.20	2.70	0.54	2.74	3.00	91.36	2.74
P 4.8.4.	Pharmacognosy – VI	2.54	2.03	2.83	0.57	2.60	3.00	86.53	2.59
P 4.8.7.	Industrial training report	2.75	-	-	-	2.75	3.00	91.66	2.75

Consolidated: University + Internal Marks 2017-18

Course code	Course name	University attainment		Sessional attainment		Attainment level		%Attainment (Achieved / required) X 100	Attainment in scale 3
		100 %	80% (100 % X 0.8)	100 %	20% (100 % X 0.2)	Achieved	Required		
BP101T	Human anatomy and physiology-I	1.20	0.90	1.62	0.40	1.30	1.50	86.93	2.60
BP102T	Pharmaceutical Analysis-I	1.43	1.07	1.98	0.50	1.57	2.10	74.71	2.24
BP103T	Pharmaceutics- I	1.63	1.22	2.38	0.57	1.79	2.00	89.50	2.68
BP104T	Pharmaceutical Inorganic Chemistry	1.48	1.11	2.28	0.57	1.68	2.20	76.36	2.29
BP105T	Communication Skills	1.15	0.40	2.13	0.32	0.72	1.20	60.00	1.80
BP106RBT	Remedial Biology	2.00	0.70	2.00	0.30	1.00	1.60	62.50	1.88
BP106RMT	Remedial mathematics	0.94	0.33	1.94	0.29	0.62	1.50	41.33	1.23
BP201T	Human Anatomy and Physiology II	1.25	0.94	2.36	0.59	1.53	2.10	72.66	2.18
BP202T	Pharmaceutical Organic Chemistry I	1.32	0.99	2.64	0.66	1.65	2.20	75.00	2.25
BP203T	Biochemistry	1.75	1.31	2.80	0.70	2.01	2.79	72.04	2.16
BP204T	Pathophysiology	1.77	1.33	2.52	0.63	1.95	2.40	81.41	2.44
BP205T	Computer Applications in Pharmacy	2.39	0.37	1.07	0.36	0.73	1.30	56.30	1.69
BP206T	Environmental sciences	2.77	0.39	1.11	0.42	0.80	1.40	57.28	1.72
T.2.3.1	Pharmaceutics -III (I Physical Pharmacy-I)	1.37	1.10	1.78	0.36	1.45	2.04	71.12	2.13
T.2.3.2.	Pharmaceutical	1.34	1.07	2.05	0.40	1.47	1.70	86.47	2.59

	Chemistry-IV (Organic Chemistry - II)								
T.2.3.3.	Pharmacognosy – II	1.26	1.01	2.23	0.44	1.45	1.83	79.12	2.38
T.2.3.4.	Pharmaceutical Analysis – I	1.26	1.01	1.66	0.33	1.34	2.42	55.28	1.65
T.2.3.5.	A P H E-II	1.46	1.17	1.71	0.34	1.51	1.70	88.70	2.66
T.2.3.6.	Pathophysiology of Common Diseases-I	1.26	1.01	1.55	0.31	1.32	1.98	66.56	2.00
T.2.4.1.	Pharmaceutics – IV (Physical Pharmacy-II)	1.52	1.22	1.75	0.35	2.10	2.29	92.03	2.76
T.2.4.2.	Pharmaceutical Microbiology	1.54	1.23	1.52	0.30	1.53	2.25	68.17	2.05
T.2.4.3.	Pharmacognosy – III	1.26	1.00	2.06	0.41	1.41	2.05	68.87	2.07
T.2.4.4.	Pharmaceutics –V (Hospital Pharmacy)	1.71	1.37	2.12	0.42	1.79	1.91	93.71	2.81
T.2.4.5.	Pharmaceutical Chemistry – V (Biochemistry)	1.12	0.90	2.06	0.41	1.31	2.28	57.45	1.72
T.2.4.6.	Pathophysiology of Common Diseases-II	1.34	1.07	1.69	0.34	1.41	2.13	66.25	1.98
T 3.5.1.	Pharmaceutical Chemistry - VI (Medicinal Chemistry - I)	1.03	0.82	1.89	0.38	1.20	2.70	44.37	1.33
T 3.5.2.	Pharmaceutics - VI (Pharmaceutical Technology I)	1.39	1.11	1.71	0.34	1.45	1.88	77.34	2.32
T 3.5.3.	Pharmacology – I	1.16	0.93	1.77	0.35	1.28	1.50	85.40	2.56
T 3.5.4.	Pharmacognosy – IV	1.10	0.89	1.91	0.38	1.27	2.33	54.29	1.62
T 3.5.5.	Pharmaceutical Analysis-II	1.07	0.86	1.48	0.30	1.15	2.20	52.36	1.57
T 3.6.1.	Pharmaceutical Chemistry - VII (Medicinal Chemistry -II)	1.09	0.87	1.25	0.25	1.12	2.00	56.15	1.68
T 3.6.2.	Pharmaceutics - VII(Biopharmaceutics &Pharmacokinetic)	1.14	0.91	1.92	0.38	1.30	1.92	67.74	2.03
T 3.6.3.	Pharmacology –II	1.35	1.09	1.58	0.32	1.40	1.50	93.40	2.80

T 3.6.4.	Pharmacognosy - V (Chemistry of Natural Products)	1.21	0.97	1.73	0.35	1.32	2.33	56.52	1.70
T 3.6.5.	Pharmaceutical Jurisprudence & Ethics	1.60	1.28	2.18	0.44	1.72	2.21	77.60	2.32
T 4.7.1.	Pharmaceutics – VIII (Pharmaceutical Technology - II)	1.78	1.42	2.65	0.53	1.96	2.75	71.09	2.13
T 4.7.2.	Pharmaceutical Chemistry – VIII(Medicinal Chemistry - III	1.10	0.88	1.29	0.26	1.14	2.10	54.04	1.62
T 4.7.3.	Pharmacology – III	1.49	1.19	1.59	0.32	1.51	1.75	86.05	2.58
T 4.7.4.	Pharmaceutical Analysis – III	1.29	1.03	1.92	0.39	1.42	2.20	64.68	1.94
T 4.7.5.	Pharmaceutical Biotechnology	1.34	1.07	1.98	0.40	1.47	2.00	73.35	2.20
T 4.7.6.	Pharmaceutical Industrial Management	1.44	1.15	1.98	0.40	1.55	1.84	84.02	2.52
T 4.8.1.	Pharmaceutics – IX	1.51	1.21	2.34	0.47	1.68	2.16	77.31	2.31
T 4.8.2.	Pharmaceutical Analysis – IV	1.22	0.98	2.32	0.46	1.44	2.40	66.57	1.99
T 4.8.3.	Pharmaceutical Chemistry –IX (Medicinal Chemistry- IV)	1.17	0.94	1.59	0.32	1.25	2.10	56.96	1.79
T 4.8.4.	Pharmacognosy – VI	1.22	0.98	1.76	0.35	1.33	2.25	58.93	1.76
T 4.8.5.	Pharmacology - IV (Clinical Pharmacy & Drug Interactions)	1.54	1.22	1.78	0.35	1.57	2.00	78.50	2.36
T 4.8.6.	Quality Assurances (Elective)	2.14	1.71	2.15	0.43	2.14	2.33	91.88	2.75
BP107P	Human anatomy and physiology-I	2.42	0.85	2.18	0.33	1.17	2.00	58.60	1.75
BP108P	Pharmaceutical Analysis-I	2.17	0.76	2.17	0.32	1.08	2.00	54.10	1.62
BP109P	Pharmaceutics- I	2.20	0.77	2.57	0.38	1.15	2.00	57.70	1.73
BP110P	Pharmaceutical Inorganic Chemistry	2.27	0.79	2.55	0.38	1.18	2.00	58.75	1.76

BP111P	Communication Skills	2.47	0.37	2.81	0.28	0.65	1.10	59.09	1.77
BP112RBP	Remedial Biology	3.00	0.45	3.00	0.30	0.75	1.20	62.50	1.87
BP207P	Human Anatomy and Physiology II	2.79	0.97	2.32	0.35	1.32	2.00	66.10	1.98
BP208P	Pharmaceutical Organic Chemistry I	2.95	1.03	2.84	0.43	1.46	2.00	72.80	2.18
BP209P	Biochemistry	2.79	0.97	2.80	0.42	1.39	2.10	66.38	1.99
BP210P	Computer Applications in Pharmacy	2.93	0.29	2.86	0.29	0.58	1.00	57.70	1.73
P.2.3.1	Pharmaceutics -III (I Physical Pharmacy-I)	1.92	1.54	1.80	0.36	1.90	2.00	94.90	2.84
P.2.3.2.	Pharmaceutical Chemistry-IV (Organic Chemistry - II)	2.92	2.34	2.92	0.58	2.92	3.00	97.26	2.91
P.2.3.3.	Pharmacognosy – II	2.97	2.38	2.97	0.59	2.97	3.00	98.83	2.96
P.2.3.4.	Pharmaceutical Analysis – I	2.06	1.65	1.91	0.38	2.03	2.50	81.16	2.43
P.2.3.5.	A P H E-II	2.05	1.64	1.82	0.36	2.00	2.41	82.94	2.48
P.2.4.1.	Pharmaceutics – IV (Physical Pharmacy-II)	1.52	1.22	1.75	0.35	1.57	2.29	68.62	2.05
P.2.4.2.	Pharmaceutical Microbiology	1.74	1.39	2.02	0.40	1.79	2.54	70.59	2.12
P.2.4.3.	Pharmacognosy – III	2.69	2.15	2.55	0.51	2.66	3.00	88.70	2.66
P.2.4.4.	Pharmaceutics –V (Hospital Pharmacy)	2.77	2.22	2.72	0.54	2.76	3.00	91.96	2.75
P.2.4.5.	Pharmaceutical Chemistry – V (Biochemistry)	2.11	1.69	2.49	0.50	2.18	2.20	99.27	2.98
P 3.5.1.	Pharmaceutical Chemistry - VI (Medicinal Chemistry - I)	2.94	2.35	2.87	0.57	2.92	3.00	97.40	2.92
P 3.5.2.	Pharmaceutics - VI (Pharmaceutical Technology I)	2.87	2.30	2.57	0.51	2.81	2.90	96.89	2.90
P 3.5.3.	Pharmacology – I	2.10	1.68	1.91	0.38	2.06	2.25	91.55	2.74
P 3.5.4.	Pharmacognosy – IV	1.87	1.50	1.52	0.30	1.80	2.41	74.68	2.24
P 3.5.5.	Pharmaceutical	2.53	2.04	1.88	0.37	2.41	2.62	91.98	2.75

	Analysis-II								
P 3.6.1.	Pharmaceutical Chemistry - VII (Medicinal Chemistry -II)	2.66	2.12	2.21	0.44	2.50	2.60	96.15	2.88
P 3.6.2.	Pharmaceutics – VII(Biopharmaceutics &Pharmacokinetic)	2.67	2.14	2.57	0.57	2.71	2.75	98.54	2.95
P 3.6.3.	Pharmacology –II	2.41	1.92	1.75	0.35	2.27	2.50	90.80	2.72
P 3.6.4.	Pharmacognosy - V (Chemistry of Natural Products)	1.48	1.19	1.59	0.32	1.50	2.41	62.24	1.86
P 3.6.6	Project report	-	-	-	-	2.78	2.82	98.58	2.95
P 4.7.1.	Pharmaceutics – VIII (Pharmaceutical Technology - II)	2.95	2.36	3.00	0.60	2.96	3.00	98.66	2.96
P 4.7.2.	Pharmaceutical Chemistry – VIII(Medicinal Chemistry - III	2.05	1.64	1.78	0.35	1.99	2.50	79.52	2.38
P 4.7.3.	Pharmacology – III	1.90	1.52	1.95	0.39	1.91	2.25	84.93	2.54
P 4.7.4.	Pharmaceutical Analysis – III	2.93	2.34	3.00	0.60	2.94	3.00	98.00	2.94
P 4.8.1.	Pharmaceutics – IX	3.00	2.40	3.00	0.60	3.00	3.00	100.00	3.00
P 4.8.2.	Pharmaceutical Analysis – IV	2.27	1.81	2.85	0.57	2.38	2.80	85.14	2.55
P 4.8.3.	Pharmaceutical Chemistry –IX (Medicinal Chemistry- IV)	2.98	2.38	2.73	0.54	2.92	3.00	97.33	2.91
P 4.8.4.	Pharmacognosy – VI	2.95	2.36	2.88	0.58	2.94	3.00	97.83	2.93
P 4.8.7.	Industrial training report	3.00	-	-	-	-	3.00	100.00	3.00

Consolidated: University + Internal Marks 2018-19

Course code	Course name	University attainment		Sessional attainment		Attainment level		%Attainment (Achieved / required) X 100	Attainment in scale 3
		100 %	80% (100 % X 0.8)	100 %	20% (100 % X 0.2)	Achieved	Required		

BP101T	Human anatomy and physiology-I	1.10	0.82	2.93	0.73	1.55		100.00	3.00
BP102T	Pharmaceutical Analysis-I	1.03	0.77	2.86	0.71	1.48	2.10	70.47	2.11
BP103T	Pharmaceutics- I	1.55	1.16	3.00	0.75	1.91	2.00	95.50	2.86
BP104T	Pharmaceutical Inorganic Chemistry	1.48	1.11	2.96	0.74	1.85	2.20	84.09	2.52
BP105T	Communication Skills	1.00	0.35	3.00	0.45	0.80	1.20	66.66	2.00
BP106RBT	Remedial Biology	3.00	1.05	3.00	0.45	1.50	1.60	93.75	2.81
BP106RMT	Remedial mathematics	2.88	1.00	3.00	0.45	1.45	1.50	96.66	2.90
BP201T	Human Anatomy and Physiology II						2.10		
BP202T	Pharmaceutical Organic Chemistry I						2.20		
BP203T	Biochemistry						2.79		
BP204T	Pathophysiology						2.40		
BP205T	Computer Applications in Pharmacy						1.30		
BP206T	Environmental sciences						1.4		
BP301T	Pharmaceutical Organic Chemistry II	1.15	0.86	2.92	0.73	1.59	2.80	56.78	1.70
BP302T	Physical PharmaceuticsI	1.80	1.35	2.83	0.70	2.05	2.71	75.64	2.26
BP303T	Pharmaceutical Microbiology	2.22	1.66	2.76	0.69	2.35	2.40	97.91	2.93
BP304T	Pharmaceutical Engineering	1.04	0.78	2.66	0.67	1.44	2.40	60.00	1.80
BP401T	Pharmaceutical Organic Chemistry III						2.56		
BP402T	Medicinal Chemistry I						2.70		
BP403T	Physical Pharmaceutics II						2.75		
BP404T	Pharmacology I						2.30		
BP405T	Pharmacognosy I						2.75		
T 3.5.1.	Pharmaceutical Chemistry - VI (Medicinal Chemistry - I)	0.88	0.70	2.36	0.47	1.17	2.70	43.40	1.30
T 3.5.2.	Pharmaceutics -	1.30	1.04	2.35	0.47	1.51	1.88	80.31	2.40

	VI (Pharmaceutical Technology I)								
T 3.5.3.	Pharmacology – I	1.36	1.09	2.18	0.44	1.50	1.50	100.00	3.00
T 3.5.4.	Pharmacognosy – IV	1.08	0.87	2.28	0.46	1.32	2.33	56.65	1.69
T 3.5.5.	Pharmaceutical Analysis-II	1.14	0.91	2.46	0.49	1.40	2.20	63.63	1.90
T 3.6.1.	Pharmaceutical Chemistry - VII (Medicinal Chemistry -II)						2.00		
T 3.6.2.	Pharmaceutics - VII(Biopharmaceutics & Pharmacokinetic)						1.92		
T 3.6.3.	Pharmacology –II						1.50		
T 3.6.4.	Pharmacognosy - V (Chemistry of Natural Products)						2.33		
T 3.6.5.	Pharmaceutical Jurisprudence & Ethics						2.21		
T 4.7.1.	Pharmaceutics – VIII (Pharmaceutical Technology - II)	1.45	1.16	2.27	0.45	1.61	2.75	58.54	1.75
T 4.7.2.	Pharmaceutical Chemistry _ VIII(Medicinal Chemistry - III	1.20	0.96	2.50	0.50	1.46	2.10	69.52	2.08
T 4.7.3.	Pharmacology – III	0.95	0.76	2.20	0.49	1.24	1.75	70.85	2.12
T 4.7.4.	Pharmaceutical Analysis – III	0.92	0.73	2.49	0.50	1.23	2.20	55.90	1.67
T 4.7.5.	Pharmaceutical Biotechnology	1.13	0.90	2.23	0.45	1.35	2.00	67.50	2.02
T 4.7.6.	Pharmaceutical Industrial Management	1.18	0.94	1.71	0.34	1.28	1.84	69.56	2.08
T 4.8.1.	Pharmaceutics – IX						2.16		
T 4.8.2.	Pharmaceutical Analysis – IV						2.40		
T 4.8.3.	Pharmaceutical Chemistry –IX (Medicinal Chemistry- IV)						2.10		
T 4.8.4.	Pharmacognosy – VI						2.25		

T 4.8.5.	Pharmacology - IV (Clinical Pharmacy & Drug Interactions)						2.00		
T 4.8.6.	Quality Assurances (Elective)						2.33		
BP107P	Human anatomy and physiology-I	2.73	0.96	2.48	0.37	1.32	2.00	66.00	1.98
BP108P	Pharmaceutical Analysis-I	2.96	1.03	3.00	0.45	1.48	2.00	74.00	2.22
BP109P	Pharmaceutics- I	2.76	0.97	2.93	0.43	1.40	2.00	69.80	2.09
BP110P	Pharmaceutical Inorganic Chemistry	2.63	0.92	2.88	0.43	1.35	2.00	67.60	2.02
BP111P	Communication Skills	2.90	0.44	2.98	0.29	0.73	1.10	65.90	1.97
BP112RBP	Remedial Biology	3.00	0.45	3.00	0.30	0.75	1.20	62.50	1.87
BP207P	Human Anatomy and Physiology II						2.00		
BP208P	Pharmaceutical Organic Chemistry I						2.00		
BP209P	Biochemistry						2.10		
BP210P	Computer Applications in Pharmacy						1.00		
BP305P	Pharmaceutical Organic Chemistry II	2.83	0.99	2.97	0.44	1.43	2.95	48.47	1.45
BP306P	Physical PharmaceuticsI	2.84	0.99	2.81	0.42	1.41	2.57	54.86	1.64
BP307P	Pharmaceutical Microbiology	2.84	0.99	2.02	0.30	1.29	2.40	53.75	1.61
BP308P	Pharmaceutical Engineering	2.73	0.95	2.77	0.42	1.36	2.33	58.36	1.75
BP406P	Medicinal Chemistry I						2.50		
BP407P	Physical Pharmaceutics II						2.75		
BP408P	Pharmacology I						2.40		
BP409P	Pharmacognosy I						2.50		
P 3.5.1.	Pharmaceutical Chemistry - VI (Medicinal Chemistry - I)	2.53	2.02	2.53	0.51	2.52	3.00	84.00	2.52
P 3.5.2.	Pharmaceutics - VI (Pharmaceutical	2.40	1.92	2.52	0.50	2.42	2.90	83.44	2.50

	Technology I)								
P 3.5.3.	Pharmacology – I	1.85	1.48	2.23	0.45	1.92	2.25	85.33	2.55
P 3.5.4.	Pharmacognosy – IV	1.29	1.03	1.71	0.34	1.37	2.41	56.84	1.70
P 3.5.5.	Pharmaceutical Analysis-II	2.50	2.00	2.42	0.48	2.48	2.62	94.65	2.83
P 3.6.1.	Pharmaceutical Chemistry - VII (Medicinal Chemistry -II)						2.60		
P 3.6.2.	Pharmaceutics – VII(Biopharmaceutics &Pharmacokinetic)						2.75		
P 3.6.3.	Pharmacology –II						2.50		
P 3.6.4.	Pharmacognosy - V (Chemistry of Natural Products)						2.41		
P 3.6.6	Project report						2.82		
P 4.7.1.	Pharmaceutics – VIII (Pharmaceutical Technology - II)	1.86	1.48	2.54	0.50	1.98	3.00	66.00	1.98
P 4.7.2.	Pharmaceutical Chemistry – VIII(Medicinal Chemistry - III	2.47	1.98	2.62	0.52	2.50	2.50	100.00	3.00
P 4.7.3.	Pharmacology – III	2.15	1.72	2.23	0.45	2.16	2.25	96.00	2.88
P 4.7.4.	Pharmaceutical Analysis – III	2.64	2.11	2.69	0.54	2.64	3.00	88.00	2.64
P 4.8.1.	Pharmaceutics – IX						3.00		
P 4.8.2.	Pharmaceutical Analysis – IV						2.80		
P 4.8.3.	Pharmaceutical Chemistry –IX (Medicinal Chemistry- IV)						3.00		
P 4.8.4.	Pharmacognosy – VI						3.00		
P 4.8.7.	Industrial training report						3.00		

The following are the conclusions drawn from the analysis of results (both internal and university examination).

1. 2015-16

- ***Practicals***: 24 courses (out of 37) have attained more than 75% aggregate of learning outcomes.
- ***Theory***: 12 courses (out of 45) have attained more than 75% aggregate of learning outcomes.

2. 2016-17

- ***Practicals***: 25 courses (out of 37) have attained more than 85% aggregate of learning outcomes.
- ***Theory***: 09 courses (out of 45) have attained more than 75% aggregate of learning outcomes.

3. 2017-18

- ***Practicals***: 12 courses (out of 21) have attained more than 90% aggregate of learning outcomes.
- ***Theory***: 10 courses (out of 24) have attained more than 75% aggregate of learning outcomes.

***4*. 2018-19**

- ***Practicals***: 08 courses (out of 19) have attained more than 80% aggregate of learning outcomes.
- ***Theory***: 12 courses (out of 22) have attained more than 70% aggregate of learning outcomes.

The attainment of outcomes is higher compared to the academic year 2017-18.

3.3 Attainment of Program Outcomes 40

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

*(Describe the assessment tools and processes used to gather the data upon which theevaluation of each the Program Outcome is based indicating the frequency withwhich these processes are carried out. Describe the assessment processes thatdemonstrate the degree to which the Program Outcomes are attained and *documentthe attainment levels)*

The assessment tools and processes to gather data was mentioned in 3.2.1 and 3.2.2. The course outcomes are mapped for each program outcome. The attainment of course outcomes achieved in the years 2015-16, 2016-17, 2017-18 and 2018-19 are translated into program outcomes based on the CO-PO Matrixes and course–PO Matrixes.

The following are the assessments

Assessment Tools:

Several tools are described for assessing course outcomes. The program outcomes are based on the course outcomes. Thus the tools remain the same for assessing the program outcomes. In addition, the tools of survey based on the alumni and exit surveys are considered.

The tools broadly are

- Employer surveys- Higher education and placement
- Student exit surveys
- Alumni surveys - yearly
- Faculty surveys – yearly
- Entry-level Students surveys – yearly

Internal Assessment-Tools

Component	Components of Evaluation	Nature of exam
Theory	First sessional exam	Short essay and long essay questions
	MCQ's	Multiple choice questions
	Second sessional exam	Short essay and long essay questions
Practicals	Daily evaluation	Planning, analysis of lab skills, finishing the experiment
	Practical examination	Synopsis, spotting and viva-voce, major experiment and minor experiment
	Laboratory manual	Communication, data interpretation
Beyond	Conducting 01	------

syllabus	Lecture/experiments	
Overall evaluation	External exam – semester wise	------

Semester End Assessment-Tools

Component	Components of Evaluation	Nature of exam
Theory	University end exams	Short essays, long essays, numericals,
Practicals	University end exams	Synopsis, spotting, major experiment, minor experiment, data analysis, Calculations, viva voce.

Assessment process:

The assessment tools are direct and indirect methods for evaluating the attainment of POs.

Direct methods:

The sessional examinations and the internal assessment,wherein the teacher can focus on the POs. The question papers include, short answers, short essay and long essay type. In addition, MCQs examinations are conducted on each unit test. Assignments are given for some extension of syllabus. In case of laboratory examination, synopsis, major experiment, minor experiment, viva voce, reports, etc., are the components. While setting a question paper, each question is framed based on the POs in order to attain them to a large extent. A few POs of minor importance may not be accommodated. It is necessary that a questions has to cover 60% of 'essentials to know', 30% 'better to know' and 10% are 'nice to know'. Therefore, special attempts are made to attain these objectives. The subjects are also categorized as professional core subjects, basic subjects (mathematics, science, computing, and humanities). Accordingly the POs have assumed adequate importance. Having set the question papers, the answer papers are being evaluated from the same perspectives. The students are given feedbackand POs are highlighted. Data are gathered after scrutinizing the answer for course outcomes. The course outcomes are translated to POs. Attainment of POs is considered from the data of all students.

Indirect methods:

Survey is conducted from two levels: alumni and exit survey.

PO evaluation

Frequency of carrying out the process: once in year The POs are obtained from course outcomes, which composed a number of tools, end examination practicals, MCQs, assignments, seminars etc., each one hasuniquely suited to achieve POs. The evaluation summative as well as formative (experience and appreciation, MCQs). The evaluation is spread throughout theprogram, examinations, job placements data, faculty survey on students and experimental site perceptions. Higher studies records, GPAT scores are a few more tools.

3.3.2. Provide results of evaluation of each PO **30**

Program shall set Program Outcome attainment levels for all POs. (The attainment levels by direct (student performance) and indirect (surveys) are to be presented through Program level Course-PO matrix as indicated).

The results evaluation is made in two levels:

Student performance (direct) – 80% value

Surveys (indirect) – 20% value

Direct attainment level of PO is determined by taking average across all courses.

Indirect attainment level of PO is determined on the student surveys (alumni).

The following are the observations

The percent attainment are converted into a scale considering the maximum of 3, *i.e.*, high. Form the calculations, results are tabulated as given below, for the academic year of 2015-16, 2016-17, 2017-18 and first semester of 2018-19.

The conclusions are drawn for B. Pharm program

- 2015-2016: About 42 courses (out of 82 courses) obtained the POs to the tune for more than 75%. About 6 POs (PO1, PO4, PO6, PO7, PO9 and PO11) are attained to the tune of 70%, other POs are attained by more than 50%.
- 2016-2017: About 37 courses (out of 82 courses) attained the POs to the tune of more than 75%.
- 2017-18: About 46 courses (out of 45) attained the POs to the tune of 70%. About 6 POs (PO 1, PO 3, PO 5, PO 7, PO 9 and PO 11) are attained to the tune of more than 75%, other POs are attained by more than 60%.

2015- 2016

Course code	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
First Year B. Pharm Sem-I Theory												
T.1.1.1	Pharmaceutics-I (Dispensing Pharmacy)	2.75	-	-	1.75	-	1.5	-	2	2.33		2
T.1.1.2	Pharmacognosy-I	3	1.5	-	2	-	-	2	-	2	2	2
T.1.1.3	Pharmaceutical Chemistry-I (Inorg. Pharm. Chemistry)	3	-	2.75	-	-	-	-	-	2.25	2.5	2.75
T.1.1.4	Applied Biostatistics & Computer Applications in Pharmacy	1.5	-	1	3	-	2	-	-	-	2	3
T.1.1.5	Communicating Skills and soft skill development	-	2.25	2.25	2.25	2.25	2	-	2.25	-	-	3
First Year B.Pharm Sem-II Theory												
T 1.2.1	Pharmaceutics –II(Unit operation)	2	-	-	1.5	-	1	-	1.5	1	-	3
T 1.2.2	Pharmaceutical Chemistry –II (Inorganic & Physical Chemistry)	3	-	2.75	-	-	-	-	-	2.75	2.75	3
T 1.2.3	Pharmaceutical Chemistry-III(Organic Chemistry-I)	2	-	--	2	-	-	-	-	1.5	-	2
T 1.2.4	Anatomy, Physiology & Health Education (APHE)	2	-	-	-	-	2.25	2.25	2	2	-	2.25
T 1.2.5	Industrial Psychology	-	2	-	-	2	1	3	-	-	2	3
5555	Environmental Science	-	2.75	2.75	-	3	-	-	-	-	3	3
Second Year B. Pharm. Sem-III Theory												
T.2.3.1	Pharmaceutics -III (Physical Pharmacy-I)	3	-	2.25	2.25	-	-	-	1	-	1.25	2.5
T.2.3.2	Pharmaceutical Chemistry-IV (Organic Chemistry - II)	2	-	-	1.5	-	1.5	-	-	1.5	-	2
T.2.3.3	Pharmacognosy –II	2	-	1.75	-	-	-	1.75	2.25	1.75	-	1.5
T.2.3.4	Pharmaceutical Analysis – I	2	2	3	3	-	-	1	-	2	-	3
T.2.3.5	A P H E-II	1	-	-	2	1.5	-	-	-	1	2	2.75
T.2.3.6	Pathophysiology of	3	-	2	2.5	-	1	-	1.66	1.25	-	2.5

	Common Diseases-I											
Second Year B. Pharm. Sem-IV Theory												
T.2.4.1	Pharmaceutics – IV (Physical Pharmacy-II)	2.25	-	--	2.25	-	-	-	-	-	2.25	2.25
T.2.4.2	Pharmaceutical Microbiology	2.75	-	-	2	-	-	-	-	1.75	1.75	3
T.2.4.3	Pharmacognosy – III	3	-	--	2	-	-	1.8	-	2	1.5	2
T.2.4.4	Pharmaceutics –V (Hospital Pharmacy)	3	-	-	-	-	1.25	1.25	2	2	-	2
T.2.4.5	Pharmaceutical Chemistry – V (Biochemistry)	3	2	2	2	-	2	-	-	2	-	3
T.2.4.6	Pathophysiology of Common Diseases-II	3	-	--	2	-	-	1.5	-	2	-	-
Third Year B. Pharm. Sem-V Theory												
T 3.5.1	Pharmaceutical Chemistry - VI (Medicinal Chemistry - I)	3	-	-	3	-	3	-	-	2.5	-	2
T 3.5.2	Pharmaceutics - VI (Pharma. Technology I)	2	-	-	1.5	-	1.5	-	2	2.33	-	2
T.3.5.3	Pharmacology – I	2.75	-	1.5	1	-	-	1	--	-	-	-
T 3.5.4	Pharmacognosy –IV	3	-	-	2.25	-	-	-	-	-	-	-
T 3.5.5	Pharmaceutical Analysis-II	2.5	-	2.75	2.75	-	-	-	-	1.5	1.5	-
Third Year B. Pharm. Sem-VI Theory												
T 3.6.1	Pharmaceutical Chemistry - VII (Medicinal Chemistry - II)	2	-	-	2	-	2	-	-	2	-	2
T 3.6.2	Pharmaceutics – VII(Biopharmaceutics& Pharmacokinetics)	3	-	-	2.5	-	1	-	2	1	-	2
T 3.6.3	Pharmacology –II	3	-	1	1	-	-	1	-	-	-	-
T 3.6.4	Pharmacognosy - V (Chemistry of Natural Products)	3	-	-	2.25	-	-	-	-	-	-	1.75
T 3.6.5	Pharmaceutical Jurisprudence & Ethics	3	1.8	-	-	2.3	1.8	1.8	2	2	-	3
Final Year B. Pharm. Sem-VII Theory												
T 4.7.1	Pharmaceutics – VIII (Pharma. Technology - II)	3	-	2.5	3	-	-	2.25	-	-	-	3
T 4.7.2	Pharmaceutical Chemistry _ VIII(Medicinal Chemistry – III)	2	-	2.25	-	-	-	-	-	2.25	-	2
T 4.7.3	Pharmacology – III	2.5	-	1.5	1.5	-	-	1.5	-	-	-	-
T 4.7.4	Pharmaceutical Analysis – III	2.5	-	2.5	2	-	-	-	-	-	-	2
T 4.7.5	Pharmaceutical Biotechnology	2.5	-	2	-	-	-	1.75	-	2	-	1.75
T 4.7.6	Pharmaceutical Industrial Management	2.2	1.6	2	-	1.8	1.4	2.2	2	-	1.2	2.2
Final Year B. Pharm. Sem-VIII Theory												
T 4.8.1	Pharmaceutics – IX	3	-	-	2	-	1.5	-	2	1.5	-	3
T 4.8.2	Pharmaceutical Analysis – IV	3	-	2	3	-	-	-	-	1	-	3

T 4.8.3	Pharmaceutical Chemistry –IX (Medicinal Chemistry-IV)	2	-	-	2.25	-	2.25	-	-	2	-	2
T 4.8.4	Pharmacognosy – VI	3	-	--	2	-	-	2	-	2.25	2	2.25
T 4.8.5	Pharmacology - IV (Clinical Pharmacy & Drug Interactions)	3	-	2	2	-	-	1	-	-	-	-
T 4.8.6	Quality Assurances (Elective)	3	2	2	-	-	-	2	2	-	-	3
First Year B.Pharm Sem-I Practical												
P.1.1.1	Pharmaceutics-I (Dispensing Pharmacy)	2	-	--	2.5	-	2.5	-	2.5	2.5	-	2.5
P.1.1.2	Pharmacognosy-I	3	-	-	3	-	-	2	-	-	2	2
P.1.1.3	Pharmaceutical Chemistry-I (Inorg. Pharm. Chemistry)	3	-	3	-	-	-	-	--	2.75	2.25	3
P.1.1.4	Applied Biostatistics & Computer Applications in Pharmacy	3	3	--	3	-	2	-	-	-	2	3
First Year B.Pharm Sem-II Practical												
P 1.2.1	Pharmaceutics –II(Unit operation)	3	-	-	3	-	3	-	2.5	2	-	3
P 1.2.2	Pharmaceutical Chemistry –II (Inorganic & Physical Chem.)	3	-	3	-	-	-	-	--	2.25	2.25	2.5
P 1.2.3	Pharmaceutical Chemistry-III(Organic Chemistry-I)	2.75	-	2.5	2.75	-	-	-	-	2.25	-	2.25
P 1.2.4	Anatomy, Physiology & Health Education (APHE)	3	2.5	2.5	3	1.5	2.5	2	2.5	3	-	-
Second Year B. Pharm Sem-III Practical												
P.2.3.1	Pharmaceutics -III (Physical Pharmacy-I)	3	-	2	2.25	-	-	-	1	-	1.25	2.5
P.2.3.2	Pharmaceutical Chemistry-IV (Organic Chemistry - II)	3	-	-	3	-	3	-	-	3	-	3
P.2.3.3	Pharmacognosy –II	3	-	3	-	-	-	3	3	3	-	3
P.2.3.4	Pharmaceutical Analysis – I	3	2.5	3	3	-	-	1	-	2	-	3
P.2.3.5	A P H E-II	2.5	-	-	2.5	2.5	-	-	-	2.5	2	2.5
Second Year B. Pharm Sem-IV Practical												
P.2.4.1	Pharmaceutics – IV (Physical Pharmacy-II)	3	0.75	3	3	-	-	-	1	-	2	3
P.2.4.2	Pharmaceutical Microbiology	3	-	1.75	2.5	-	-	-	--	3	2	3
P.2.4.3	Pharmacognosy – III	3	-	--	3	-	-	3	-	3	3	3
P.2.4.4	Pharmaceutics –V (Hospital Pharmacy)	3	-	-	-	-	3	3	3	3	-	3
P.2.4.5	Pharmaceutical Chemistry – V (Biochemistry)	3	-	2	2	-	-	-	-	1	-	3
Third Year B. Pharm Sem-V Practical												
P 3.5.1	Pharmaceutical Chemistry - VI (Medicinal Chemistry - I)	3	-	-	3	-	3	-	-	3	-	3
P 3.5.2	Pharmaceutics - VI	3	-	-	2.75	-	2.75	-	3	3	-	3

	(Pharma. Technology I)											
P 3.5.3	Pharmacology – I	3	-	2	2	-	-	2	-	-	-	-
P 3.5.4	Pharmacognosy –IV	3	-	-	2.25	-	-	-	-	-	-	2
P 3.5.5	Pharmaceutical Analysis-II	2.75	-	2.75	2.75	--	-	-	-	2.25	-	-
Third Year B. Pharm Sem-VI Practical												
P 3.6.1	Pharmaceutical Chemistry - VII (Medicinal Chemistry - II)	3	-	-	3		3	-	-	2	-	2
P 3.6.2	Pharmaceutics – VII(Biopharmaceutics& Pharmacokinetics)	3	---	-	2.5	--	3	-	2	3	-	3
P 3.6.3.	Pharmacology –II	3	-	3	2	-	-	2	-	-	-	-
P 3.6.4	Pharmacognosy - V (Chemistry of Natural Products)	3	-	-	2.25	-	-	-	-	-	-	2
P 3.6.6	Project report	3	2.75	2.75	2.75	-	-	2.75	-	2.75	-	3
Final Year B. Pharm Sem-VII Practical												
P 4.7.1	Pharmaceutics – VIII (Pharma. Technology - II)	3	-	3	3	-	-	3	-	-	-	3
P 4.7.2	Pharmaceutical Chemistry _ VIII(Medicinal Chemistry - III	2.5	-	-	2.5	-	-	-	-	2.5	-	2.5
P 4.7.3	Pharmacology – III	2.5	-	2	2.5	-	-	2	-	-	-	-
P 4.7.4	Pharmaceutical Analysis – III	3	-	3	3	-	-	-	-	-	-	3
Final Year B. Pharm Sem-VIII Practical												
P 4.8.1	Pharmaceutics – IX	3	-	-	3	-	3	-	3	3	-	3
P 4.8.2	Pharmaceutical Analysis – IV	3	-	3	3	-	-	-	-	2	-	3
P 4.8.3	Pharmaceutical Chemistry –IX (Medicinal Chemistry-IV)	3	-	-	3	-	3	-	-	3	-	3
P 4.8.4	Pharmacognosy – VI	3	-	--	3	-	-	3	-	3	3	3
P 4.8.7	Industrial training report	3	-	3	3	3	-	3	-	3	-	3
	B. Pharm Direct Attainment (3 Max)	**2.77**	**2.1**	**1.97**	**2.45**	**1.80**	**2.19**	**2.09**	**1.85**	**2.24**	**2.06**	**2.62**
	B. Pharm Direct Attainment (100%)	**92.39**	**70**	**65.81**	**81.92**	**60.15**	**73.21**	**69.77**	**61.92**	**74.79**	**68.68**	**87.53**
	B. Pharm Direct Attainment (80%)	**73.91**	**56**	**52.65**	**65.53**	**48.12**	**58.57**	**55.82**	**49.54**	**59.81**	**54.94**	**70.02**
	B. Pharm Indirect Attainment (20%)	**20.2**	**18.64**	**17.56**	**18.8**	**19.24**	**19.56**	**19.76**	**19.68**	**19.36**	**19**	**19.6**
	Total Attainment %	**94.11**	**74.64**	**70.21**	**84.33**	**67.36**	**78.13**	**75.58**	**69.22**	**79.19**	**73.94**	**89.62**

2016-2017

Course code	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
First Year B. Pharm Sem-I Theory												
T.1.1.1	Pharmaceutics-I	2.75	-	-	1.75	-	1.5	-	2	2.33		2

	(Dispensing Pharmacy)											
T.1.1.2	Pharmacognosy-I	3	1.5	-	2	-	-	2	-	2	2	2
T.1.1.3	Pharmaceutical Chemistry-I (Inorg. Pharm. Chemistry)	3	-	2.75	-	-	-	-	-	2.25	2.5	2.75
T.1.1.4	Applied Biostatistics & Computer Applications in Pharmacy	1.5	-	1	3	-	2	-	-	-	2	3
T.1.1.5	Communicating Skills and soft skill development	-	2.25	2.25	2.25	2.25	2	-	2.25	-	-	3
First Year B. Pharm Sem-II Theory												
T 1.2.1	Pharmaceutics –II (Unit operation)	2	-	-	1.5	-	1	-	1.5	1	-	3
T 1.2.2	Pharmaceutical Chemistry –II (Inorganic & Physical Chemistry)	3	-	2.75	-	-	-	-	-	2.75	2.75	3
T 1.2.3	Pharmaceutical Chemistry-III (Organic Chemistry-I)	2	-	--	2	-	-	-	-	1.5	-	2
T 1.2.4	Anatomy, Physiology & Health Education (APHE)	2	-	-	-	-	2.25	2.25	2	2	-	2.25
T 1.2.5	Industrial Psychology	-	2	-	-	2	1	3	-	-	2	3
5555	Environmental Science	-	2.75	2.75	-	3	-	-	-	-	3	3
Second Year B. Pharm. Sem-III Theory												
T.2.3.1	Pharmaceutics -III (Physical Pharmacy-I)	3	-	2.25	2.25	-	-	-	1	-	1.25	2.5
T.2.3.2	Pharmaceutical Chemistry-IV (Organic Chemistry - II)	2	-	-	1.5	-	1.5	-	-	1.5	-	2
T.2.3.3	Pharmacognosy –II	2	-	1.75	-	-	-	1.75	2.25	1.75	-	1.5
T.2.3.4	Pharmaceutical Analysis – I	2	2	3	3	-	-	1	-	2	-	3
T.2.3.5	A P H E-II	1	-	-	2	1.5	-	-	-	1	2	2.75
T.2.3.6	Pathophysiology of Common Diseases-I	3	-	2	2.5	-	1	-	1.66	1.25	-	2.5
Second Year B. Pharm. Sem-IV Theory												
T.2.4.1	Pharmaceutics – IV (Physical Pharmacy-II)	2.25	-	--	2.25	-	-	-	-	-	2.25	2.25
T.2.4.2	Pharmaceutical Microbiology	2.75	-	-	2	-	-	-	-	1.75	1.75	3
T.2.4.3	Pharmacognosy – III	3	-	--	2	-	-	1.8	-	2	1.5	2
T.2.4.4	Pharmaceutics –V (Hospital Pharmacy)	3	-	-	-	-	1.25	1.25	2	2	-	2
T.2.4.5	Pharmaceutical Chemistry – V (Biochemistry)	3	2	2	2	-	2	-	-	2	-	3
T.2.4.6.	Pathophysiology of Common Diseases-II	3	-	--	2	-	-	1.5	-	2	-	-
Third Year B. Pharm. Sem-V Theory												
T 3.5.1	Pharmaceutical	3	-	-	3	-	3	-	-	2.5	-	2

	Chemistry - VI (Medicinal Chemistry - I)											
T 3.5.2	Pharmaceutics - VI (Pharma Technology I)	2	-	-	1.5	-	1.5	-	2	2.33	-	2
T.3.5.3	Pharmacology – I	2.75	-	1.5	1	-	-	1	--	-	-	-
T 3.5.4	Pharmacognosy –IV	3	-	-	2.25	-	-	-	-	-	-	-
T 3.5.5	Pharmaceutical Analysis-II	2.5	-	2.75	2.75	-	-	-	-	1.5	1.5	-
Third Year B. Pharm. Sem-VI Theory												
T 3.6.1	Pharmaceutical Chemistry - VII (Medicinal Chemistry -II)	2	-	-	2	-	2	-	-	2	-	2
T 3.6.2	Pharmaceutics –VII (Biopharmaceutics & Pharmacokinetics)	3	-	-	2.5	-	1	-	2	1	-	2
T 3.6.3	Pharmacology –II	3	-	1	1	-	-	1	-	-	-	-
T 3.6.4	Pharmacognosy - V (Chemistry of Natural Products)	3	-	-	2.25	-	-	-	-	-	-	1.75
T 3.6.5	Pharmaceutical Jurisprudence & Ethics	3	1.8	-	-	2.3	1.8	1.8	2	2	-	3
Final Year B. Pharm. Sem-VII Theory												
T 4.7.1	Pharmaceutics – VIII (Pharmaceutical Technology - II)	3	-	2.5	3	-	-	2.25	-	-	-	3
T 4.7.2	Pharmaceutical Chemistry _ VIII (Medicinal Chemistry – III	2	-	2.25	-	-	-	-	-	2.25	-	2
T 4.7.3	Pharmacology – III	2.5	-	1.5	1.5	-	-	1.5	-	-	-	-
T 4.7.4	Pharmaceutical Analysis – III	2.5	-	2.5	2	-	-	-	-	-	-	2
T 4.7.5	Pharmaceutical Biotechnology	2.5	-	2	-	-	-	1.75	-	2	-	1.75
T 4.7.6	Pharmaceutical Industrial Management	2.2	1.6	2	-	1.8	1.4	2.2	2	-	1.2	2.2
Final Year B. Pharm. Sem-VIII Theory												
T 4.8.1	Pharmaceutics – IX	3	-	-	2	-	1.5	-	2	1.5	-	3
T 4.8.2	Pharmaceutical Analysis – IV	3	-	2	3	-	-	-	-	1	-	3
T 4.8.3	Pharmaceutical Chemistry –IX (Medicinal Chemistry- IV)	2	-	-	2.25	-	2.25	-	-	2	-	2
T 4.8.4	Pharmacognosy – VI	3	-	--	2	-	-	2	-	2.25	2	2.25
T 4.8.5	Pharmacology - IV (Clinical Pharmacy & Drug Interactions)	3	-	2	2	-	-	1	-	-	-	-
T 4.8.6	Quality Assurances (Elective)	3	2	2	-	-	-	2	2	-	-	3
First Year B. Pharm Sem-I Practical												
P.1.1.1	Pharmaceutics-I (Dispensing Pharmacy)	2	-	--	2.5	-	2.5	-	2.5	2.5	-	2.5
P.1.1.2	Pharmacognosy-I	3	-	-	3	-	-	2	-	-	2	2

P.1.1.3	Pharmaceutical Chemistry-I (Inorg. Pharm. Chemistry)	3	-	3	-	-	-	-	--	2.75	2.25	3
P.1.1.4	Applied Biostatistics & Computer Applications in Pharmacy	3	3	--	3	-	2	-	-	-	2	3
First Year B. Pharm Sem-II Practical												
P 1.2.1	Pharmaceutics –II (Unit operation)	3	-	-	3	-	3	-	2.5	2	-	3
P 1.2.2	Pharmaceutical Chemistry –II (Inorganic & Physical Chemistry)	3	-	3	-	-	-	-	--	2.25	2.25	2.5
P 1.2.3	Pharmaceutical Chemistry-III (Organic Chemistry-I)	2.75	-	2.5	2.75	-	-	-	-	2.25	-	2.25
P 1.2.4	Anatomy, Physiology & Health Education (APHE)	3	2.5	2.5	3	1.5	2.5	2	2.5	3	-	-
Second Year B. Pharm Sem-III Practical												
P.2.3.1	Pharmaceutics -III (Physical Pharmacy-I)	3	-	2	2.25	-	-	-	1	-	1.25	2.5
P.2.3.2	Pharmaceutical Chemistry-IV (Organic Chemistry - II)	3	-	-	3	-	3	-	-	3	-	3
P.2.3.3	Pharmacognosy –II	3	-	3	-	-	-	3	3	3	-	3
P.2.3.4	Pharmaceutical Analysis – I	3	2.5	3	3	-	-	1	-	2	-	3
P.2.3.5	A P H E-II	2.5	-	-	2.5	2.5	-	-	-	2.5	2	2.5
Second Year B. Pharm Sem-IV Practical												
P.2.4.1	Pharmaceutics – IV (Physical Pharmacy-II)	3	0.75	3	3	-	-	-	1	-	2	3
P.2.4.2	Pharmaceutical Microbiology	3	-	1.75	2.5	-	-	-	--	3	2	3
P.2.4.3	Pharmacognosy – III	3	-	--	3	-	-	3	-	3	3	3
P.2.4.4	Pharmaceutics –V (Hospital Pharmacy)	3	-	-	-	-	3	3	3	3	-	3
P.2.4.5	Pharmaceutical Chemistry – V (Biochemistry)	3	-	2	2	-	-	-	-	1	-	3
Third Year B. Pharm Sem-V Practical												
P 3.5.1	Pharmaceutical Chemistry - VI (Medicinal Chemistry - I)	3	-	-	3	-	3	-	-	3	-	3
P 3.5.2	Pharmaceutics - VI (Pharmaceutical Technology I)	3	-	-	2.75	-	2.75	-	3	3	-	3
P 3.5.3	Pharmacology – I	3	-	2	2	-	-	2	-	-	-	-
P 3.5.4	Pharmacognosy –IV	3	-	-	2.25	-	-	-	-	-	-	2
P 3.5.5	Pharmaceutical Analysis-II	2.75	-	2.75	2.75	--	-	-	-	2.25	-	-
Third Year B. Pharm Sem-VI Practical												
P 3.6.1	Pharmaceutical Chemistry - VII (Medicinal Chemistry -II)	3	-	-	3		3	-	-	2	-	2

P 3.6.2	Pharmaceutics –VII (Biopharmaceutics & Pharmacokinetics)	3	---	-	2.5	--	3	-	2	3	-	3
P 3.6.3	Pharmacology –II	3	-	3	2	-	-	2	-	-	-	-
P 3.6.4	Pharmacognosy - V (Chemistry of Natural Products)	3	-	-	2.25	-	-	-	-	-	-	2
P 3.6.6	Project report	3	2.75	2.75	2.75	-	-	2.75	-	2.75	-	3
Final Year B. Pharm Sem-VII Practical												
P 4.7.1	Pharmaceutics – VIII (Pharmaceutical Technology - II)	3	-	3	3	-	-	3	-	-	-	3
P 4.7.2	Pharmaceutical Chemistry _ VIII (Medicinal Chemistry - III	2.5	-	-	2.5	-	-	-	-	2.5	-	2.5
P 4.7.3	Pharmacology – III	2	-	2	2	-	-	2	-	-	-	-
P 4.7.4	Pharmaceutical Analysis – III	3	-	3	3	-	-	-	-	-	-	3
Final Year B. Pharm Sem-VIII Practical												
P 4.8.1	Pharmaceutics – IX	3	-	-	3	-	3	-	3	3	-	3
P 4.8.2	Pharmaceutical Analysis – IV	3	-	3	3	-	-	-	-	2	-	3
P 4.8.3	Pharmaceutical Chemistry –IX (Medicinal Chemistry- IV)	3	-	-	3	-	3	-	-	3	-	3
P 4.8.4	Pharmacognosy – VI	3	-	--	3	-	-	3	-	3	3	3
P 4.8.7	Industrial training report	3	-	3	3	3	-	3	-	3	-	3
	B. Pharm Direct Attainment (3 Max)	**2.77**	**2.1**	**1.97**	**2.45**	**1.8**	**2.19**	**2.09**	**1.85**	**2.24**	**2.06**	**2.62**
	B. Pharm Direct Attainment (100%)	**92.39**	**70**	**65.81**	**81.92**	**60.15**	**73.21**	**69.77**	**61.92**	**74.79**	**68.68**	**87.53**
	B. Pharm Direct Attainment (80%)	**73.91**	**56**	**52.65**	**65.53**	**48.12**	**58.57**	**55.82**	**49.54**	**59.81**	**54.94**	**70.02**
	B. Pharm Indirect Attainment (20%)	**17.53**	**15.4**	**14.98**	**16.26**	**12.46**	**16.73**	**16.46**	**15.62**	**15.7**	**14.93**	**17.46**
	Total Attainment %	**91.44**	**71.4**	**67.63**	**81.79**	**60.58**	**75.3**	**72.28**	**65.16**	**75.51**	**69.87**	**87.48**

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Course code	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BP101T	Human anatomy and physiology-I	1.5	-	-	1	2	1	-	-	1.75	1.5	1.75

BP102T	Pharmaceutical Analysis-I	2	2	2	3	-	-	1	-	2	-	3
BP103T	Pharmaceutics- I	2.75	-	-	1.75	-	1.5	-	2	1.75	-	2
BP104T	Pharmaceutical Inorganic Chemistry	2	-	2	-	-	-	-	-	2	2	3
BP105T	Communication Skills	-	1	1	1	1.5	2	-	1	-	-	1
BP106RBT	Remedial Biology	2	1.5	1.5	2	-	2	-	-	-	-	1
BP106RMT	Remedial mathematics	-	1.5	1.5	1.5	-	-	-	-	-	-	1.5
BP201T	Human Anatomy and Physiology II	2.5	-	2	2	-	-	-	-	2	-	2
BP202T	Pharmaceutical Organic Chemistry I	2	-	-	2	-	-	-	-	2.5	-	2.5
BP203T	Biochemistry	3	-	2.75	-	-	2.75	-	-	3	2.25	3
BP204T	Pathophysiology	3	-	-	-	-	2	-	-	2	2	3
BP205T	Computer Applications in Pharmacy	2	-	2	1.5	-	1	-	1	1	1	1
BP206T	Environmental sciences	-	2	2	-	1	-	-	-	-	1	1
T.2.3.1	Pharmaceutics -III (Physical Pharmacy-I)	3	-	2.25	2.25	-	-	-	1	-	1.25	2.5
T.2.3.2	Pharmaceutical Chemistry-IV (Organic Chemistry - II)	2	-	-	1.5	-	1.5	-	-	1.5	-	2
T.2.3.3	Pharmacognosy – II	2	-	1.75	-	-	-	1.75	2.25	1.75	-	1.5
T.2.3.4	Pharmaceutical Analysis – I	2	2	3	3	-	-	1	-	2	-	3
T.2.3.5	A P H E-II	1	-	-	2	1.5	-	-	-	1	2	2.75
T.2.3.6	Pathophysiology of Common Diseases-I	3	-	2	2.5	-	1	-	1.66	1.25	-	2.5
T.2.4.1	Pharmaceutics – IV (Physical Pharmacy-II)	2.25	-	--	2.25	-	-	-	-	-	2.25	2.25
T.2.4.2	Pharmaceutical Microbiology	2.75	-	-	2	-	-	-	-	1.75	1.75	3
T.2.4.3	Pharmacognosy – III	3	-	--	2	-	-	1.8	-	2	1.5	2
T.2.4.4	Pharmaceutics –V (Hospital Pharmacy)	3	-	-	-	-	1.25	1.25	2	2	-	2
T.2.4.5.	Pharmaceutical Chemistry – V (Biochemistry)	3	2	2	2	-	2	-	-	2	-	3
T.2.4.6	Pathophysiology of Common Diseases-II	3	-	--	2	-	-	1.5	-	2	-	-

T 3.5.1	Pharmaceutical Chemistry - VI (Medicinal Chemistry - I)	3	-	-	3	-	3	-	-	2.5	-	2
T 3.5.2	Pharmaceutics - VI (Pharmaceutical Technology I)	2	-	-	1.5	-	1.5	-	2	2.33	-	2
T.3.5.3	Pharmacology – I	2.75	-	1.5	1	-	-	1	--	-	-	-
T 3.5.4	Pharmacognosy – IV	3	-	-	2.25	-	-	-	-	-	-	-
T 3.5.5	Pharmaceutical Analysis-II	2.5	-	2.75	2.75	-	-	-	-	1.5	1.5	-
T 3.6.1	Pharmaceutical Chemistry - VII (Medicinal Chemistry -II)	2	-	-	2	-	2	-	-	2	-	2
T 3.6.2	Pharmaceutics – VII (Biopharmaceutics & Pharmacokinetics)	3	-	-	2.5	-	1	-	2	1	-	2
T 3.6.3	Pharmacology –II	3	-	1	1	-	-	1	-	-	-	-
T 3.6.4	Pharmacognosy - V (Chemistry of Natural Products)	3	-	-	2.25	-	-	-	-	-	-	1.75
T 3.6.5	Pharmaceutical Jurisprudence & Ethics	3	1.8	-	-	2.3	1.8	1.8	2	2	-	3
T 4.7.1	Pharmaceutics – VIII (Pharmaceutical Technology - II)	3	-	2.5	3	-	-	2.25	-	-	-	3
T 4.7.2	Pharmaceutical Chemistry _ VIII (Medicinal Chemistry – III	2	-	2.25	-	-	-	-	-	2.25	-	2
T 4.7.3	Pharmacology – III	2.5	-	1.5	1.5	-	-	1.5	-	-	-	-
T 4.7.4	Pharmaceutical Analysis – III	2.5	-	2.5	2	-	-	-	-	-	-	2
T 4.7.5	Pharmaceutical Biotechnology	2.5	-	2	-	-	-	1.75	-	2	-	1.75
T 4.7.6	Pharmaceutical Industrial Management	2.2	1.6	2	-	1.8	1.4	2.2	2	-	1.2	2.2
T 4.8.1	Pharmaceutics – IX	3	-	-	2	-	1.5	-	2	1.5	-	3
T 4.8.2	Pharmaceutical Analysis – IV	3	-	2	3	-	-	-	-	1	-	3
T 4.8.3	Pharmaceutical Chemistry –IX (Medicinal Chemistry- IV)	2	-	-	2.25	-	2.25	-	-	2	-	2
T 4.8.4	Pharmacognosy –	3	-	--	2	-	-	2	-	2.25	2	2.25

	VI											
T 4.8.5	Pharmacology - IV (Clinical Pharmacy & Drug Interactions)	3	-	2	2	-	-	1	-	-	-	-
T 4.8.6	Quality Assurances (Elective)	3	2	2	-	-	-	2	2	-	-	3
BP107P	Human anatomy and physiology-I	2	-	-	2	2	-	-	--	2	2	2
BP108P	Pharmaceutical Analysis-I	2	2	2	2	-	-	1	-	2	-	3
BP109P	Pharmaceutics- I	2	-	-	2	-	2	-	2	2	-	2
BP110P	Pharmaceutical Inorganic Chemistry	2	-	2	-	-	-	-	-	2	2	2
BP111P	Communication Skills	-	1	1	1	1	1	-	1	-	-	2
BP112RBP	Remedial Biology	2.5	2.5	3	2.75	-	3	-	-	-	-	3
BP207P	Human Anatomy and Physiology II	2	-	2	2	-	-	-	-	2	-	2
BP208P	Pharmaceutical Organic Chemistry I	2	-	2	2	-	-	-	-	2	-	2
BP209P	Biochemistry	2	-	2	-	-	-	-	-	2.5	2	2
BP210P	Computer Applications in Pharmacy	1	-	-	1	-	1	-	1	1	1	1
P.2.3.1	Pharmaceutics -III (Physical Pharmacy-I)	3	-	2	2.25	-	-	-	1	-	1.25	2.5
P.2.3.2	Pharmaceutical Chemistry-IV (Organic Chemistry - II)	3	-	-	3	-	3	-	-	3	-	3
P.2.3.3	Pharmacognosy – II	3	-	3	-	-	-	3	3	3	-	3
P.2.3.4	Pharmaceutical Analysis – I	3	2.5	3	3	-	-	1	-	2	-	3
P.2.3.5	A P H E-II	2.5	-	-	2.5	2.5	-	-	-	2.5	2	2.5
P.2.4.1	Pharmaceutics – IV (Physical Pharmacy-II)	3	0.75	3	3	-	-	-	1	-	2	3
P.2.4.2	Pharmaceutical Microbiology	3	-	1.75	2.5	-	-	-	--	3	2	3
P.2.4.3	Pharmacognosy – III	3	-	--	3	-	-	3	-	3	3	3
P.2.4.4	Pharmaceutics –V (Hospital Pharmacy)	3	-	-	-	-	3	3	3	3	-	3
P.2.4.5	Pharmaceutical Chemistry – V (Biochemistry)	3	-	2	2	-	-	-	-	1	-	3
P 3.5.1	Pharmaceutical Chemistry - VI	3	-	-	3	-	3	-	-	3	-	3

	(Medicinal Chemistry - I)											
P 3.5.2	Pharmaceutics - VI (Pharmaceutical Technology I)	3	-	-	2.75	-	2.75	-	3	3	-	3
P 3.5.3	Pharmacology – I	3	-	2	2	-	-	2	-	-	-	-
P 3.5.4	Pharmacognosy – IV	3	-	-	2.25	-	-	-	-	-	-	2
P 3.5.5	Pharmaceutical Analysis-II	2.75	-	2.75	2.75	--	-	-	-	2.25	-	-
P 3.6.1	Pharmaceutical Chemistry - VII (Medicinal Chemistry -II)	3	-	-	3		3	-	-	2	-	2
P 3.6.2	Pharmaceutics – VII (Biopharmaceutics & Pharmacokinetics)	3	---	-	2.5	--	3	-	2	3	-	3
P 3.6.3	Pharmacology –II	3	-	3	2	-	-	2	-	-	-	-
P 3.6.4	Pharmacognosy - V (Chemistry of Natural Products)	3	-	-	2.25	-	-	-	-	-	-	2
P 3.6.6	Project report	3	2.75	2.75	2.75	-	-	2.75	-	2.75	-	3
P 4.7.1	Pharmaceutics – VIII (Pharmaceutical Technology - II)	3	-	3	3	-	-	3	-	-	-	3
P 4.7.2	Pharmaceutical Chemistry _ VIII (Medicinal Chemistry - III	2.5	-	-	2.5	-	-	-	-	2.5	-	2.5
P 4.7.3	Pharmacology – III	2.5	-	2	2.5	-	-	2	-	-	-	-
P 4.7.4	Pharmaceutical Analysis – III	3	-	3	3	-	-	-	-	-	-	3
P 4.8.1	Pharmaceutics – IX	3	-	-	3	-	3	-	3	3	-	3
P 4.8.2	Pharmaceutical Analysis – IV	3	-	3	3	-	-	-	-	2	-	3
P 4.8.3	Pharmaceutical Chemistry –IX (Medicinal Chemistry- IV)	3	-	-	3	-	3	-	-	3	-	3
P 4.8.4	Pharmacognosy – VI	3	-	--	3	-	-	3	-	3	3	3
P 4.8.7	Industrial training report	3	-	3	3	3	-	3	-	3	-	3
	B. Pharm Direct Attainment (3 Max)	**2.25**	**1.80**	**3**	**2**	**2.50**	**1**	**3**	**1.78**	**2.38**	**1.50**	**2.38**
	B. Pharm Direct Attainment	**75**	**60**	**100**	**66.67**	**83.33**	**33.33**	**100**	**59.33**	**79.17**	**50**	**79.17**

	(100%)										
	B. Pharm Direct Attainment (80%)	**60**	**48**	**80**	**53.33**	**66.67**	**26.67**	**80**	**47.47**	**63.33**	**40**	**63.33**
	B. Pharm Indirect Attainment (20%)	**18.26**	**17.06**	**14.06**	**13.66**	**14.06**	**15.86**	**17.06**	**16.26**	**16.4**	**14.73**	**17.33**
	Total Attainment %	**78.26**	**65.06**	**94.06**	**66.99**	**80.73**	**42.53**	**97.06**	**63.73**	**79.73**	**54.73**	**80.66**

2018- 2019

Course code	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
BP101T	Human anatomy and physiology-I	1.5	-	-	1	2	1	-	-	1.75	1.5	1.75
BP102T	Pharmaceutical Analysis-I	2	2	2	3	-	-	1	-	2	-	3
BP103T	Pharmaceutics- I	2.75	-	-	1.75	-	1.5	-	2	1.75	-	2
BP104T	Pharmaceutical Inorganic Chemistry	2	-	2	-	-	-	-	-	2	2	3
BP105T	Communication Skills	-	1	1	1	1.5	2	-	1	-	-	1
BP106RBT	Remedial Biology	2	1.5	1.5	2	-	2	-	-	-	-	1
BP106RMT	Remedial mathematics	-	1.5	1.5	1.5	-	-	-	-	-	-	1.5
BP201T	Human Anatomy and Physiology II	2.5	-	2	2	-	-	-	-	2	-	2
BP202T	Pharmaceutical Organic Chemistry I	2	-	-	2	-	-	-	-	2.5	-	2.5
BP203T	Biochemistry	3	-	2.75	-	-	2.75	-	-	3	2.25	3
BP204T	Pathophysiology	3	-	-	-	-	2	-	-	2	2	3
BP205T	Computer Applications in Pharmacy	2	-	2	1.5	-	1	-	1	1	1	1
BP206T	Environmental sciences	-	2	2	-	1	-	-	-	-	1	1
BP301T	Pharmaceutical Organic Chemistry II	3	-	-	2.5	-	2.75	-	-	2.75	-	3
BP302T	Physical Pharmaceutics I	3	2	3	-	3	3	2	-	-	-	3
BP303T	Pharmaceutical Microbiology	3	-	-	2	-	-	-	-	2	2	3
BP304T	Pharmaceutical Engineering	3	2	2	3	-	-	2	-	-	-	-

BP401T	Pharmaceutical Organic Chemistry -III	2.75	-	-	2.25	-	-	-	-	2.50	-	2.75
BP402T	Medicinal Chemistry I	3	-	-	2.5	-	2.5	-	-	2.5	-	3
BP403T	Physical Pharmaceutics II	3	-	-	3	-	-	-	-	2	-	3
BP404T	Pharmacology I	3	-	-	2	-	1.5	-	-	2	-	3
BP405T	Pharmacognosy I	3	-	-	3	-	-	-	-	2	-	3
T 3.5.1	Pharmaceutical Chemistry - VI (Medicinal Chemistry - I)	3	-	-	3	-	3	-	-	2.5	-	2
T 3.5.2	Pharmaceutics - VI (Pharmaceutical Technology I)	2	-	-	1.5	-	1.5	-	2	2.33	-	2
T.3.5.3	Pharmacology – I	2.75	-	1.5	1	-	-	1	--	-	-	-
T 3.5.4	Pharmacognosy – IV	3	-	-	2.25	-	-	-	-	-	-	-
T 3.5.5	Pharmaceutical Analysis-II	2.5	-	2.75	2.75	-	-	-	-	1.5	1.5	-
T 3.6.1	Pharmaceutical Chemistry - VII (Medicinal Chemistry -II)	2	-	-	2	-	2	-	-	2	-	2
T 3.6.2	Pharmaceutics – VII (Biopharmaceutics & Pharmacokinetics)	3	-	-	2.5	-	1	-	2	1	-	2
T 3.6.3	Pharmacology –II	3	-	1	1	-	-	1	-	-	-	-
T 3.6.4	Pharmacognosy - V (Chemistry of Natural Products)	3	-	-	2.25	-	-	-	-	-	-	1.75
T 3.6.5	Pharmaceutical Jurisprudence & Ethics	3	1.8	-	-	2.3	1.8	1.8	2	2	-	3
T 4.7.1	Pharmaceutics – VIII (Pharmaceutical Technology - II)	3	-	2.5	3	-	-	2.25	-	-	-	3
T 4.7.2	Pharmaceutical Chemistry _ VIII (Medicinal Chemistry – III	2	-	2.25	-	-	-	-	-	2.25	-	2
T 4.7.3	Pharmacology – III	2.5	-	1.5	1.5	-	-	1.5	-	-	-	-
T 4.7.4	Pharmaceutical	2.5	-	2.5	2	-	-	-	-	-	-	2

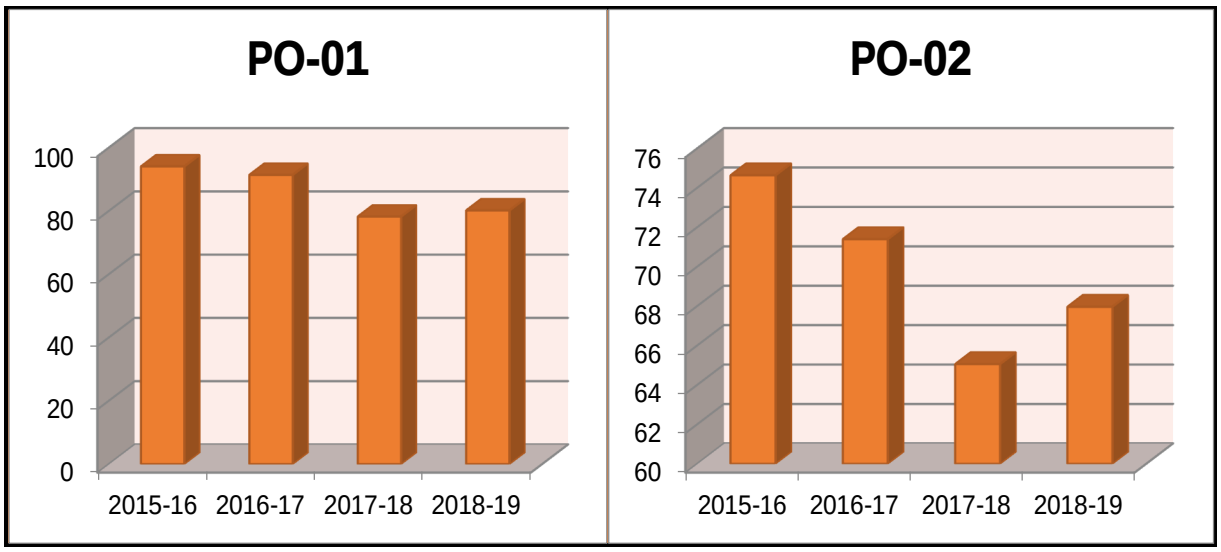
	Analysis – III											
T 4.7.5	Pharmaceutical Biotechnology	2.5	-	2	-	-	-	1.75	-	2	-	1.75
T 4.7.6	Pharmaceutical Industrial Management	2.2	1.6	2	-	1.8	1.4	2.2	2	-	1.2	2.2
T 4.8.1	Pharmaceutics – IX	3	-	-	2	-	1.5	-	2	1.5	-	3
T 4.8.2	Pharmaceutical Analysis – IV	3	-	2	3	-	-	-	-	1	-	3
T 4.8.3	Pharmaceutical Chemistry –IX (Medicinal Chemistry- IV)	2	-	-	2.25	-	2.25	-	-	2	-	2
T 4.8.4	Pharmacognosy – VI	3	-	--	2	-	-	2	-	2.25	2	2.25
T 4.8.5	Pharmacology - IV (Clinical Pharmacy &Drug Interactions)	3	-	2	2	-	-	1	-	-	-	-
T 4.8.6	Quality Assurances (Elective)	3	2	2	-	-	-	2	2	-	-	3
BP107P	Human anatomy and physiology-I	2	-	-	2	2	-	-	--	2	2	2
BP108P	Pharmaceutical Analysis-I	2	2	2	2	-	-	1	-	2	-	3
BP109P	Pharmaceutics- I	2	-	-	2	-	2	-	2	2	-	2
BP110P	Pharmaceutical Inorganic Chemistry	2	-	2	-	-	-	-	-	2	2	2
BP111P	Communication Skills	-	1	1	1	1	1	-	1	-	-	2
BP112RBP	Remedial Biology	2.5	2.5	3	2.75	-	3	-	-	-	-	3
BP207P	Human Anatomy and Physiology II	2	-	2	2	-	-	-	-	2	-	2
BP208P	Pharmaceutical Organic Chemistry I	2	-	2	2	-	-	-	-	2	-	2
BP209P	Biochemistry	2	-	2	-	-	-	-	-	2.5	2	2
BP210P	Computer Applications in Pharmacy	1	-	-	1	-	1	-	1	1	1	1
BP305P	Pharmaceutical Organic Chemistry II	3	-	-	3	-	3	-	-	2.75	-	3
BP306P	Physical Pharmaceutics I	3	2	2	-	3	3	2	-	-	-	3
BP307P	Pharmaceutical	3	-	--	2	-	1	-	-	-	3	3

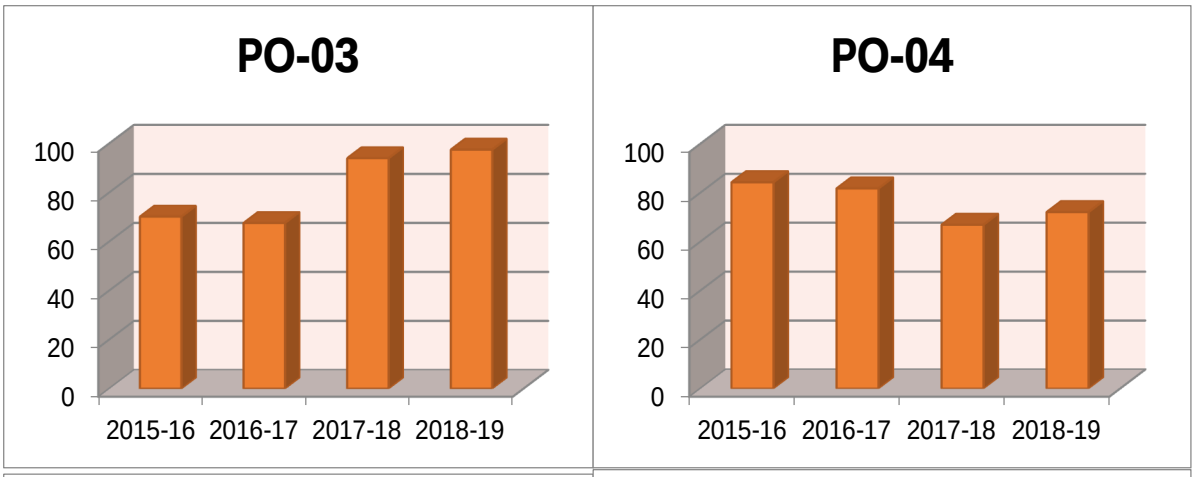
	Microbiology											
BP308P	Pharmaceutical Engineering	3	2	2	3	-	-	2	-	2	-	-
BP406P	Medicinal Chemistry I	3	-	2.5	-	-	2.5	-	-	2	-	2.5
BP407P	Physical Pharmaceutics II	3	-	-	3	-	-	-	-	2	-	3
BP408P	Pharmacology I	2	-	-	2	-	3	-	-	2	-	3
BP409P	Pharmacognosy I	3	-	2.5	-	-	2.5	-	-	2	-	2.5
P 3.5.1	Pharmaceutical Chemistry - VI (Medicinal Chemistry - I)	3	-	-	3	-	3	-	-	3	-	3
P 3.5.2	Pharmaceutics - VI (Pharmaceutical Technology I)	3	-	-	2.75	-	2.75	-	3	3	-	3
P 3.5.3	Pharmacology – I	3	-	2	2	-	-	2	-	-	-	-
P 3.5.4	Pharmacognosy – IV	3	-	-	2.25	-	-	-	-	-	-	2
P 3.5.5	Pharmaceutical Analysis-II	2.75	-	2.75	2.75	--	-	-	-	2.25	-	-
P 3.6.1	Pharmaceutical Chemistry - VII (Medicinal Chemistry -II)	3	-	-	3		3	-	-	2	-	2
P 3.6.2	Pharmaceutics – VII (Biopharmaceutics & Pharmacokinetics)	3	---	-	2.5	--	3	-	2	3	-	3
P 3.6.3	Pharmacology –II	3	-	3	2	-	-	2	-	-	-	-
P 3.6.4	Pharmacognosy - V (Chemistry of Natural Products)	3	-	-	2.25	-	-	-	-	-	-	2
P 3.6.6	Project report	3	2.75	2.75	2.75	-	-	2.75	-	2.75	-	3
P 4.7.1	Pharmaceutics – VIII (Pharmaceutical Technology - II)	3	-	3	3	-	-	3	-	-	-	3
P 4.7.2	Pharmaceutical Chemistry _ VIII (Medicinal Chemistry - III	2.5	-	-	2.5	-	-	-	-	2.5	-	2.5
P 4.7.3	Pharmacology – III	2.5	-	2	2.5	-	-	2	-	-	-	-
P 4.7.4	Pharmaceutical Analysis – III	3	-	3	3	-	-	-	-	-	-	3

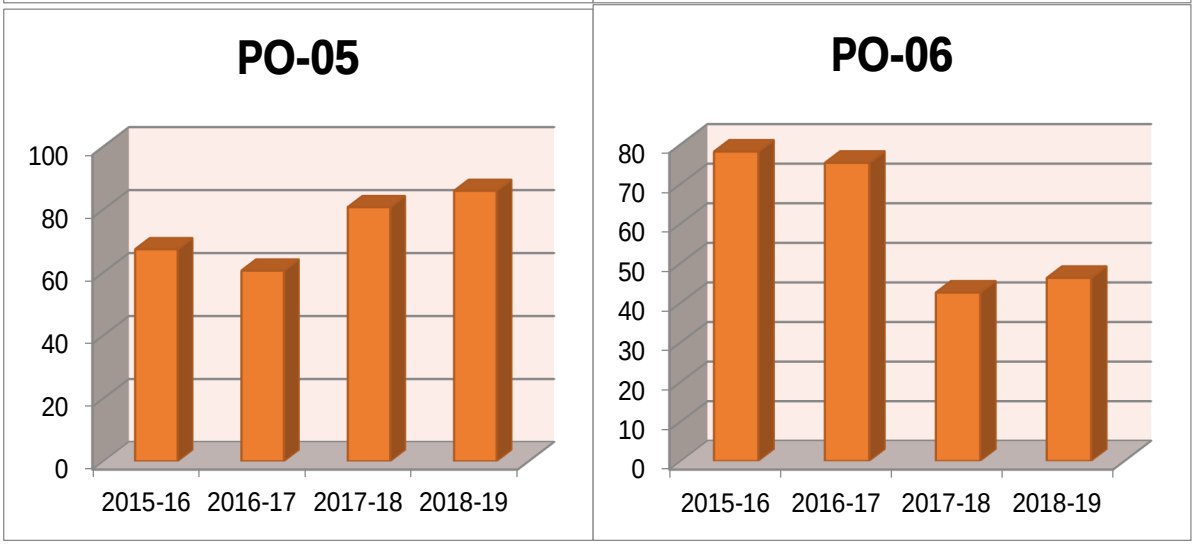
P 4.8.1	Pharmaceutics – IX	3	-	-	3	-	3	-	3	3	-	3
P 4.8.2	Pharmaceutical Analysis – IV	3	-	3	3	-	-	-	-	2	-	3
P 4.8.3	Pharmaceutical Chemistry –IX (Medicinal Chemistry- IV)	3	-	-	3	-	3	-	-	3	-	3
P 4.8.4	Pharmacognosy – VI	3	-	--	3	-	-	3	-	3	3	3
P 4.8.7	Industrial training report	3	-	3	3	3	-	3	-	3	-	3
	B. Pharm Direct Attainment (3 Max)	**2.25**	**1.85**	**3**	**2**	**2.50**	**1**	**3**	**1.86**	**2.38**	**1.50**	**2.38**
	B. Pharm Direct Attainment (100%)	**75**	**61.67**	**100**	**66.67**	**83.33**	**33.33**	**100**	**62**	**79.17**	**50**	**79.17**
	B. Pharm Direct Attainment (80%)	**60**	**49.33**	**80**	**53.33**	**66.67**	**26.67**	**80**	**49.60**	**63.33**	**40**	**63.33**
	B. Pharm Indirect Attainment (20%)	**20.20**	**18.64**	**17.56**	**18.80**	**19.24**	**19.56**	**19.76**	**19.68**	**19.36**	**19**	**19.60**
	Total Attainment %	**80.20**	**67.97**	**97.56**	**72.13**	**85.91**	**46.23**	**99.76**	**69.28**	**82.69**	**59**	**82.93**

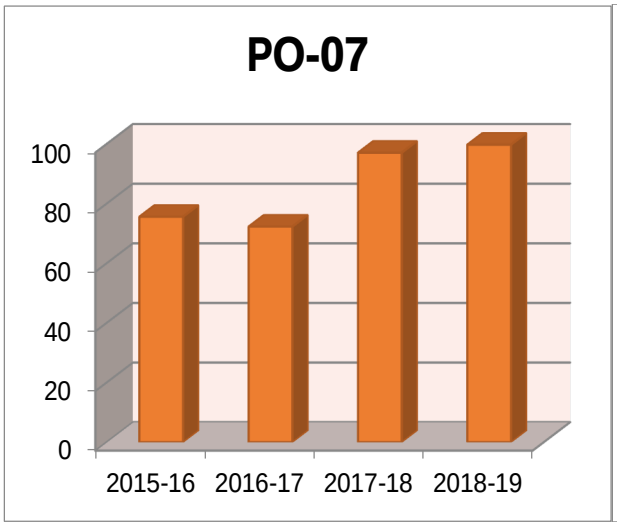
Comparison of POs and success index (SI)

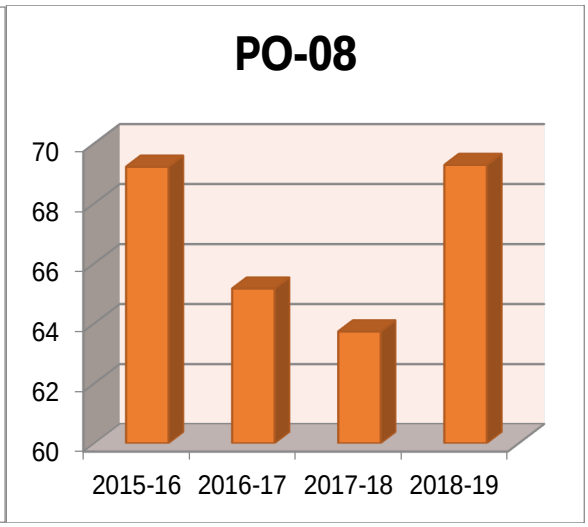
PO's	2015- 2016	2016- 2017	2017-2018	2018-2019
PO-1	94.11	91.44	78.26	80.20
PO-2	74.64	71.40	65.06	67.97
PO-3	70.21	67.63	94.06	97.56
PO-4	84.33	81.79	66.96	72.13
PO-5	67.36	60.58	80.73	85.91
PO-6	78.13	75.30	42.53	46.23
PO-7	75.58	72.28	97.06	99.76
PO-8	69.22	65.16	63.73	69.28
PO-9	79.19	75.51	79.73	82.69
PO-10	73.94	69.87	54.73	59.00
PO-11	89.62	87.48	80.66	82.93

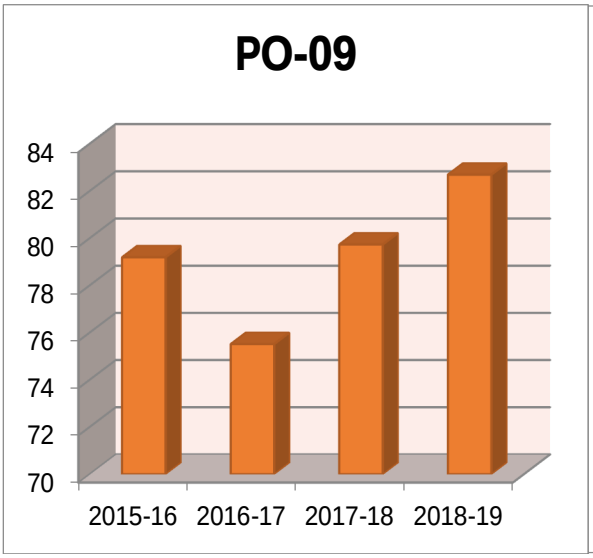

PO-01
100
80
60
40
20
0
2015-16
2016-17
2017-18
2018-19
PO-02
76
74
72
70
68
66
64
62
60
2015-16
2016-17
2017-18
2018-19

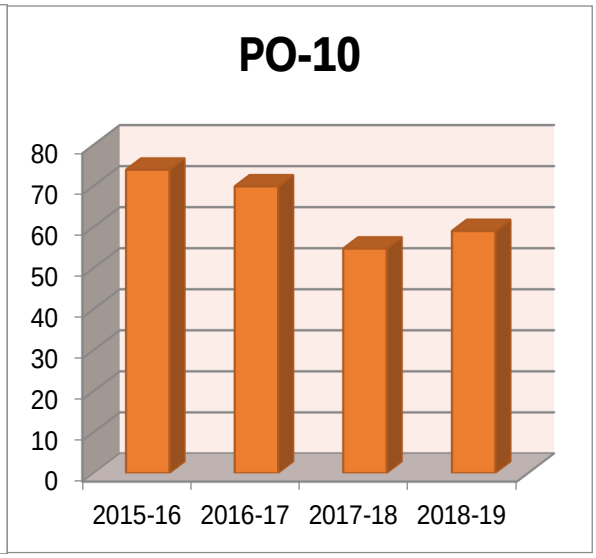

PO-03
100
80
60
40
20
0
2015-16
2016-17
2017-18
2018-19
PO-04
100
80
60
40
20
0
2015-16
2016-17
2017-18
2018-19

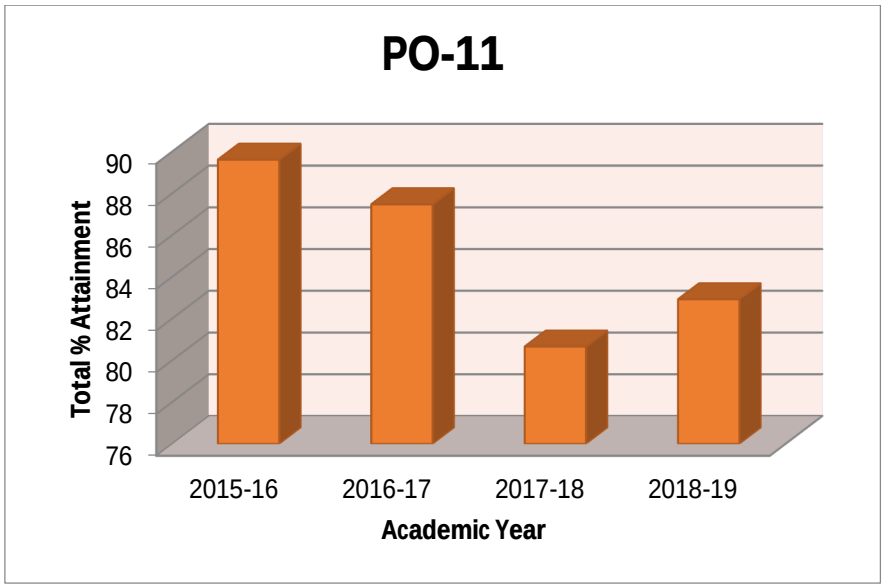

PO-05
100
80
60
40
20
0
2015-16
2016-17
2017-18
2018-19
PO-06
80
70
60
50
40
30
20
10
0
2015-16
2016-17
2017-18
2018-19


PO-07
100
80
60
40
20
0
2015-16
2016-17
2017-18
2018-19


PO-08
70
68
66
64
62
60
2015-16
2016-17
2017-18
2018-19

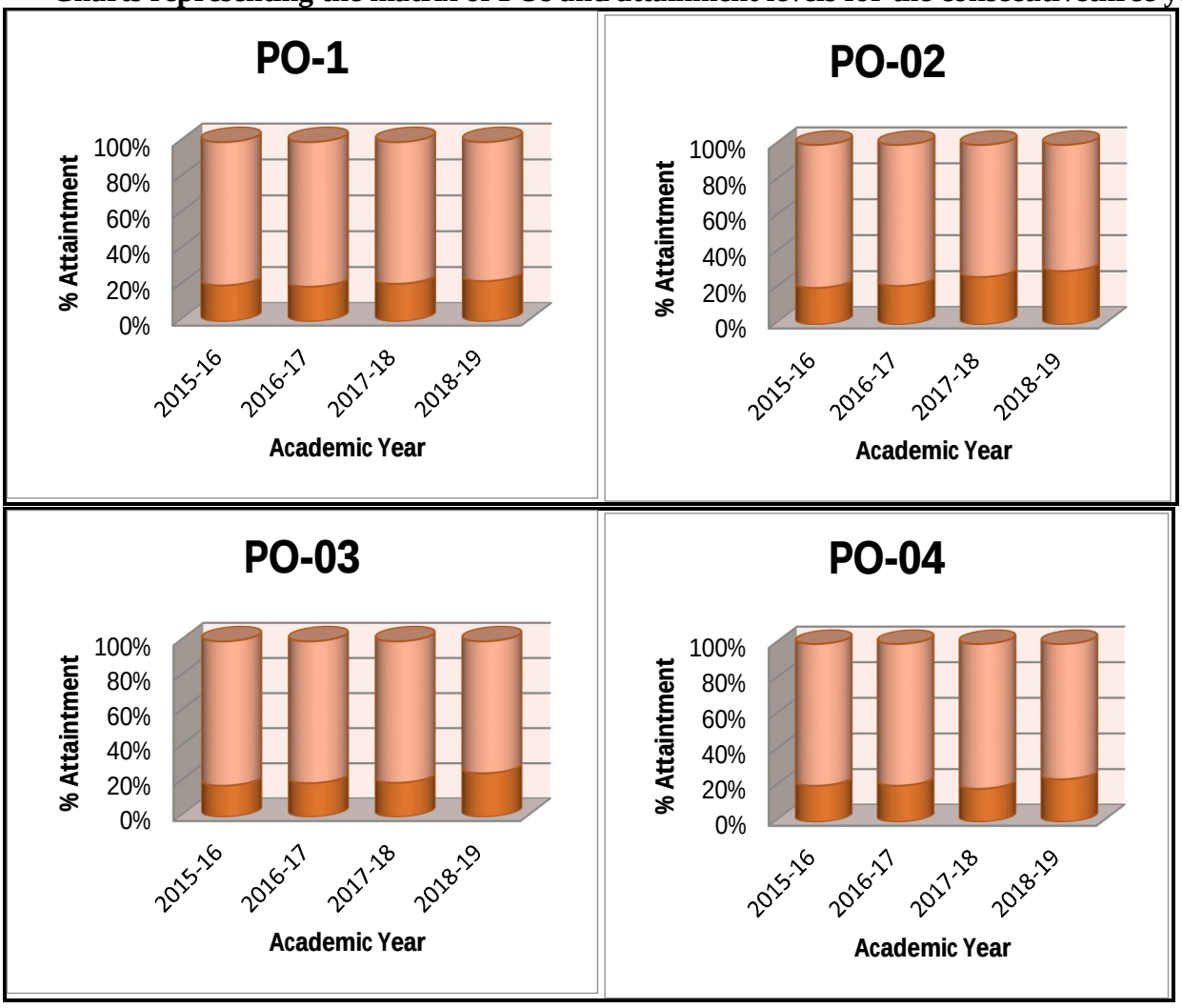

PO-09
84
82
80
78
76
74
72
70
2015-16
2016-17
2017-18
2018-19

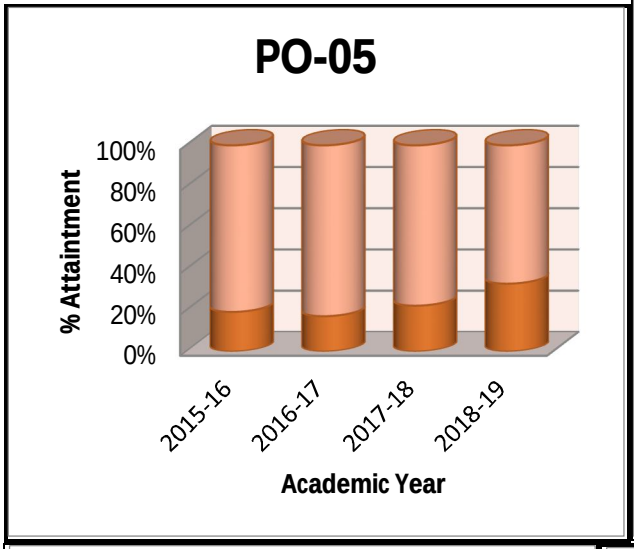

PO-10
80
70
60
50
40
30
20
10
0
2015-16
2016-17
2017-18
2018-19

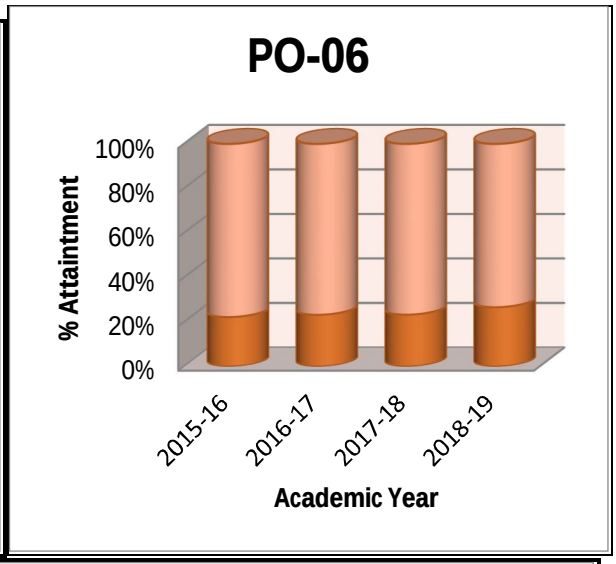


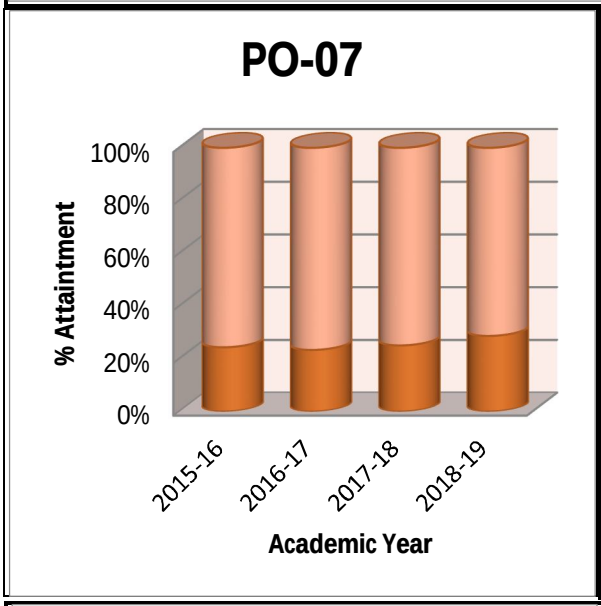
Academic Year Vs. Total %Attainment

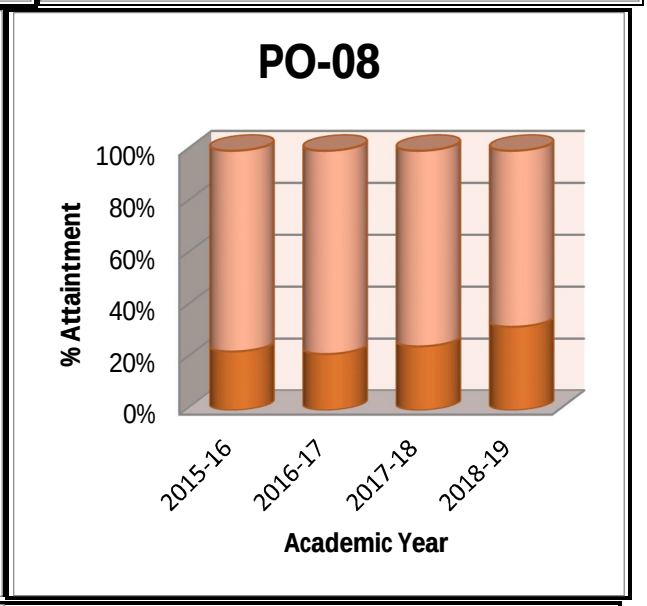
Charts representing the matrix of POs and attainment levels for the consecutivethree years.

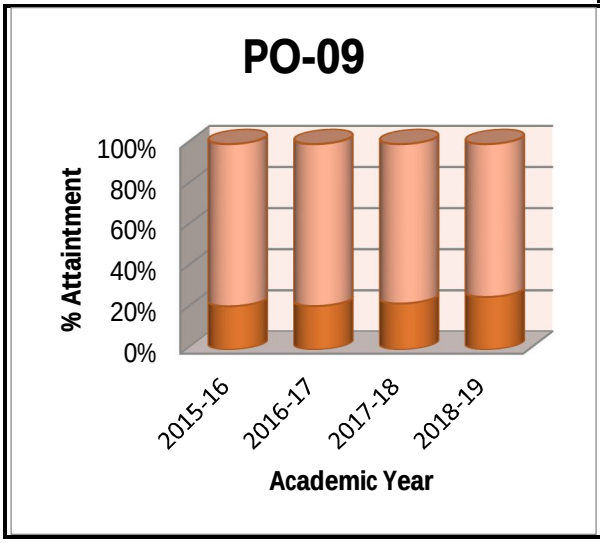


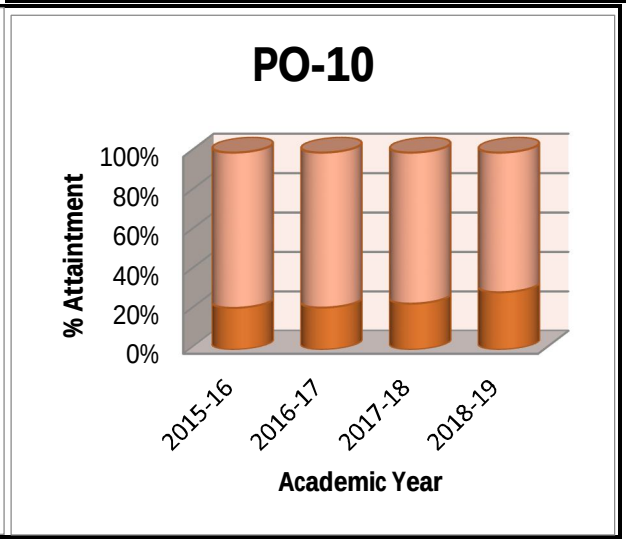

PO-05
100%
80%
60%
40%
20%
0%
% Attaintment
2015-16
2016-17
2017-18
2018-19
Academic Year

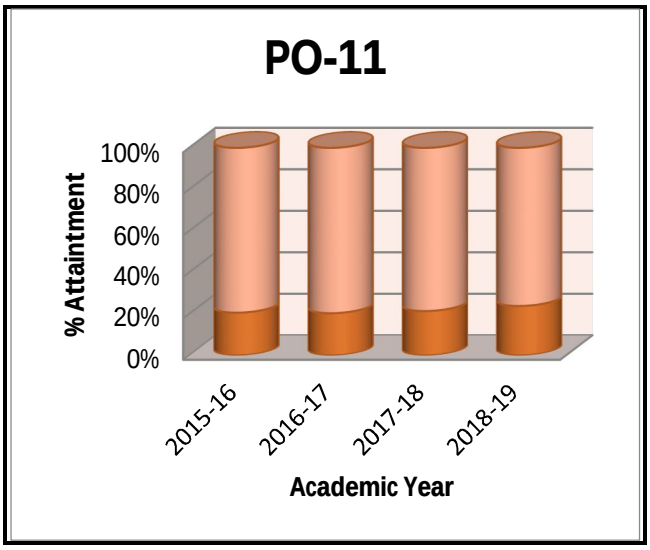

PO-06
100%
80%
60%
40%
20%
0%
% Attaintment
2015-16
2016-17
2017-18
2018-19
Academic Year


PO-07
100%
80%
60%
40%
20%
0%
% Attaintment
2015-16
2016-17
2017-18
2018-19
Academic Year


PO-08
100%
80%
60%
40%
20%
0%
% Attaintment
2015-16
2016-17
2017-18
2018-19
Academic Year


PO-09
100%
80%
60%
40%
20%
0%
% Attaintment
2015-16
2016-17
2017-18
2018-19
Academic Year


PO-10
100%
80%
60%
40%
20%
0%
% Attaintment
2015-16
2016-17
2017-18
2018-19
Academic Year



Charts representing the comparative analysis of direct (examinations) and indirect attainment (survey).

The survey opinion gave higher values compared to actual performance.

1. Direct attainment level of a PO is determined by taking average across all courses addressing that PO. Fractional numbers may be used for example 1.55.
2. Indirect attainment level of a PO is determined based on the student exit surveys, employer surveys, co-curricular activities, extracurricular activities etc.

Example:

1. It is assumed that a particular PO has been mapped to four coursesBP101T, BP102T, BP103T, and BP104T.
2. The attainment level for each of the four courses will be as per the examples given in respective criteria.
3. PO attainment level will be based on attainment levels of direct assessment and indirect assessment
4. It is assumed that while deciding on overall attainment level 80% weightage may be given to direct assessment and 20% weightage to indirect assessment through surveys from students(largely), employers (to some extent). Program may have different weightages with appropriate justification.
5. Assuming following actual attainment levels:

Direct Assessment

BP101T –Low (1), BP102T –High (3), BP103T –Medium (1.75), BP104T – High (3)

Attainment level will be summation of levels divided by no. of courses 1+3+1.75+3/4= 8.75/4=2.18

Indirect Assessment

Surveys, Analysis, customized to an average value as per levels 1, 2 & 3.

Assumed level - 2

PO Attainment level will be 80% of directs assessment + 20% of indirect assessment i.e. 1.8 + 0.4 = 2.2.

The following are the conclusions:

Direct assessment: PO 1 and PO 11 are highly achieved. These POs are hard in nature and areappropriately attained through examination and project. PO 7 and PO 10 are attained (>55%). These are known as soft outcomes and needs the Co- and extra- curricular activities to attain them.POs 5, 6, 8 and 10 are fulfilled by providing the necessary co-curricular activities, seminars, conferences, debate, essay writing, games, quizzes, poster presentations, publications, dance, music, workshops, industrial visits, pre-placement training, personality development programmes etc., which are not included in the above calculation as assessment. The POs 5, 6, 8 and 10 are evidenced by the students entered into higher education (both in India and abroad).

Surveys and analysis:

- All POs (PO1 to PO11) have high attainability (from 55 to 99%) suggesting the holistic growth of the students, considering all co-curricular and extra-curricular activities.
- PO 7 and PO 9 have nearly identical attainment in three years. In these POs, the attainment achieved is high in 2015-16, 2016-17 & 2017-18 compared to 2018-19.
- The attainment in 2018-19 is nearly same, though the second semester is not completed.
- Most of the POs have attained nearly 65 to 90%. In these POs, the attainment is higher in 2018-19 increases with 3 to 5% compared to 2017-18.
- The improvement attained in POs in 2018-19 is agreeing with the success index indicated in aggregate of 4 years of 2018-19, and also in individual years (3.3.1).
- The indirect attainment of POs is higher compared to direct attainment observed, may be on account of survey and exit student's survey.

Criterion 4 Students Performance 180

4.1Enrolment ratio 20

Item	CAY(2018-19)	CAY m1 (2017-18)	CAYm2 (2016-17)	CAYm3 (2015-16)
Sanctioned intake of the program (*N*)	60	60	60	60
Total number of students admitted in first year*(N1)*	60	60	60	60
Number of students admitted in 2nd year in the same batch via lateral entry (*N*2)	9	6	9	2
Total number of students admitted in the Program (*N*1 + *N*2)	69	66	69	62

Enrolment ratio calculation

Enrolment Ratio= N1/N
Enrolment Ratio for CAY(2018-19) = 60/60 = 1
Enrolment Ratio CAY m1(2017-18) = 60/60 = 1
Enrolment Ratio CAY m2(2016-17) = 60/60 = 1
Enrolment Ratio CAY m3 (2015-16) = 60/60 = 1

4.2 Success rate in stipulated period of the program 50

4.2.1. Success rate without backlogs in any year of study 30

Year of entry	Number of students admitted in 1st year + admitted via lateral entry in 2nd year (N1 + N2)	Number of students who havesuccessfully graduated without backlogsin any year of study(Without backlog means no compartment/failure in anysemester/year of study)			
		I Year	II Year	III Year	IV Year
CAY (2018-19)	69				
CAY*m*1 (2017-18)	66	32			
CAY*m*2 (2016-17)	69	33	27		
CAY*m*3 (2015-16)	62	23	19	17	
CAY*m*4(LYG) (2014-15)	63	8	7	4	3
CAY*m*5 (LYG*m*1) (2013-14)	64	9	8	8	6
CAYm6 (LYGm2) (2012-13)	58	19	16	14	14

SI= (Number of students who graduated from the program without backlog)/{(Number of students admitted in the first year of that batch) plus (lateral entry Students admitted in second year of study)}

Item	(LYG) 2017-18	(LYG*m*1) 2016-17	(LYG*m*2) 2015-16
Number of students admitted in the corresponding First Year + admitted in 2nd year via lateral entry	63	64	58
Number of students who have graduated without backlogs in the stipulated period	3	6	14
Success index (SI)	3/63=0.047	6/64=0.093	14/58=0.24

SI= Average SI = Mean of success index (SI) for past three batches
Average SI = 0.047+0.093+0.24=0.380/3=0.126
Success rate without backlogs in any year of study = Success rate = 30 × 0.126 = 3.80

4.2.2 Success rate with backlog in stipulated period of study 20

Year of entry	Number of students admitted in 1st year + admitted via lateral entry in 2nd year (N1 + N2)	Number of students who havegraduated with backlogsin any year of study(Students with backlog in stipulatedperiod of study)			
		I Year	II Year	III Year	IV Year
CAY (2018-19)	69				
CAY*m*1 (2017-18)	66	29			
CAY*m*2 (2016-17)	69	36	31		
CAY*m*3 (2015-16)	62	39	30	26	
CAY*m*4 (LYG) (2014-15)	63	55	36	32	27
CAY*m*5 (LYG*m*1) (2013-14)	64	57	34	32	37
CAYm6 (LYGm2) (2012-13)	58	39	31	22	35

SI= (Number of students who graduated from the program in the stipulated period of course duration)/ {(Number of students admitted in the first year of that batch) plus (lateral entry students admitted in second year of study)}

Item	(LYG) 2017-18	(LYG*m*1) 2016-17	(LYG*m*2) 2015-16
Number of studentsadmitted in thecorresponding First Year+ admitted in 2nd year via lateral entry	63	64	58
Number of students whohave graduated with backlogs in the stipulatedperiod	27	37	35
Success index (SI)	27/63=0.42	37/64=0.57	35/58=0.60

Average SI = mean of success index (SI) for past three batches
Average SI = 0.42+0.57+0.6=1.59/3=0.53

Success rate = 20 × Average SI = 0.53*20=10.65

4.3 Academic performance in final year 10

Academic Performance= Average API

Academic Performance Index = ((Mean of Final year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the percentage of marks of all successful students in Final Year/10)) X (successful students / number of students appeared in the examination)

Successful students are those who passed in all the final year courses

Academic Performance	LYG (2017-18)	LYGm1(2016-17)	LYGm2 (2015-16)
Mean of CGPA or mean percentage of all successful students/10 (X)	5.96	6.69 and 49.57%	7.047 and 57.19%
Total no. of successful students (Y)	39	37	35
Total no. of students appeared in the examination (Z)	41	48	42
API= X * (Y/Z)	5.66	7.54	9.28
Average API= (AP1+AP2+AP3)/3	**7.67**		
Academic performance = Average API = (AP1+AP2+AP3)/3		**7.67**	

4.4 Academic Performance in Third Year 10

Academic Performance= Average API

Academic Performance Index (API) = ((Mean of Third Year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the percentage of marks of all successful students in Third Year/10)) x (successful students/number of students appeared in the examination)

Successful students are those who proceeded to final year

Academic Performance	LYG (2017-18)	LYGm1 (2016-17)	LYGm2 (2015-16)
Mean of CGPA or mean percentage of all successful students/10 (X)	6.11	5.94	6.34
Total no. of successful students (Y)	54	41	39
Total no. of students appeared in the examination (Z)	56	46	40
API= X * (Y/Z)	5.89	5.29	6.18
Average API= (AP1+AP2+AP3)/3		**5.78**	
Academic performance = Average API = (AP1+AP2+AP3)/3		**5.78**	

4.5 Academic Performance in Second Year 10

Academic performance =Average API

Academic Performance Index = (API) = ((Mean of 2rd year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the percentage of marks of all successful students in Second Year/10)) X (successful students / number of students appeared in the examination)

Successful students are those who are permitted to proceed to the Third Year

Academic Performance	LYG (2017-18)	LYGm1 (2016-17)	LYGm2 (2015-16)
Mean of CGPA or mean percentage of all successful students/10 (X)	5.48	6.04	6.07
Total no. of successful students (Y)	55	53	44
Total no. of students appeared in the examination (Z)	59	65	47
API= X * (Y/Z)	5.48	4.92	5.68
Average API= (AP1+AP2+AP3)/3		**5.36**	
Academic performance = Average API = (AP1+AP2+AP3)/3		**5.36**	

4.6 Academic Performance in First Year **20**

Academic performance =Average API

Academic Performance Index = ((Mean of 2rd year Grade Point Average of all successful Students on a 10 point scale) or (Mean of the percentage of marks of all successful students in Second Year/10)) X (successful students / number of students appeared in the examination)

Successful students are those who are permitted to proceed to the Second year

Academic Performance	LYG (2017-18) CAY-1	LYG (2016-17) CAY-2	LYGm1 (2015-16) CAY-3
Mean of CGPA or mean percentage of all successful students/10 (X)	6.37	6.02	6.01
Total no. of successful students (Y)	56	51	47
Total no. of students appeared in the examination (Z)	56	55	59
API= X * (Y/Z)	6.37	5.48	4.78
Average API= (AP1+AP2+AP3)/3		11.08	
Academic performance = Average API = (AP1+AP2+AP3)/3		11.08	

4.7 Placement and Higher Studies **40**

Assessment Points = 40 × (x + y)/N

Item	LYG (2017-18)	LYG*m*1 (2016-17)	LYG*m*2 (2015-16)
Total No. of Final Year Students (N)	41	48	43
Number of students placed in Industries/ Hospitals/ Government sector through on/off campus recruitment or opted for Entrepreneurship(x)	22	31	21
No. of students admitted to higher studies with valid scores in various qualifying exams(y)	12	08	13
x + y	34	39	34
Placement Index : (x + y)/N	0.82	0.81	0.79
T = Average of (x + y)/N		2.2/3=0.806	
Assessment = 40 X T		40*0.806=32.26	

4.8. Professional Activities **20**

4.8.1. Professional societies / chapters and organizing pharmacy events **5**

(Provide the relevant details)

The faculty and students are regularly participating in national pharmacy week celebrations, under the banners of IPA, APTI and SPER.

List of affiliation details

Sr. no.	Name	Registered Pharmacist	SPER	APTI
1	Dr. P.R. Patil	123714		MA/LM1648
2	Dr. D. D. Kumbhar	98023		MA/LM589
3	Dr. U. B. Gandagule	42316		
4	Mrs. B. Y. Rane	54789		
5	Mr. K. G. Ingale	96476		
6	Mr. R. G. Jadhao	184040		
7	Mr. S. S. Patil	93745		
8	Mr. S. W. Rangari	168716		
9	Ms. P.P. Warade	155501		
10	Mrs. U. M. Sonawane	132072		
11	Mr. M. R. Bhurat	117635	SPER/LM/MH/120	MA/LM2369
12	Mr. S.A. Nagdev	180453	SPER/LM/MH/143	MA/LM2370
13	Ms. R. V. Patil	136986		
14	Mr. P. D. Warke	58407		MA/LM-800
15	Dr. Mrs. S. P. Warke	78486		
16	Mr. S. S. Chaudhari	190848		
17	Mr. A. R. Jadhav	139221		
18	Mr. P. R. Tijare	120548		
19	Ms. Snehal Jaiswal	190707		
20	Ms. Aishwarya Patil	190708		

The following are the activities during the last years NPW.

a. Generating wide spread awareness and educates the public about the pharmacist, the pharmacy profession and its vital role in society.
b. Creating awareness amongst various authorities and do advocacy on various fronts so as to highlight the important role of the pharmacist in health care and wellbeing of the people.
c. Interacting with other health care professionals and highlight the importance and role of the
d. Pharmacist in the health care system and move towards better coordination and working together, both private and public.
e. Enhancing the image of pharmacist as a medication expert and an integral part of the health
f. Care team, not just dispenser of medication.
g. Creating awareness among the students about harmony of religions, spiritual fulfillment.
h. All round development of human faculties, social equality and peace for all humanity.

1. World Pharmacist Day, 25th September 2018

World Pharmacist day was celebrated under the guidance of Principal Prof. Dr. P. R. Patil, KYDSCT's College of Pharmacy, Sakegaon. The inauguration ceremony took place at the hands of Principal. On this occasion a big rally having theme "Patient Awareness" was organized. The Rally was started with

students of B. Pharmacy at Sakegaon Village. This program was successfully carried out with kind cooperation of Prof. K. G. Ingale, Prof. M. R. Bhurat, Mrs. B. Y. Rane, Prof S. A. Nagdev and all teaching staff of KYDSCT's Pharmacy College. All the students and professors of college took Pledge pharmacist oath.

World Pharmacist Day, 25th September 2017

World Pharmacist day was celebrated under the guidance of Principal Prof. Dr. R. L. Bakal, KYDSCT's College of Pharmacy, Sakegaon. The inauguration ceremony took place at the hands of Principal. Sharing his thoughts on the occasion, he spoke about the increasing career opportunities for pharmacist. On this occasion a big rally having theme "Patient Awareness" was organized. The Rally was started with students of B. Pharmacy at Sakegaon Village. This program was successfully carried out with kind cooperation of Prof. K. G. Ingale, Prof. R.G. Jadhao, Mrs. B. Y. Rane, Prof S. S. Patil and all teaching staff of KYDSCT's Pharmacy College. All the students and professors of college took Pledge pharmacist oath

World Pharmacist day 25th September 2016

The students have designed a banner and made a Campaign in the nearby local areas. The banners were fixed in the retail pharmacy outlets. Students took pharmacist oath.

2. National conference at KYDSCT's College of Pharmacy Sakegaon

The college has organized one day national conference on recent trends in computer aided drug design and chromatographic sciences on 27/12/2016. At this occasion Prof. Dr. M. D. Karvekar, Pharmacy Council of India (Govt. of India Nominated) was present as a chief guest. The conference has scientific sessions followed by poster presentation. All students were participated.

National conference at KYDSCT's College of Pharmacy, Sakegaon

The college has organized one day national conference on Current Perspectives and Future Trends on Organic Chemistry of Biomolecules Sponsored by KBC North Maharashtra University on 30/1/2018. On this occasion Prof. Dr. D.H. More, director UDCS KBC North Maharashtra University Jalgaon was present as a chief guest. The conference has scientific sessions followed by poster presentation. All students were participated.

National conference at KYDSCT's College of Pharmacy, Sakegaon

The college has organized one day national conference on modern innovative applications on pharmaceutical medicinal chemistry sponsored by KBC North Maharashtra University on 2/2/2019. At this occasion Mr. Sanjay Sawkare MLA, Bhusawal was present as a chief guest. The conference has scientific sessions followed by poster presentation. All students were participated.

4.8.2. Publication of technical magazines, newsletters, etc. **5**

(List the publications mentioned along with the names of the editors, publishers, etc.)

a) Students publications/technical magazines

b) College magazine

a) Student Publications

2016-17: List of student publications

Sr. No.	Authors	Title of the research article	Journal Name	Volume & page no.	Year
1	Manwar JV, Patil SS, **Patil B**, Jadhao RG, Kumbhar DD* and Bakal R	Diclofenac Sodium Loaded Nanosized Ethosomes: An Investigation on Z-Average, Polydispersity and Stability	Open Access Journal of Pharmaceutical Research	Volume 1 issue 3 page no 1-4	2017

b) College Magazine - UMANG:
UMANG is the magazine of KYDSCT's College of Pharmacy, Sakegaon. The magazinebriefs the events of KYDSCT's College of Pharmacy. Hard copy is available in the institution. Mr. S. A. Nagdev, Asst. Professor, Dept. of quality assurance is the editor for this magazine.

4.8.3. Participation in inter-institute events by students of the program of study **10**
(Provide a table indicating those publications, which received awards in the events/conferences organized by other institutes).

Students who received awards in Poster/Quiz/Debate competition organized by other institutes

Sr. no	Student name	Title/Event	Activity	Organized by	Date	Achievements/ Benefits
			2018-19			
1	Dhanjay Kakad, Roshni Chaudhari, Shubham Jadhav	One day national conference on recent ternds in analytical and bioanalytical tehniques	Poster presentation	SGSPS Institute of Pharmacy Akola	8/2/2019	**First prize**
2	Ujjwala Kumawat, Pallavi Borase, Vaishali Baviskar	One day national conference on modern innovative applications in pharmaceutical medicinal chemistry	Poster presentation	KYDSCT's College of Pharmacy, Sakegaon, Bhusawal	2/2/2019	**First prize**
3	Prasad Joshi, Sonowane Rushikesh	State level seminar and poster presentation on recent trends in pharmaceutical sciences	Poster presentation	TVES LMC College Of Pharmacy Faizpur	15/9/2018	**Second prize**
			2017-18			
1	Priyanka Patil, Amol Bhalerao, Priya Patil, Chandrashekhar Patil, Shubham Patil	One day national conference continuing pharmacy education programme – CPE2018(Prospective of Pharmacy Practice in India)	Conference	Crescent college of pharmaceutical sciences, Kannur, Kerala	3/5/2018	Participated
2	Bushra Firoz Deshpande	Innovative Concepts and Methodologies in Pharmaceutical Research(ICMPR-III)	Poster presentation	HR Patel Inst. of Pharmaceutical Education and Research, Shirpur	10/03/2018	**Second prize**
3	Sayali Zambare, Diksha Ranpise	Current perspectives and future trends on organic chemistry of Biomolecules	Poster presentation	KYDSCT's College of Pharmacy, Sakegaon, Bhusawal	30/1/2018	**Third prize**
4	Pooja Dhavade, Shubham Patil, Mukesh Nikumbh, Atul Trivedi	Current perspectives and future trends on organic chemistry of Biomolecules	Poster presentation	KYDSCT's College of Pharmacy, Sakegaon, Bhusawal	30/1/2018	Participated

5	Pooja Dhavade	Protecting crop genetic diversity for food security :political , ethical and technical challenges	Poster presentation	Institute of Management and Sciences, Sakegaon	18-01/2018 and 19-01/2018	**First prize**
6	Amol Bhalerao, Atul Trivedi, Jayesh Zambare, Priya Patil, Priyanka Patil	Innovative Concepts and Methodologies in Pharmaceutical Research(ICMPR-III)	Poster presentation	HR Patel Inst. of Pharmaceutical Education and Research, Shirpur	10/03/2018	Participated
7	Priya Patil, Priyanka Patil, Ankush Navalakhe	Current scenario of CPCSEA and promotion of Animal Research Welfare of Laboratory animal science	Workshop	SNJB's Shriman Suresh dada Jain college of pharmacy Chandwad, Dist Nasik	5/1/2018 and 6/1/2018	Participated
			2016-17			
1	Rubina Bano	Analytical tools and techniques for structural elucidation	Conference	Pune university(SMBT COP Nashik)	13/01/2017	Participated
2	Vaibhav Jangale	Recent advances in cancer therapeutics and its molecular targets	Poster presentation	Konkan Gyanpeeth Rahul Dharkar CPRI, Karjat dist Raigad	14/01/2017	**Third prize**
3	Shubham Patil,	Brand logo design competition	Competition	Institute of management and sciences, Sakegaon	1/10/2016	**3rd prize**
4	Bhushara Deshpande	Brand logo design competition	Competition	Institute of management and sciences, Sakegaon	1/10/2016	**4th prize**
5	Tarachand Kapade	Structure interpretation of organic compounds	Poster presentation	RCPIPER Shirpur	24/09/2016	**Runner up**

List of Conference presentations for last three years

Sr. No.	Author name	Title of the research article	Conference name	Conference venue	Date
1	GaytriL. Malpure , Arshi J.Khan	Impact of radiopharmaceuticals in health care system	Radiopharmaceutical enhancement by drug delivery system	A.R.A.College of Pharmacy, Nagaon	19/01/2019
2	Adityta P. Patil, Ashwini A. Gayakwad	Determination of a drug content of pharmaceutical containing Emtricitabine in non-aqueous medium by microtitrimetric	Recent Trends in analytical & Bioanalytical techniques	ShriGurudattashikshanPrasaraksanstha's Institute of Pharmacy	8/2/2019

3	Avais Mohammad Sharif Mohammad, BhagwatJ. Bodade	Formulation and Evaluation of Herbal cream from Aloe Barbadensis Linn extract	Recent Trends in analytical & Bioanalytical techniques	ShriGurudattashikshanPrasaraksanstha's Institute of Pharmacy	8/2/2019
4	Dhananjay Kakad, Vaibhav D. Mali	New Conductometric titration Methods for determination of Ramolazine by using 0.1 N CCl_4 in ammonia solution with micrometric analysis	Recent Trends in analytical & Bioanalytical techniques	ShriGurudattashikshanPrasaraksanstha's Institute of Pharmacy	8/2/2019
5	Neha B. Rokade, Minaj H. Tadavi	Protective Effect of Hygrophila Spinosa against Cisplatin induced Nephrotoxicity in Rats.	Recent Trends in analytical & Bioanalytical techniques	Shri Gurudatta shikshan Prasarak sanstha's Institute of Pharmacy	8/2/2019
6	Vaishali N. Baviskar, Pallavi G. Borse	Optimization of systems variable for liquid chromatography of candesartan cilexetile	Modern Innovative Applications In Pharmaceutical Medicinal Chemistry	KYDSCTs COP, Sakegaon	2/2/2019
7	Chaiatli K. Gunjal, Harshada P. Dhande, Ashwini V. Gaikwad	Emerging Future of Ayurvedic formulation, Tactics & strategies used in Tuberculosis	Modern Innovative Applications In Pharmaceutical Medicinal Chemistry	KYDSCTs COP, Sakegaon	2/2/2019
8	Arshi Jasim Khan, Gayatri L. Malpure	Natural Drug Product Discovery	Modern Innovative Applications In Pharmaceutical Medicinal Chemistry	KYDSCTs COP, Sakegaon	2/2/2019
9	Rushikesh B. Sonawane, Prasa R. Joshi	Effect of Magnetic field of Nanoparticles on a cancer cells	Modern Innovative Applications In Pharmaceutical Medicinal Chemistry	KYDSCTs COP, Sakegaon	2/2/2019
10	Patil Aaditya, JangaleVaishanvi, KolheEkata, Chaudhari Deepti, Jhamanai Rohit, Mahajan Mayur, Bhangale Nikita, Bagul Minal	Quiz	Second MET PharmaQ-2018	MET Bhujabal Knowledge city, Institute of Pharmacy Nashik	26/9/2018

11	Dhannjay Kakad, Gayatri Malpure, Khan Arshi	Extraction and evaluation of parameters solid semisolid and liquid herbal dosage forms.	SERB sponsored National Seminar on innovations, development and standardization of novel herbal formulations	KGRD College of Pharmacy and Research Institute Karjat	24/9/18 and 25/9/18
12	Bhagwat Bodale, Neha Rokade	Antihypertensive effect of methanolic extract of HygrophilaSpinosa in rats	State level seminar and poster presentation on recent trends in pharmaceutical sciences	TVES HLMC College of Pharmacy Faizpur	15/9/2018
13	Tarachand Kapade, Sameer Mevati	Spectrophotometric estimation of olanzapine and fluoxetine HCl in their combined dosage form	Recent advances in cancer therapeutics and its molecular targets	KonkanGyanpeeth Rahul Dharkar CPRI, KarjatdistRaigad	14/01/2017
14	Bhagyashri Patil, Bushra Deshpande, Abdul Rehman	Study of Tribulus Terrestris in treatment of diabetic nephropathy	Recent trends in computer aided drug design and chromatographic sciences	KYDSCT COP, Sakegaon	27/12/2016
15	Reshma Bano, Rubina Bano	Indomethacin loaded ethosome:an investigation on Z average, polydispersity and stability	Recent trends in computer aided drug design and chromatographic sciences	KYDSCT COP, Sakegaon	27/12/2016
16	Vaibhav Jangale	Development and study of antimicrobial activity of Ayurvedic formulations	Structure interpretation of organic compounds	RCPIPER, Shirpur	24/09/2016
17	Sameer Mevati, Jayesh Zambare, Swapnapurti Bharambe	Comparative quality evaluation study : A quantitative approach for safe drinking water	Structure interpretation of organic compounds	RCPIPER, Shirpur	24/09/2016

Criterion 5 Faculty Information and Contributions 175

List of Faculty: (2018-2019)

Name of the faculty	Degree (Highest degree)	University	Year of graduation	Association with institution	Designation	Date of joining the institution	Department	Specialization	Faculty receiving Ph. D during the assessment year	Ph. D Guidance	Research Paper Publications	Sponsored Research (Funded Research)	Consultancy and Product development
Dr. Parag R. Patil	Ph. D	University of Nottingham	2007	Full time	Principal & professor	11th April 2018	Pharmacology	Pharmacology	NA	NA	1	NA	NA
Dr. Dipak D. Kumbhar	Ph. D	Bharti Vidyapeeth University, Pune	2014	Full time	Associate. Professor	7th December 2014	Pharmaceutics	Pharmaceutics	NA	NA	1	NA	NA
Dr. Upendra B. Gandagule	Ph. D	JSS University, Ooty	2014	Full time	Associate. Professor	7th July 2016	Pharmacognosy	Pharmacognosy	NA	NA	8	NA	NA
Mr. Kundan G. Ingale	M. Pharmacy	Pune University	2010	Full time	Asst. Professor	1st August 2011	Pharmacology	Pharmacology	NA	NA	NA	NA	NA
Miss. Poonam P. Warade	M. Pharmacy	North Maharashtra university, Jalgaon	2013	Full time	Asst. Professor	1st June 2013	Pharmaceutics	Pharmaceutics	NA	NA	NA	NA	NA
Mr. Rajesh G. Jadhao	M. Pharmacy	Sant Gadge baba Amravati university	2012	Full time	Asst. Professor	16th August 2012	Pharmaceutical Chemistry	Pharmaceutical Chemistry	NA	NA	1	NA	NA
Mr. Suraj S. Patil	M. Pharmacy	North Maharashtra university,	2012	Full time	Asst. Professor	11th August 2012	Pharmaceutics	Pharmaceutics	NA	NA	1	NA	NA

		Jalgaon											
Mr. Shyam W. Rangari	M. Pharmacy	Sant Gadge baba Amravati university	2013	Full time	Asst. Professor	1st May 2013	Pharmaceutical Chemistry	Pharmaceutical Chemistry	NA	NA	NA	NA	NA
Mrs. Uttara M. Sonawane	M. Pharmac	North Maharashtra university, Jalgaon	2011	Full time	Asst. Professor	25th June 2013	Pharmaceutics	Pharmaceutics	NA	NA	NA	NA	NA
Mrs. Bhuwaneshwari Y. Rane	M. Pharmacy	North Maharashtra university, Jalgaon	2011	Full time	Asst. Professor	30th August 2014	Pharmaceutical Chemistry	Pharmaceutical Chemistry	NA	NA	NA	NA	NA
Mr. Sanjay A. Nagdev	M. Pharmacy	Rashtrasant Tukdoji Maharaj Nagpur University	2016	Full time	Asst. Professor	23rd September 2016	Quality Assurance	Quality Assurance	NA	NA	8	NA	NA
Mr. Mayur R. Bhurat	M. Pharmacy	North Maharashtra university, Jalgaon	2009	Full time	Asst. Professor	6th October 2017	Pharmacognosy	Pharmacognosy	NA	NA	8	NA	NA
Miss. Rupal S. Sanghavi	M. Pharmacy	North Maharashtra university, Jalgaon	2017	Full time	Asst. Professor	1st October 2017	Pharmaceutics	Pharmaceutics	NA	NA	NA	NA	NA
Mr. Parmeshwar R. Tijare	M. Pharmacy	Sant Gadge baba Amravati university	2013	Full time	Asst. Professor	4th August2015	Pharmaceutics	Pharmaceutics	NA	NA	NA	NA	NA
Miss. Rajashri V. Patil	M. Pharmacy	North Maharashtra university, Jalgaon	2015	Full time	Asst. Professor	5th July 2018	Quality Assurance	Quality Assurance	NA	NA	NA	NA	NA
Mr. Sandip S.	M. Phar	North Maharashtr	2018	Full time	Asst. Profe	1st Septe	Pharmace	Pharmaceuti	NA	NA	NA	NA	NA

Chaudhari	macy	a university, Jalgaon			ssor	mber 2018	utical Chemistry	cal Chemistry					
Mr. Amit R. Jadhav	M. Pharmacy	North Maharashtra university, Jalgaon	2015	Full time	Asst. Professor	21st March 2018	Quality Assurance	Quality Assurance	NA	NA	NA	NA	NA
Mr. P.D. Warke	M. Pharmacy	RGUHS, Banglore	2003	Full time	Asst. Professor	03rd Oct 2018	Pharmacognosy	Pharmacognosy	NA	NA	NA	NA	NA
Dr. Samiksha P. Warke	Ph. D	MJRP University, Jaipur	2014	Full time	Associate. Professor	3rd Oct 2018	Pharmaceutics	Pharmaceutics	NA	NA	NA	NA	NA
Mr. Makarand R. Patil	M. Pharmacy	North Maharashtra university, Jalgaon	2015	Full time	Asst. Professor	21st March 2018	Quality Assurance	Quality Assurance	NA	NA	NA	NA	NA
Mr. Parag M. Barhate	M. Pharmacy	North Maharashtra university, Jalgaon	2016	Full time	Asst. Professor	20th march 2018	Pharmaceutics	Pharmaceutics	NA	NA	NA	NA	NA
Miss. Aishwarya Patil	M. Pharmacy	Pune university	2018	Full time	Asst. Professor	1st January 2019	Quality Assurance	Quality Assurance	NA	NA	NA	NA	NA
Miss. Snehal Jaiswal	M. Pharmacy	Pune university	2018	Full time	Asst. Professor	1st January 2019	Quality Assurance	Quality Assurance	NA	NA	NA	NA	NA
List of faculty (2017-18)													
Dr. Ravindra L. Bakal	Ph. D	North Maharashtra university, Jalgaon	2013	Full time	Principal & professor	3rd May 2014	Pharmaceutical Chemistry	Pharmaceutical Chemistry	NA	NA	1	NA	NA
Dr. Dinkar G. Mundhe	Ph. D	JNTU, Hyderabad	2015	Full time	Associate. Professor	15th February 2014	Pharmaceutical Chemistry	Pharmaceutical Chemistry	NA	NA	NA	NA	NA
Dr. Jagdish V.	Ph. D	Bharti Vidyapeet University,	2013	Full time	Associate. Profe	2nd June 2014	Quality Assur	Pharmaceutical	NA	NA	2	NA	NA

Manwar		Pune			ssor		ance	Chemistry					
Dr. Dipak D. Kumbhar	Ph. D	Bharti Vidyapeeth University, Pune	2014	Full time	Associate. Professor	7th December 2014	Pharmaceutics	Pharmaceutics	NA	NA	2	NA	NA
Dr. Upendra B. Gandagule	Ph .D	JSS University, Ooty	2014	Full time	Associate. Professor	7th July 2016	Pharmacognosy	Pharmacognosy	NA	NA	NA	NA	NA
Mr. Kundan G. Ingale	M. Pharmacy	Pune University	2010	Full time	Asst. Professor	1st August 2011	Pharmacology	Pharmacology	NA	NA	NA	NA	NA
Miss. Poonam P. Warade	M. Pharmacy	North Maharashtra university, Jalgaon	2013	Full time	Asst. Professor	1st June 2013	Pharmaceutics	Pharmaceutics	NA	NA	NA	NA	NA
Mr. Rajesh G. Jadhao	M. Pharmacy	Sant Gadge baba Amravati university	2012	Full time	Asst. Professor	16th August 2012	Pharmaceutical Chemistry	Pharmaceutical Chemistry	NA	NA	1	NA	NA
Mr. Suraj S. Patil	M. Pharmacy	North Maharashtra university, Jalgaon	2012	Full time	Asst. Professor	11th August 2012	Pharmaceutics	Pharmaceutics	NA	NA	2	NA	NA
Mr. Shyam W. Rangari	M. Pharmacy	Sant Gadge baba Amravati university	2013	Full time	Asst. Professor	1st May 2013	Pharmaceutical Chemistry	Pharmaceutical Chemistry	NA	NA	1	NA	NA
Mrs. Uttara M. Sonawan	M. Pharmacy	North Maharashtra	2011	Full time	Asst. Professor	25th June 2013	Pharmaceutics	Pharmaceutics	NA	NA	1	NA	NA

e		university, Jalgaon											
Mrs. Bhuwaneshwari Y. Rane	M. Pharmacy	North Maharashtra university, Jalgaon	2011	Full time	Asst. Professor	30th August 2014	Pharmaceutical Chemistry	Pharmaceutical Chemistry	NA	NA	NA	NA	NA
Mr. Ashish B. Wadekar	M. Pharmacy	Sant Gadge baba Amravati university	2013	Full time	Asst. Professor	11th July 2016	Pharmaceutics	Pharmaceutics	NA	NA	NA	NA	NA
Mr. Sanjay A. Nagdev	M. Pharmacy	Rashtrasant Tukdoji Maharaj Nagpur University	2016	Full time	Asst. Professor	23rd September 2016	Quality Assurance	Quality Assurance	NA	NA	2	NA	NA
Mr. Mayur R. Bhurat	M. Pharmacy	North Maharashtra university, Jalgaon	2009	Full time	Asst. Professor	6th October 2017	Pharmacognosy	Pharmacognosy	NA	NA	2	NA	NA
Miss. Rupal S. Sanghavi	M. Pharmacy	North Maharashtra university, Jalgaon	2017	Full time	Asst. Professor	1st October 2017	Pharmaceutics	Pharmaceutics	NA	NA	1	NA	NA
Mr. Parmeshwar R. Tijare	M. Pharmacy	Sant Gadge baba Amravati university	2013	Full time	Asst. Professor	4th August2015	Pharmaceutics	Pharmaceutics	NA	NA	NA	NA	NA
Shilpa R. Mandape	M. Pharmacy	North Maharashtra university, Jalgaon	2015	Full time	Asst. Professor	14th August2017	Quality Assurance	Quality Assurance	NA	NA	NA	NA	NA
List of Faculty (2016-17)													
Dr. Ravindra L. Bakal	Ph. D	North Maharashtra university, Jalgaon	2013	Full time	Principal & professor	3rd May 2014	Pharmaceutical Chemistry	Pharmaceutical Chemistry	NA	NA	1	NA	NA
Dr. Dinkar G. Mundhe	Ph. D	JNTU, Hyderabad	2015	Full time	Associate. Professor	15th February 2014	Pharmaceutical Chemistry	Pharmaceutical Chemistry	NA	NA	NA	NA	NA

Dr. Jagdish V. Manwar	Ph. D	Bharti Vidyapeeth University, Pune	2013	Full time	Associate. Professor	2nd June 2014	Quality Assurance	Pharmaceutical Chemistry	NA	NA	1	NA	NA
Dr. Dipak D. Kumbhar	Ph. D	Bharti Vidyapeeth University, Pune	2014	Full time	Associate. Professor	7th December 2014	Pharmaceutics	Pharmaceutics	NA	NA	1	NA	NA
Dr. Upendra B. Gandagule	Ph. D	JSS University, Ooty	2014	Full time	Associate. Professor	7th July 2016	Pharmacognosy	Pharmacognosy	NA	NA	NA	NA	NA
Dr. Sameer S. Sheaikh	Ph. D	PRIST University	2015	Full time	Associate. Professor	23rd September 2016	Pharmaceutics	Pharmaceutics	NA	NA	NA	NA	NA
Mr. Vishal C. Gurumukhi	M. Pharmacy	Rashtrasant Tukdoji Maharaj Nagpur University	2008	Full time	Asst. Professor	1st August 2012	Pharmaceutics	Quality Assurance	NA	NA	NA	NA	NA
Mr. Kundan G. Ingale	M. Pharmacy	Pune University	2010	Full time	Asst. Professor	1st August 2011	Pharmacology	Pharmacology	NA	NA	NA	NA	NA
Miss. Poonam P. Warade	M. Pharmacy	North Maharashtra university, Jalgaon	2013	Full time	Asst. Professor	1st June 2013	Pharmaceutics	Pharmaceutics	NA	NA	NA	NA	NA
Mr. Rajesh G. Jadhao	M. Pharmacy	Sant Gadge baba Amravati university	2012	Full time	Asst. Professor	16th August 2012	Pharmaceutical Chemistry	Pharmaceutical Chemistry	NA	NA	1	NA	NA
Mr. Suraj S. Patil	M. Pharmacy	North Maharashtra university, Jalgaon	2012	Full time	Asst. Professor	11th August 2012	Pharmaceutics	Pharmaceutics	NA	NA	NA	NA	NA
Mr. Shyam W. Rangari	M. Pharmacy	Sant Gadge Baba Amravati university	2013	Full time	Asst. Professor	1st May 2013	Pharmaceutical Chemistry	Pharmaceutical Chemistry	NA	NA	NA	NA	NA

Mr. N.A. Sheikh	M. Pharmacy	SRM university, Tamilnadu	2008	Full time	Asst. Professor	22nd August 2016	Pharmacology	Pharmacology	NA	NA	NA	NA	NA
Mrs. Uttara M. Sonawane	M. Pharmacy	North Maharashtra university, Jalgaon	2011	Full time	Asst. Professor	25th June 2013	Pharmaceutics	Pharmaceutics	NA	NA	NA	NA	NA
Mr. Nilesh D. Bendale	M. Pharmacy	North Maharashtra university, Jalgaon	2012	Full time	Asst. Professor	1st April 2014	Pharmacognosy	Pharmacognosy	NA	NA	NA	NA	NA
Mrs. Bhuwaneshwari Y. Rane	M. Pharmacy	North Maharashtra university, Jalgaon	2011	Full time	Asst. Professor	30th August 2014	Pharmaceutical Chemistry	Pharmaceutical Chemistry	NA	NA	NA	NA	NA
Mr. Parmeshwar R. Tijare	M. Pharmacy	Sant Gadge baba Amravati university	2013	Full time	Asst. Professor	4th August2015	Pharmaceutics	Pharmaceutics	NA	NA	NA	NA	NA
Mr. Ashish B. Wadekar	M. Pharmacy	Sant Gadge baba Amravati university	2013	Full time	Asst. Professor	11th July 2016	Pharmaceutics	Pharmaceutics	NA	NA	NA	NA	NA
Mr. Sanjay A. Nagdev	M. Pharmacy	Rashtrasant Tukdoji Maharaj Nagpur University	2016	Full time	Asst. Professor	23rd September 2016	Quality Assurance	Quality Assurance	NA	NA	1	NA	NA

5.1 STUDENT-FACULTY RATIO (SFR) 20

No. of UG Programs in the Department (n)
No. of PG Programs in the Department (m)
No. of Students in UG 2nd Year = u1
No. of Students in UG 3rd Yea = u2
No. of Students in UG 4th Year = u3
No. of Students in PG 1st Year = p1

No. of Students in PG 2nd Year = p2
No. of Students = Sanctioned Intake + Actual admitted lateral entry students
(The above data to be provided considering all the UG and PG programs of the department)
***S**=Number of Students in the Department = UG1+UG2+UG3+PG1+PG2*
***F** = Total Number of Faculty Members in the Department (excluding first year faculty)*

Student Faculty Ratio (SFR) = S / F

Year	2016-2017	2017-2018	2018-2019
F.Y. B. Pharmacy	60	60	60
S.Y.B. Pharmacy	66	65	72
T.Y.B. Pharmacy	47	56	71
Final Y. B. Pharmacy	48	41	59
Total	**221**	**222**	**262**
M. Pharm-I P'cuetics	5	NIL	12
M. Pharm-II P'cuetics	2	5	NIL
Total	**7**	**5**	**12**
M. Pharm-I QA	4	NIL	12
M. Pharm-II QA	3	4	NIL
Total	**7**	**4**	**12**
Total No. of Students in theDepartment (S)	**S1=235**	**S2 =231**	**S3 =286**
No. of Faculty in the Department (F)	**F1= 19**	**F2= 18**	**F3 = 21**
Student Faculty Ration (SFR)	**12.36**	**12.83**	**13.61**
Average SFR		**38.8/3 = 12.93**	

5.2 Faculty Cadre Proportion **20**

Academic Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
2016-2017	2	**1**	4	**5**	11	**13**
2017-2018	2	**1**	4	**4**	11	**13**
2018-19	2	**2**	4	**2**	11	**17**
Average Numbers	RF1 = 2	**AF1 = 1.33**	RF2 =4	**AF2 = 3.66**	RF3 = 11	**AF3 = 14.33**

Cadre Proportion Marks:
= [(AF1/RF1) + (AF2/RF2 * 0.6) + (AF3/RF3*0.4)] * 10
= [(**1.33**/2) + (**3.66**/4 * 0.6) + (**14.33**/11*0.4)] * 10
= [0.665+ 0.549+0.521]* 10

= 17.35

5.3 Faculty Qualification 20

FQ = 2*(10X +4Y)/F

Where X is no. of faculty with PhD
Y is no. of faculty with M Pharm.,
F is no. of faculty required to comply 1:15 Faculty Student ratio (no. of faculty and no. of students required to be calculated as per 5.1)

Assessment year	X (No. of faculty with Ph. D)	Y (no. of faculty with M. Pharmacy)	F (No. of faculty required to comply 1:15 Faculty Student ratio)	FQ= 2*[(10X+ 4Y)/F]
2016-2017	**6**	**13**	16	**14**
2017-2018	**5**	**13**	16	**12.75**
2018-2019	**4**	**17**	16	**13.5**
Average Assessment				**13.41**

5.4 Faculty Retention 20

Sr. No.	Faculty available for 2016-17	List of faculty available for both 2015-2016 and 2017-2018	List of faculty available for both 2016-2017and 2018-2019	Faculty Retention
1	Dr. Ravindra L. Bakal	Dr. Ravindra L. Bakal	Dr. Dipak D. Kumbhar	Faculty Retention =Number of faculty available for **2018-19**/ Number of faculty available for **2016-2017** = **(11/19) * 100** = **57.89%**
2	Dr. Dinkar G. Mundhe	Dr. Dinkar G. Mundhe	Dr. Upendra B. Gandagule	
3	Dr. Jagdish V. Manwar	Dr. Jagdish V. Manwar	Mr. Kundan G. Ingale	
4	Dr. Dipak D. Kumbhar	Dr. Dipak D. Kumbhar	Miss. Poonam P. Warade	
5	Dr. Upendra B. Gandagule	Dr. Upendra B. Gandagule	Mr. Rajesh G. Jadhao	
6	Dr. Sameer S. Sheaikh	Mr. Kundan G. Ingale	Mr. Suraj S. Patil	
7	Mr. Vishal C. Gurumukhi	Miss. Poonam P. Warade	Mr. Shyam W. Rangari	
8	Mr. Kundan G.Ingale	Mr. Rajesh G. Jadhao	Mrs. Uttara M. Sonawane	
9	Miss. Poonam P. Warade	Mr. Suraj S. Patil	Mr.Parmeshwar R. Tijare	
10	Mr. Rajesh G. Jadhao	Mr. Shyam W. Rangari	Mr. Sanjay A. Nagdev	
11	Mr. Suraj S. Patil	Mrs. Uttara M. Sonawane	Mrs. Bhuwaneshwari Y. Rane	
12	Mr. Shyam W. Rangari	Mr.Parmeshwar R. Tijare		
13	Mr. N. A. Sheikh	Mr. Ashish B. Wadekar		
14	Mrs. Uttara M. Sonawane	Mr. Sanjay A. Nagdev		
15	Mr. Nilesh D. Bendale	Mrs. Bhuwaneshwari Y. Rane		
16	Mrs. Bhuwaneshwari Y. Rane			
17	Mr. Parmeshwar R. Tijare			
18	Mr. Ashish B. Wadekar			

19	Mr. Sanjay A. Nagdev

5.5 Innovations by the Faculty in Teaching and Learning 15

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

Contributions to teaching and learning are activities that contribute to the improvement of student learning. These activities may include innovations including, however not limited to, use of ICT, in instruction delivery, instructional methods, assessment, evaluation and inclusive class rooms that lead to effective, efficient and engaging instruction. Any contributions to teaching and learning should satisfy the criteria:

- The work must be made available on Institute website
- The work must be available for peer review and critique
- The work must be able to be reproduced and built on by other scholars
- The institution may set up appropriate processes for making the contributions available to the public, getting them reviewed and for rewarding. These may typically include statement of clear goals, adequate preparation, use of appropriate methods, and significance of results, effective presentation and reflective critique.

- Self-learning assignments
- Seminars
- Group discussions
- Availability of some power point Presentation Prepared by Faculty on College Website.
- LCD - based classroom and Teaching is done by using PowerPoint presentations for easy understanding of some advanced and hyphenated topics and techniques.
- Language Laboratory is established to provide basic training regarding English and communication skills to the students to enhance their communication skills.
- The faculty encourages the students to get experience in answering MCQ type of questions. This is beyond the curriculum and being implemented, so as to train the students for competitive exams.
- Tutorials are made more interactive and student - centric which facilitates the learning Process and involves advancement of slow learners.
- Assignments, open book test and online tests on subject topics are being introduced and self-learning exercises for the students.
- Availability of PowerPoint presentations and some videos prepared by faculty on college website.

5.6 Faculty as Participants in Faculty Development/Training Activities 15

- Participant in **2 to 5 days Workshop**/Faculty Development Program: **3 Points**
- Participant **>5 days Workshop**/Faculty Development Program: **5 points**
- A **Faculty** scores **maximum five points** for participation

Sr. No	Names of all the faculty members 3 years	2016-17	2017-18	2018-19
1	Dr. Parag R. Patil	-	-	5
2	Dr. R.L. Bakal	-	-	-
3	Kundan G. Ingale	-	5	5
4	Sanjay A. Nagdev	-	5	5
5	Dr. D. G. Mundhe	-	-	-

6	Dr. Dipak D. Kumbhar	-	5	5
7	Vishal C. Gurumukhi	-	-	-
8	Dr. Sameer S. Sheaikh	-		-
9	Poonam P. Warade	-	5	5
10	Nilesh D. Bendale	-	-	-
11	N. A. Sheikh	-	-	-
12	Suraj S. Patil	-	5	5
13	Rajesh G. Jadhao	-	5	5
14	Mayur R. Bhurat	-	5	5
15	Uttara M. Sonawane	-	5	5
16	Dr. Upendra B. Gandagule	-	5	5
17	Parmeshwar R. Tijare	-	-	5
18	Shyam W. Rangari	-	5	5
19	Bhuwaneshwari Y. Rane	-	5	5
20	Rajashri V. Patil	-	-	5
21	Dr. Jagdish V. Manwar	-	5	-
22	Rupal S. Sanghavi	-	5	5
23	Sandip S. Chaudhari	-	-	5
24	Amit R. Jadhav	-	-	-
25	Prashant D. Warke	-	-	-
26	Parag M. Barhate	-	-	5
27	Dr. Samiksha P. Warke	-	-	-
28	Makarand R. Patil	-	-	-
29	Shilpa R. Mandpe	-	5	-
30	Ashish B. Wadekar	-	5	-
31	Aishwarya Patil	-	-	-
32	Snehal Jaiswal	-	-	-
Sum		**0**	**75**	**85**
***RF* = Number of Faculty required to comply with 15:1**		**16**	**16**	**16**
Assessment = 3 × Sum/(0.5 RF)		**0**	**28.12**	**31.87**
Average assessment over three years			**19.99**	

5.7. Research & Development

5.7.1 Academic Research **10**

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. **6**

List of Publications: (2016-17)

1. **J.V. Manwar**, S. Vispute, **D. Kumbhar**, R. Manmode, **R. L. Bakal**, **R. Jadhao** and S. Jogdand, "Response surface based optimization of system variables for liquid chromatographic analysis of candestran cilexetil", Journal of Tiabah university for Science. (2016)

2. **Sanjay A. Nagdev**, Ravi P. Kalsait and Milind J. Umekar, "Quantitative estimation: An approach for quantification of essential trace elements in drinking water from natural sources", Archives of applied science research. (2016)

List of Publications: (2017-18)

1. **Manwar JV**, **Patil SS**, **Jadhao RJ**, **Kumbhar DD** and **Bakal R**, "Diclofenac sodium Loaded Nanosized ethosomes: an investigation on Z- Average, Polydispersity and Stability", Open access journal of Pharmaceutical Research (Medwin Publishers). (2017)

2. **Manwar JV**, **Patil SS**, Bhalerao CA, **Mandpe SR** and **Kumbhar DD**, "Experimental Design Approach for Chromatographic Determination of Ketorolac Tromethamine from bulk drug and tablet", Global journal of Pharmacy and Pharmaceutical science. (2017)

3. Swati D. Raysing, **Shyam Rangari**, **Uttara Sonawane**, Sanjay Bari and Sanjay Surana, "Formulation development and evaluation of novel dual compartment capsule for stomach specific drug delivery", Journal of drug delivery and therapeutics. (2017)

4. **Sanjay A. Nagdev**, **Mayur R. Bhurat**, Dr. Krishna R. Gupta, "Health risk assessment to zinc in drinking water of rural residents living in Bhusawal city, Maharashtra (India)", Pharmatutor. (2018)

5. **Mayur R. Bhurat**, **Sanjay A. Nagdev, Rupal Sanghavi**, **Dr. P. R. Patil**, "HPTLC Fingerprinting and Quantification of SHATAVARIN IV in Extract and Polyherbal Formulations" World journal of Pharmaceutical Research. (2018)

List of Publications: (2018-19)

1. **Upendra B Gandagule**, B Duraiswamy, **Mayur R Bhurat**, **Sanjay A. Nagdev**, "Evaluation of Anti-Asthmatic Activity of *Ventilago maderspatana* Stem Extract and *Ziziphus xylopyrus* Stem Bark Extract", Inventi Rapid: Ethnopharmacology. (2018)

2. **Sanjay A. Nagdev**, **Mayur R. Bhurat**, **Upendra B. Gandagule**, Krishna R. Gupta, "Health risk assessment to Calcium in drinking water of rural residents living in Bhusawal city, Maharashtra (India)", Pharmatutor. (2018)

3. **Upendra B Gandagule**, B Duraiswamy, **Mayur R Bhurat**, **Sanjay A. Nagdev**, "Isolation and Characterization of Lupeol a Triterpenoid from Stem Bark of *Ziziphus xylopyrus* (Retz) Willd", Inventi Rapid: Pharmaceutical Analysis & Quality assurance. (2018)
4. **Upendra B Gandagule**, B Duraiswamy, Lokesh Gupta, **Mayur R Bhurat**, **Sanjay A. Nagdev**, "Pharmacognostic Studies of the Leaves and Stem of *Ventilago maderspatana* Gaertn." Inventi Rapid: Planta active. (2018)

5. **Upendra B Gandagule**, B Duraiswamy, Lokesh Gupta, **Mayur R Bhurat**, **Sanjay A. Nagdev**, "Pharmacognostical and Phytochemical Evaluation of the stem of *Ziziphus xylopyrus* (Retz) Willd." Pharmatutor. (2018)

6. **Upendra B Gandagule**, B Duraiswamy, Lokesh Gupta, **Mayur R Bhurat**, **Sanjay A Nagdev**, "Pharmacognostic Studies of the Stem Bark of *Ziziphus xylopyrus* (Retz) Willd." Inventi Rapid: Planta activa. (2018)

7. **Upendra B Gandagule,** B Duraiswamy**,** Ashish Zalke**, Mayur R Bhurat, Sanjay A. Nagdev** "Evaluation of In-Vitro Antioxidant Activity of Leaves, Stem and Stem Bark Extracts of *Ziziphus xylopyrus (Retz)* Willd., Inventi Rapid: Ethnopharmacology. (2018)

8. **Upendra Gandagule,** B Duraiswamy**, Mayur Bhurat, Sanjay Nagdev,** Ashish Zalke**,** Lokesh Gupta, "Estimation of Total Phenolic Content and Total Flavonol Content in Leaves and Stem Extracts of *Ventilago maderspatana* Gaertn. and Leaves, Stem and Stem Bark Extracts of *ZiZiphus xylopyrus (Retz)* Willd.*"*, Inventi Rapid: Planta Activa. (2018)

9. **Suraj S. Patil**, **Dipak D. Kumbhar**, **Jagdish V. Manwar**, **Rajesh G. Jadhao**, Ravindra L. Bakal, Sharad Wakode, "Ultra sound-Assisted facile Synthesis of Nanostructured Hybrid Vesicle for Nasal Delivery of Indomethacin: Response Surface optimization, Microstructure and Stability", AAPS Pharmscitech. (2019)

- **Books Published: 04**

➢ Practical Pharmacognosy and Phytochemistry-I (2018 Pee Vee Publications) by S.A. Nagdev and M.R. Bhurat
➢ Human Anatomy and Physiology-I (Global Publications) by Dr. P.R. Patil
➢ Pharmaceutical Quality Assurance (2018 Pee Vee Publications) by S.A. Nagdev, M.R. Bhurat and Dr. U.B. Gandagule
➢ Practical Pharmaceutics-I (Global Publications) by Dr. Dipak D. Kumbhar, Suraj S. Patil and Rajesh G. Jadhao

- **Ph.D. guided: Nil** **4**
- **Ph.D. awarded during the assessment period while working in the institute - Nil**

5.7.2 Sponsored Research: Nil **10**
5.7.3 Consultancy (From Industry): Nil **10**
5.7.4 Honorary Consultancy from Central/ State/ Local Government Organization **5**

➢ **Our faculty receives Honorary Examination duties from**

- North Maharashtra university, Jalgaon
- Sant Gadge baba Amravati University, Amravati
- Gondwana University, Gadchiroli
- Some of our faculties had received Minor projects From North Maharashtra University, Jalgaon Under Vice-Chancellor research Motivation Scheme (VCRMS) for the period of 2016-2018

Sr. No	Name of Principal investigator	Project tile	Amount received
1	**Dr. R.L. Bakal**	Development and Micro structural analysis of lipid based colloidal drug delivery system for some pharmaceutical actives	35000
2	**Mr. R.G. Jadhao**	Design, synthesis and biological evaluation of some azole derivatives for some anti-cancer and anti-bacterial activity	35000
3	**Mr. S.S. Patil**	To study anti-microbial activity of toothpaste containing synthesized silver nanoparticles	35000
4	**Dr. J.V. Manwar**	Development of fused pyrido pyrimidine as possible anti-convulsants	35000

5.7.5 Development Activities: Nil **5**

5.8 Faculty Performance Appraisal and Development System (FPADS) **20**

Faculties of Higher Education Institutions today have to perform a variety of tasks pertaining to diverse roles. In addition to instruction, Faculty needs to innovate and conduct research for their self-renewal, keep abreast with changes in technology, develop expertise for the effective implementation of curricula. They are also expected to provide services to the hospitals/ industry and community in large for understanding and contributing to the solution of real life problems. Another role relates to the shouldering of administrative responsibilities to co-operation with other Faculty, heads-of-departments and the Head of Institute. An effective performance appraisal system for Faculty is vital for optimizing the contribution of individual Faculty to institutional performance.The assessment is based on a well-defined system instituted for all the assessment years its implementation and effectiveness.

Key points for faculty appraisal are:

Performance based Self-Appraisal takes into account a feedback evaluation. The faculty is assessed annually by the Self-Appraisal method, Peer Evaluation and a robust Student Feedback System. The analysis is done based on the following parameters: Results, number of seminars, conferences attended, contribution to the college and community, books, papers and patents published, grants received and special awards, consultancy work; student feedback is however, given top priority and this is duly communicated at personal level by the Principal to the teacher. A teacher who secures 100% results in his/her subject is motivated by being presented with a Certificate of Appreciation.

The "Best Teacher" award has also been instituted wherein a teacher receives a certificate and memento by Management. The college also encourages Faculty Self-Development through upgrading education by offering full support in terms of facilities provided. Faculty participation in continuing education programs, various national and international conferences, sponsored registration and workshops is encouraged. This appraisal system has given way for further enhancement and up-gradation of their skills and knowledge.

Key points for faculty appraisal are:

- Students feedback
- Professional Society Membership
- Result Analysis and Actions on that to improve higher grades.
- Remedial Coaching (tutorials)
- Workshops/Conference/ seminar to be organized
- Professional Networking
- Additional Content to be covered other than regular curriculum
- Research work/ publications
- Other initiatives for department and College
- Industry Interactions and Visits

- Improvements in T-L Process and Pedagogical Innovations
- More publications
- Exposure on Magazines, Journals, Articles to be increased

5.9 Visiting / Adjunct faculty **5**

Adjunct faculty also includes experts from Industry, Research Organizations/Universities and other Government Organizations. Provide details of participation and contributions in teaching and learning and /or research by visiting/adjunct faculty for all the assessment years.

Sr. No	Name of the Visiting faculty	Parent organization	Subject	Duration and Total Hours spent	Target audience
			2018-2019		
1	Kavita K. Ingale	-	Computer Application in Pharmacy	Jan, Feb, March 201930hrs	F.Y.B. Pharmacy
			2017-18		
1	Nashiket Patil	-	Communication Skills	Aug, Sept, Oct, Nov 2016 30hrs	F.Y.B. Pharmacy
2	Rajashree Mavale	-	Remedial Mathematics	Aug, Sept, Oct, Nov 2016 30hrs	F.Y.B. Pharmacy
3	Dipika Kute	-	Communication skills	Jan, Feb, March 201830hrs	F.Y.B. Pharmacy
			2016-17		
1	Geeta Pal	-	Applied Biostatics and computer application in pharmacy in pharmacy	Aug, Sept, Oct, Nov 2016 30hrs	F.Y.B. Pharmacy

Criterion 6 Facilities 120

6.1 Availability of adequate, well-equipped classrooms to meet the Curriculum Requirements 20

- For the B. Pharmacy course, for each year, total 04 lecture halls available.
- Each classroom accommodates a minimum of 60 students.
- The classroom equipped with chairs and desks.
- Adequate number of tube lights, fans, black board and white projection screen available.
- Classrooms having good ventilation and un-interrupted power supply (UPS).
- In addition to classrooms, one tutorial hall should available.
- The seminar hall available for conducting guest lectures, Seminar, Workshop having 240 seating capacity.
- All Class Rooms/ Board Rooms/Seminar Hall/ Tutorial Rooms designated with proper labels

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

B. PHARMACY PROGRAM

Class/ Tutorial/Board Room/Conference/ Auditorium	Room No.	Seating Capacity (per room)	Dimensions with Area (Sq1M)	Rooms/Labs Equipped with
Tutorial Hall – 1	C16	40	34.09	desks, chairs, blackboard, and Wi-Fi
Lecture Hall – 1	B3	60	67.98	LCD screen, desks, black board, podium and Wi-Fi
Lecture Hall – 2	B2	60	67.98	LCD screen, desks, black board, podium and Wi-Fi
Lecture Hall – 3	C1	60	67.98	Desks, black board, podium and Wi-Fi
Lecture Hall – 4	C2	60	67.98	Laptop, LCD screen, desks, chairs, teachers table, black board, podium and Wi-Fi
Seminar Hall	D10	240	160.00	LCD screen, chairs, podium and Wi-Fi
Computer Lab	D12	20	122.00	Monitor, CPU, Speaker, Mouse, Internet, Chairs
Placement Cell	D11	10	31.00	Monitor, CPU, Table, Chairs

6.2 Faculty Rooms 10

Facilities Available:

- Adequate rooms and cabins are available to accommodate faculty members.
- All the staff rooms are equipped with high speed LAN connection.
- The staff room and staff cabins are well furnished.
- Emergency light connections available in every room in case of power failure.
- All the rooms are well ventilated.
- Every cabin is provided with acomputer, chairs and racks to store their books and files.

Sr. No	Name of the faculty	Designation (HOD/ Assistant Prof)	Faculty Room Code	Exclusive /Shared	Seating capacity for HOD cabin	Whether Computer available	Availability of internet connection
1	Mr. R. G. Jadhao	(HOD) Assistant Professor	A6	Exclusive	01+02	Yes	Yes
2	Mrs. B. Y. Rane	Assistant Professor	A8	Exclusive	01+02	Yes	Yes
3	Mr. S. W. Rangari	Assistant Professor	A8	Exclusive	01+02	Yes	Yes
4	Mr. S. S. Patil	Assistant Professor	A17	Exclusive	01+02	Yes	Yes
5	Mr. P.D. Warke	Assistant Professor	B16	Shared	01+02	Yes	Yes
6	Mrs. P.P. Warade	Assistant Professor	A19	Shared	01+02	Yes	Yes
7	Mr. K. G. Ingale	(HOD) Assistant Professor	B6	Exclusive	01+02	Yes	Yes
8	Mrs. S. P. Warke	(HOD) Associate Professor	A12	Exclusive	01+02	Yes	Yes
9	Mr. M. R. Bhurat	Assistant Professor	B16	Shared	01+02	Yes	Yes
10	Dr. U. B. Gandagule	(HOD) Associate Professor	B18	Exclusive	01+02	Yes	Yes
11	Miss. U. M. Sonowane	Assistant Professor	C9	Exclusive	01+02	Yes	Yes
12	Mr. S. S. Chaudhari	Assistant Professor	A15	Shared	02+03	Yes	Yes
13	Mr. P. R. Tijare	Assistant Professor	B8	Shared	02+03	Yes	Yes
14	Mr. S. A. Nagdev	Assistant Professor	B14	Shared	02+03	Yes	Yes
15	Mr. A. R. Jadhav	Assistant Professor	B14	Shared	02+03	Yes	Yes
16	Dr. D. D. Kumbhar	Associate Professor	A11	Exclusive	01+02	Yes	Yes
17	Ms. R. V. Patil	Assistant Professor	A19	Shared	01+02	Yes	Yes
18	Ms. R. S. Sanghvi	Assistant Professor	C22	Shared	01+02	Yes	Yes
19	Ms. A. K. Patil	Assistant Professor	B11	Shared	01+02	Yes	Yes
20	Ms. S. R. Jaiswal	Assistant Professor	B11	Shared	01+02	Yes	Yes

6.3 (A) laboratories including Preparation room (Wherever applicable), Instrument/Machine Room and computer labs along with Equipment and Relevant Facilities 40

01. Every Laboratory properly labeled from outside
02. SOP's wall mounted near to the equipment
03. Every laboratory possess First Aid Kit
04. All the chemicals properly labeled and kept on isolated rack

05. Document containing Proper list of chemicals available in the laboratory, labeled on Rack/cupboard containing chemicals
07. Every laboratory possess exhaust fans
08. Facility of fire extinguishers available in every laboratory
09. All the instruments/machineries in the institute labeled with unique code
10. Each and every instrument/machine with Log Book for user entries.
11. Every log book possess unique code which has to be mentioned on front page
12. Central Instrument room is equipped with A.C.
13. There is regular Water supply in the lab.
14. The cleanliness of this room is regularly maintained.
15. Sand bucket are available.
16. All the equipment's present in laboratories is equipped with stabilizer
17. Central Instrument lab equipped with online UPS

Names of all the laboratories

Laboratory Name	Lab No.	Batch Size	Dimensions with area (Sq M)	Availability of manuals	Quality of instruments	Safety measures	Remarks (if any)
Pharmaceutical Chemistry-I	A5	20	78.73	Yes	Excellent	Yes	
Pharmaceutical Chemistry-II	A9	20	78.73	Yes	Excellent	Yes	
Pharmaceutical Analysis	A10	20	78.73	Yes	Excellent	Yes	
Central Instrument Lab	A13	20	78.73	Yes	Excellent	Yes	
Pharmaceutics-I	A16	20	78.73	Yes	Excellent	Yes	
Pharmaceutics-II	A20	20	78.73	Yes	Excellent	Yes	
Machine Room	A24	20	68.17	Yes	Excellent	Yes	
Pharmacology-I	B5	20	78.73	Yes	Excellent	Yes	
Pharmacology-I	B9	20	78.73	Yes	Excellent	Yes	
Quality Assurance	B10	15	78.73	Yes	Excellent	Yes	
Quality Assurance Research lab	B14	15	78.73	Yes	Excellent	Yes	
Pharmacognosy-I	B15	20	78.73	Yes	Excellent	Yes	
Pharmacognosy-II	B19	20	78.73	Yes	Excellent	Yes	
HAP lab (D. Pharm)	C4	20	78.73	Yes	Excellent	Yes	
Animal House	C6	20	78.73	No	Excellent	Yes	
Biotechnology	C9	20	78.73	Yes	Excellent	Yes	
Pharmaceutics (PG)	C12	15	78.73	Yes	Excellent	Yes	
Pharmaceutics Research Lab (PG)	C13	15	78.73	Yes	Excellent	Yes	

Sr. No.	Name of The Equipment	Code	Manufacturer	Model	Availability of SOP and SOP No.	Availability of manual	Availability of Log Book and Log Book Number
Central Instrument Lab							
1	FTIR	KYDSCT/COPS/2014-15/ FTIR No. 01	Agilent Tech	Carry 630	Yes	Yes	Yes
2	HPLC	KYDSCT/COPS/2014-15/ HPLC No. 01	Agilent Tech	Infinity 1220	Yes	Yes	Yes
3	UV spectrophotometer	KYDSCT/COPS/2013-14/ UV No. 01	Shimadzu	1800	Yes	Yes	Yes
4	Dissolution Apparatus	KYDSCT/COPS/2013-14/ Disso App. No. 01	Electrolab		Yes	Yes	Yes
5	Bursting Strength Apparatus	KYDSCT/COPS/2013-14/ BSA No. 01	Vertex	BST-D1	Yes	Yes	Yes
6	Probe Sonicator	KYDSCT/COPS/2013-14/ Probe S. No. 01	PCI Analytics		Yes	Yes	Yes
7	Ultra Turrax	KYDSCT/COPS/2013-14/ Ultra T. No. 01	Cole Parmer		Yes	Yes	Yes
Dept. of Pharmaceutics							
1	Tray Dryer	KYDSCT/COPS/2010-11/Tray dry No.1	-	-	Yes	Yes	Yes
2	Brookfield Viscometer	KYDSCT/COPS/2012-13	Brookfield engi. Lab	LV-DVE	Yes	Yes	Yes
3	Water distillation unit	KYDSCT/COPS/2015-16 D.U No. 04	-	-	Yes	Yes	Yes
4	Digital Tachometer	KYDSCT/COPS/2015-16 D.T No. 1	Cutron	DT223 4C	Yes	Yes	Yes
5	Clarity test apparatus	KYDSCT/COPS/2010-11/ Inst. C.T/01	-	-	Yes	No	Yes
6	Digital pH meter	KYDSCT/COPS/2015-	Scientex	-	Yes	Yes	Yes

		16 PH meter No.01					
7	Friability test apparatus	KYDSCT/COPS/2010-11/friability No. 01	-	-	Yes	Yes	Yes
8	Hardness Tester (Monsanto)	KYDSCT/COPS/2015-16 No.02	Inco	-	Yes	No	Yes
9	Incubator	KYDSCT/COPS/2007-08/Inc no. 1	Lab Hosp	-	Yes	Yes	Yes
10	Water bath thermostatic	KYDSCT/COPS/2007-08 No.01	-	-	Yes	Yes	Yes
11	Bulk density apparatus	KYDSCT/COPS/2010-11/Density app no. 2	Labtech	-	Yes	Yes	Yes
12	Disintegration test apparatus	KYDSCT/COPS/2010-11/Dis app. No. 01	Inco	-	Yes	Yes	Yes
13	Hot plate	KYDSCT/COPS/2010-11/Inst. R Hot plate no 2	-	-	Yes	Yes	Yes
14	Percolator	KYDSCT/COPS/2007-08/ perco no.09	-	-	Yes	No	Yes
15	Vacuum pump	KYDSCT/COPS/2010-11/no V pump 02	-	VP115	Yes	Yes	Yes
16	Vacuum pump	KYDSCT/COPS/2015-16/VP No. 03	-	TID15	Yes	Yes	Yes
17	Hot air oven	KYDSCT/COPS/2007-08/OVD no 02	Labstar	-	Yes	Yes	Yes
18	Heating mantle	KYDSCT/COPS/2007-08/HM no 01,7,8,11,15	-	-	Yes	Yes	Yes
19	Autoclave	KYDSCT/COPS/2015-16/Autoclave no 03,05	-	-	Yes	Yes	Yes
20	Melting point Apparatus	KYDSCT/COPS/2007-08/Inst.MP Appt no 01	Universal BTO	-	Yes	Yes	Yes
21	Tincture Press Machine	KYDSCT/COPS/2007-08/Tinc. Pr. M. no.1	-	-	Yes	Yes	Yes
22	Analytical Balance	KYDSCT/COPS/2007-08/ANBL no.06	Spacelab	-	Yes	Yes	Yes
23	Mechanical stirrer	KYDSCT/COPS/2010-11/Int. Mech. Str. No 11,16,21	-	-	Yes	Yes	Yes

24	Agitator	KYDSCT/COPS/2010-11/Inst. Agitator no.1 to 5	-	-	Yes	Yes	Yes
25	Homogeniser	KYDSCT/COPS/2010-11/Inst. Homor no.1 to 5	-	-	Yes	Yes	Yes
			Machine Room				
1	Bottle washing machine	KYDSCT/COPS/2010-11/BWM no. 01	Labtech	-	Yes	No	Yes
2	Ointment filling machine	KYDSCT/COPS/20 07-08/Oint. no. 01	-	-	Yes	No	Yes
3	Tablet coating pan	KYDSCT/COPS/2010-11/T. Coating pan no.01	-	-	Yes	No	Yes
4	Tablet punching machine (hand operated)	KYDSCT/COPS/20 09-10/ Tab punch no.01	Inco	-	Yes	No	Yes
5	All-purpose equipment	KYDSCT/COPS/2014-15 No.01	Labtech		Yes	No	Yes
6	Sieve shaker	KYDSCT/COPS/2010-11/Inst. sieve shaker no.01	-	-	Yes	Yes	Yes
7	Bottle filling machine	KYDSCTCOPS/2010-11/BFM no.01	Labtech	-	Yes	No	Yes
8	Bottle sealing machine	KYDSCT/COPS/10-11/Bottle sealing No. 01	Labtech	-	Yes	No	Yes
9	Double cone blender	KYDSCT/COPS/2010-11/D C Blender no.01	-	-	Yes	Yes	Yes
10	Tablet compression machine (Single Rotary)	KYDSCT/COPS/2013-14 Comp M No.02	Karnavati Remek	CMR-JTBA0010BAA	Yes	Yes	Yes
			Pharmacology				
1	Actophotometer	KYDSCT/COPS/2010-11/ Inst. ACT-1	Labtech	-	Yes	No	Yes
2	Rotarod	KYDSCT/COPS/2010-11Inst.Rotarod-1	Labtech	-	Yes	Yes	Yes
3	Electroconvulsiometer	KYDSCT/COPS/2010-11/Inst. Econv-1	Labtech	-	Yes	No	Yes

4	Eddy's Hot plate analgesiometer	KYDSCT/COPS/2010-11/Inst. ED hotplate-1	Labtech	-	Yes	No	Yes
5	Spirometer	KYDSCT/COPS/2010-11/Hspirometer-1	KE	--	Yes	No	Yes
6	Sherington Drum	KYDSCT/COPS/2009-10/SD-1 to 10	INCO	-	Yes	Yes	Yes
7	Organ bath	KYDSCT/COPS/2009-10/OB-1to10	INCO	-	Yes	Yes	Yes
8	Pole climbing apparatus	KYDSCT/COPS/2010-11/PCA-1	Labtech	---	Yes	Yes	Yes
9	Digital photo Colorimeter	KYDSCT/COPS/2012-13/DPC-1	Labline	---	Yes	Yes	Yes
			Biotechnology				
1	Refrigerator	KYDSCT/COPS/15-16/ Refri.	Electrolux		Yes	Yes	Yes
2	Ultra sonic cleanser (Sonicator)	KYDSCT/COPS/15-16/Sonicator No.02	Lab man scientific instrument	LMU-2	Yes	Yes	Yes
3	Digital centrifuge	KYDSCT/COPS/15-16/D. Centri. No. 02	Laby	T-3BL	Yes	Yes	Yes
4	Water bath shaker	KYDSCT/COPS/10-11/ W. Bath No.01	Lab tech		Yes	Yes	Yes
5	Humidity chamber	KYDSCT/COPS/10-11/ Humi Cham.	Lab tech		Yes	Yes	Yes
6	Orbital incubator shaking	KYDSCT/COPS/10-11/ O. S. I	Esha		Yes	Yes	Yes
7	Laminar air flow apparatus	KYDSCT/COPS/10-11/ Lam. A. Flow	Lab tech		Yes	Yes	Yes
8	Air conditioner	KYDSCT/COPS/10-11/ AC No 03	Whirlpool		Yes	Yes	Yes
9	Lab stirrer	KYDSCT/COPS/10-11/ stirr	Remielektrotechnik	RQ.12 2D	Yes	Yes	Yes
10	Autoclave	KYDSCT/COPS/07-08/ Auto No.01	Space lab		Yes	Yes	Yes
11	B.O.D incubator	KYDSCT/COPS/10-11/ BOD			Yes	Yes	Yes

12	Digital PH meter	KYDSCT/COPS/15-16/ Ph Meter	Sciencetex		Yes	Yes	Yes
13	Membrane filter assembly	KYDSCT/COPS/10-11/MFA			Yes	No	Yes
			Pharmaceutical chemistry				
1	Hot air oven-1	KYDSCT/COPS/2007-08/ HAO No.-1	Lab-Star		Yes	Yes	Yes
2	Hot air oven-2	KYDSCT/COPS/2010-11/ HAO No.-4			Yes	Yes	Yes
3	Micro-oven-2	KYDSCT/COPS/209-10/ Micro O No.-2	Whirlpool		Yes	Yes	Yes
4	Micro-oven-1	KYDSCT/COPS/209-10/ Micro O No.-1	Catalyst System	Cata-2R	Yes	Yes	Yes
5	Muffle Furnace	KYDSCT/COPS/2013-14/ MF	Biotech Ltd	DTC-96	Yes	Yes	Yes
6	Digital PH meter	KYDSCT/COPS/2010-11/Dig.Ph.M. No-3	Lab-tech	-	Yes	Yes	Yes
7	Magnetic Stirrer	KYDSCT/COPS/2010-11/Mag. Str. No-7,8,10,12,14	-	-	Yes	Yes	Yes
8	Mechanical Stirrer	KYDSCT/COPS/2010-11/ Mech. Str. No-2,4,5,6,7,8,9,10,12	-	-	Yes	Yes	Yes
9	Vacuum Pump	KYDSCT/COPS/2015-16/ VP No.-4	-	-	Yes	Yes	Yes
10	Digital Balance	KYDSCT/COPS/2013-14 DB	-	-	Yes	Yes	Yes
11	Hot-plate	KYDSCT/COPS/10-11/ Hot P. No.-1,2,3,4	-	-	Yes	Yes	Yes
			Pharmaceutical Analysis Lab				
1	Polarimeter	KYDSCT/COPS/07-08/POL/No.1	-	WXG4	Yes	Yes	Yes
2	Digital Turbidity Meter	KYDSCT/COPS/08-09/Ins.D.T.M No.1	Ri	212-R	Yes	Yes	Yes

3	Refractometer	KYDSCT/COPS/07-08/REF.M.No.1	DOUBLER OPTICS	--	Yes	Yes	Yes
4	Digital Balance	KYDSCT/COPS/15-16/Digital Balance/No.8	Labtech	BL-3002	Yes	Yes	Yes
5	Heating Mantle	KYDSCT/COPS/15-16/HM/No.4,9,12	-	-	Yes	Yes	Yes
6	Digital Conductivity Meter	KYDSCT/COPS/08-09/C.M.Mg.ST/No.1	Equip-Tronics	EQ-664A	Yes	Yes	Yes
7	Karl Fischer Titrimeter	KYDSCT/COPS/INS-A.K.T.M/No.1	-	-	Yes	Yes	Yes
8	Analytical Balance	KYDSCT/COPS/07-08/Inst.ANBL/No.1	Spacelab	-	Yes	Yes	Yes
9	Analytical Balance	KYDSCT/COPS/07-08/Inst.ANBL/No.5	KerroY&Co	-	Yes	Yes	Yes
10	Magnetic Stirrer	KYDSCT/COPS/10-11/Mag.StR/No.8, 9	-	-	Yes	Yes	Yes
QA-I and QA-II Lab							
1	Flame Photometer	KYDSCT/COPS/09-10/F.P/ No.1	Elico	CL378	Yes	Yes	Yes
2	Analytical Balance	KYDSCT/COPS/07-08/Inst.ANBL/ No.02	Spacelab	-	Yes	Yes	Yes
3	Analytical Balance	KYDSCT/COPS/07-08/Inst.ANBL/ No.01	Spacelab	-	Yes	Yes	Yes
4	Hot air Oven	KYDSCT/COPS/15-16/oven/No.05	Biotech		Yes	Yes	Yes
5	Magnetic Stirrer	KYDSCT/COPS/07-08/Inst- Mag-Str/ No.05	-	-	Yes	Yes	Yes
6	Autoclave	KYDSCT/COPS/10-11/Inst.Autoclave/No.04	Shiva Gauges	-	Yes	Yes	Yes
7	SpectroFlurometer	KYDSCT/COPS/09-10/Flu/No.01	Elico	CL-53S	Yes	Yes	Yes
8	Digital PH meter	KYDSCT/COPS/10-11/Dig.PH.M.No.4	Labtech	-	Yes	Yes	Yes
9	Digital Photo	KTDSCT/COPS/07-	MAX	-	Yes	Yes	Yes

	Colorimeter	08/Dig.P.M. No.1					
10	Cobb's Tester	KYDSCT/COPS/2015-16 CT No.01	Vertex	CT-01	Yes	Yes	Yes
Pharmacognosy and Phytochemistry							
1	BOD Incubator	KYDSCT/COPS/10-11/BOD Inc No-02			Yes	Yes	Yes
2	Hot air oven	KYDSCT/COPS/10-11/Oven No. 05			Yes	Yes	Yes
3	Autoclave	KYDSCT/COPS/10-11/ Autoclave No.02			Yes	Yes	Yes
4	Antibiotic zone reader	KYDSCT/COPS/10-11/Zone Reader No.01	Lab Tech		Yes	No	Yes
5	Infrared moisture balance	KYDSCT/COPS/ 10-11/ Infrared balance No. 01			Yes	Yes	Yes
6	Muffle furnace	KYDSCT/COPS/10-11/ muffle furnace No. 1			Yes	Yes	Yes
7	U. V. Cabinet	KYDSCT/COPS/07-08/U.V. Cab No. 01	Lab Hosp		Yes	Yes	Yes
8	Projection microscope	KYDSCT/COPS/10-11/ Projection microscope No. 01			Yes	Yes	Yes
9	Serum centrifuge	KYDSCT/COPS/15-16/Serum Centri. No. 3	Laby		Yes	Yes	Yes
10	Suction Pump	KYDSCT/COPS/10-11/ Suction pump No. 4			Yes	No	Yes
11	Digital Balance	KYDSCT/COPS/15-16/Digital Balance No. 36	Lab Tech		Yes	Yes	Yes
12	Digital colony counter	KYDSCT/COPS/10-11/colony counter No. 1 and 2	Lab Tech		Yes	Yes	Yes
13	Electric water bath	KYDSCT/COPS/8-09/Ele. Water bath No. 02			Yes	Yes	Yes

6.3. (B) Availability of computing facilities exclusively for the programme 20

The college has well equipped infrastructure in terms of hardware and software facilities to use ICT (Information and communication technology) solutions in pharmacy with English Language software (Words-Worth) having uninterrupted light supply .The details of IT infrastructure are given as under:

Table-Details of IT Infrastructure

Sr. No	Item	Specification	Quantity
1	Monitor	Dell	14
		HCL	14
		LG	6
		Intex	4
2	CPU	Dell	1
		HCL	14
		Intex	9
3	Mouse	Dell	14
		Max Pro	3
		HCL	3
		Seriesa	13
		Iball	1
		Amkette	1
		Transtech	2
		Intex	1
4	Key Board	Dell	12
		Seriesa	10
		HCL	8
		Iball	9
		Amkette	1
5	UPS	Artis	1
		Power safe	2
		Microtek	1
6	Head Phone	Logitech	21

6.4 Drug Museum **05**

1. Type & quality of collection in the museum with proper labelling and display.
2. Drug museum located center of the ground floor, facing to the entrance gate, which becomes visible to everyone entering to college.
3. The museum is designed with special care to highlight the displayed products with excellent transparency.
4. The museum designed to provide separate sections for various categories of products.
5. Regular cleaning schedule is followed for the museum.
6. The products updated from time to time with latest developments in the market.

Name of Product	Quality	Labelling
A. DRY SYRUP		
SENSICALV	Good	Done
EXYLIN	Good	Done
ZATHRIN 100	Good	Done
B. PARENTRALS		
Dextrose % Injection	Good	Done
LOX 2 % 30 ml Injection	Good	Done
Dexalab 8mg/2ml Injection	Good	Done
C. CONTRACEPTIVES		

Model CU 375 IUD	Good	Done
Choice Birthcontrol pills	Good	Done
Manforce Staylong Condom	Good	Done
D. OPTHALMIC & NASAL PREPARATIONS		
Xylozen Nasal Drop	Good	Done
Neosporin H ear Drop	Good	Done
Ciplox Eye Drop	Good	Done
E. CREAMS		
Clomed GM Skin cream	Good	Done
Ucemic Cream	Good	Done
F. GELS		
Rhumatil gel	Good	Done
Ultra gel	Good	Done
G. OINTMENTS		
Tacrotopic Ointment 10mg	Good	Done
Iodex	Good	Done
Ocupol D Ointment	Good	Done
Gatsun Ointment	Good	Done
H. LIQUID DOSAGE FORM		
Pudin Hara	Good	Done
Bevon Suspension	Good	Done
Richar XT Suspension	Good	Done
I. AYURVEDIC PREPARATIONS		
Divya Kanti Lep	Good	Done
Apigra Appetiser Syrup	Good	Done
Crux Cough formula	Good	Done
J. COSMETIC PREPARATIONS		
Pond's Powder	Good	Done
Oriflame Nature body Talc	Good	Done
Dermicool Skin defence Talc	Good	Done
K. HAIR PREPARATIONS		
Pantene Pro V Hairfall Cont Shampoo	Good	Done
Ayur Hair Gel	Good	Done
Indica Herbal hair colour	Good	Done
L. POWDER		
Clocip Absorbant Dusting powder	Good	Done
Nuforce Dusting Powder	Good	Done
M. DENTAL PRODUCT		
Rexidine -M Forte Gel	Good	Done
Closeup Tooth Paste	Good	Done
Pepsodent Tooth Paste	Good	Done
N. LOZENGES		
Zeal Plus Cough lozenge	Good	Done
Strepsil Orange Cough Lozenge	Good	Done
O. AEROSOLS		
Tranquil body deo	Good	Done
Cartier Natural Spray	Good	Done

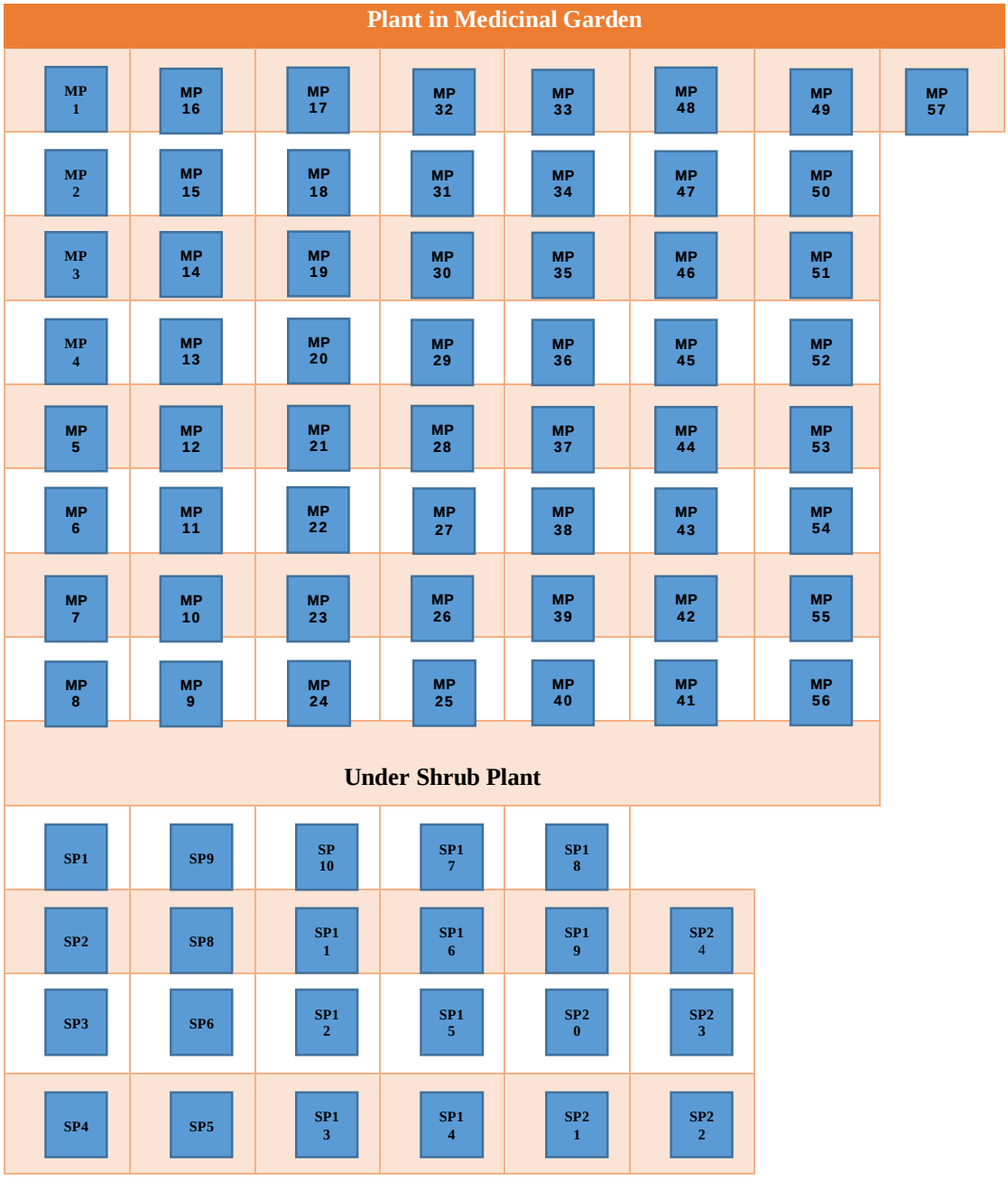
Layerr'S Shot Deo	Good	Done
P. BABY PRODUCT		
Johnsons Baby Soap	Good	Done
Johnsons Baby Cream	Good	Done
Johnsons baby Oil	Good	Done
Touch Moist Baby Soap	Good	Done
Zincovit Drop	Good	Done
Soaft Peatles Powder	Good	Done
Mamy Pokopants Diaper	Good	Done
Q. INHALERS		
Tiova Inhaler (Tiotripium bromide)	Good	Done
Seroflow (Salbutamol & Fluticasone)	Good	Done
R. UNCOATED TABLETS		
Orofer XT Tablet	Good	Done
Calpol Tablet	Good	Done
F-Zole 150 Tablet	Good	Done
ZIB-200 Tablet	Good	Done
CAPSULE		
Razo D Capsule	Good	Done
Alkof coughgels	Good	Done
Econorm Capsule	Good	Done
GLASSWARE'S		
Reagent Bottle	Good	Done
Conical Flask	Good	Done
Nessler Cylinder	Good	Done
Beaker	Good	Done
Buchnear Funnel	Good	Done
S. Funnel		
RBF	Good	Done
Crucible	Good	Done
Thermometer	Good	Done
T. Volumetric Pipette		
Graduated Pipette	Good	Done
Micro Pipette	Good	Done
Mortar and Pestle	Good	Done
Pair of Tong	Good	Done
Wire Gauge	Good	Done
Thiele's Tube	Good	Done
Dropper	Good	Done
Porcelain Dish	Good	Done
Water Bath	Good	Done
Test tube Holder	Good	Done
Test Tube	Good	Done
Test Tube Stand	Good	Done
Volumetric Flask	Good	Done
Stalagmometer	Good	Done
Ostwald Viscometer	Good	Done
Measuring Cylinder	Good	Done

Organ Tube	Good	Done
Receiver	Good	Done
Calcium Guard Tube	Good	Done
Cones	Good	Done
Vacuum Adapter	Good	Done
Density Bottle	Good	Done
Petridish	Good	Done
Watchglass	Good	Done
Corck Borer	Good	Done
Glass slide	Good	Done
Condenser	Good	Done
Burette	Good	Done
Fusion Tube	Good	Done
Needle	Good	Done
Spatula	Good	Done
Tripod Stand	Good	Done
Fractionating Column	Good	Done
Adaptor	Good	Done
Weighing Bottle	Good	Done
Iodine Flask	Good	Done

6.5 Medicinal Plant Garden 05

Sr. No.	Question	Response
1	Names of Teaching Faculty members responsible for maintenance of Medicinal Plant Garden	Dr. U. B. Gandagule, Prof. P. D. Warke, Mr. R. G. Jadhao
2	Plantation done in demarcated areas.	Yes
3	Total area of the garden (in Square Meter)	288
4	The boundary of the garden properly demarcated.	Yes
5	The medicinal plant garden is permanent and is provided with all-time maintenance facility.	Yes
6	The medicinal plant garden has green house facility.	Yes
7	The cultivation of medicinal plants is proper and kept based on the type of plants. Herbs, xerophytes and shrubs are provided with different locations.	Yes
8	Name of housekeeping person /a gardener is taking care for water pouring, cleaning and providing the pesticides from time to time.	Mr.B. R. Talele
9	The plant density of the medicinal plants is maintained properly.	Yes

Map of Medicinal and Herbal Garden



Types, varieties and number of plants, available in the garden (with names and uses thereof)

Sr. No (MP)	Name of Plant	Scientific Name of Plant	Family
1.	Sadaphuli	*Cathrenthus roseus*	Apocynaceae
2.	Jangali Badam	*Terminalia catappa*	Combretaceae
3.	Mango	*Magnifera indica*	Anacardiaceae

4.	Adulasa	*Adhatoda vasika*	Acanthaceae
5.	Gambhari	*Gmelina arborea*	Lamiaceae
6.	Aamla	*Emblica officinalis*	Euphorbiaceae
7.	Gunja	*Abrus precatorius*	Leguminosae
8.	Sarpgandha	*Rauwolfia serpentina*	Apocynaceae
9.	Jaswand	*Hibiscus rosa-sinensis*	Malvaceae
10.	Nimbu	*Citrus limon*	Rutaceae
11.	Halad	*Curcuma longa*	Zingiberaceae
12.	Behada	*Terminalia bellirica*	Combretaceae
13.	Ashwagandha	*Withania somnifera*	Solanaceae
14.	Aloe	*Aloe barbadensis*	Liliaceae
15.	Panphuti	*Bryophyllum pinnatum*	Crassulaceae
16.	Thevetia	*Cascabela thevetia*	Apocynaceae
17.	Bael	*Aegle marmelos*	Rutaceae
18.	Jambhul	*Syzygium cumini*	Myrtaceae
19.	Ginger	*Zinziber officinalis*	Zingiberaceae
20.	Karavand	*Carissa carandas*	Apocynaceae
21.	Papaya	*Carica papaya*	Caricaceae
22.	Nilgiri	*Eucalyptus globulus*	Myrtaceae
23.	Shatavari	*Asparagus racemosus*	Asparagaceae
24.	Cotton	*Gossypium herbaceum*	Malvaceae
25.	Dhatura	*Datura metal*	Solanaceae
26.	Cardamom	*Elettaria cardamomum*	Zingiberaceae
27.	Mandukaparni	*Centella asiatica*	Apiaceae
28.	Shyonak	*Oroxylum indicum*	Bignoniaceae
29.	Kanchana	*Bauhinia acuminata*	Leguminosae
30.	Fennel	*Foeniculum vulgare*	Umbelliferaceae
31.	Pimpali	*Piper longum*	Piperaceae

32.	Bakuchi	*Psoralea corylifolia*	Leguminosae
33.	Tulas	*Osimum sanctum*	Lamiaceae
34.	Lajalu	*Mimosa pudica*	Leguminosae
35.	Nirgudi	*Vitex negundo*	Lamiaceae
36.	Chitrak	*Plumbago zeylanica*	Plumbaginaceae
37.	Bhringraj	*Eclipta alba*	Asteraceae
38.	Bambu	*Bambusa vulgaris*	Poaceae
39.	Shendari Bixa	*Bixa orellana*	Bixaceae
40.	Panphuti	*Bryophyllum pinnatum*	Crassulaceae
41.	Karanj	*Pongamia pinnata*	Fabaceae
42.	Guggul	*Commiphora wightii*	Burseraceae
43.	Bramha rakhshas	*Alocacia indica*	Araceae
44.	Aamaltas	*Cassia fisula*	Fabaceae
45.	Saptaparni	*Alstonia scholaris*	Apocynaceae
46.	Kulinjan	*Alpinia galanga*	Zingiberaceae
47.	Ratangunj	*Adenanthera Pavonina*	Fabaceae.
48.	Bhui Amla	*Phyllanthus amarus*	Phyllanthaceae
49.	Chapha	*Plumeria Alba*	Apocynaceae
50.	PutraJiva	*Putranjiva roxburghii*	Putranjivaceae
51.	Chitrak	*Plambago Zeylanica*	Plumbaginaceae
52.	Ankol	*Alangium salviifilium*	Cornaceae
53.	Pashanbhed	*Plectranthus barbatus*	Lamiaceae
54.	Bogonwel	*Bougainvillea*	Nyctaginaceae
55.	Kandwel	*Cissus quadrangularis.*	Vitaceae
56.	Samudrashok	*Argyreia speciosa*	Convolvulaceae

Under Shed Plants

Sr. No (SP)	Name of Plant	Scientific Name of Plant	Family
1.	Mogara	*Jasminum sambac*	Oleaceae
2.	Khus	*Chrysopogon zizanioides*	Poaceae
3.	Tikhadi	*Cymbopogon martinii*	Poaceae
4.	Lajalu	*Mimosa pudica*	Fabaceae
5.	Jangali Lasun	*Allium sativum*	Amaryllidaceae
6.	Bramhi	*Bacopa monnieri*	Plantaginaceae
7.	Paan ova	*Coleus amboinicus*	Lamiaceae
8.	Gokarn vel	*Clitoria Ternatea*	Fabaceae
9.	Dudh Mogra	*Jasminum sambac*	Oleaceae
10.	Citronella	*Pelargonium citrosum*	Geraniaceae
11.	Simaruba	*Simarouba glauca*	Simaroubaceae
12.	Ran kanda	*Urginea indica*	Liliaceae.
13.	Kevkand	*Costus speciosus*	Costaceae
14.	Ashwagandha	*Withania somnifera*	Solanaceae
15.	Kalmegh	*Andrographis paniculata*	Acanthaceae
16.	Pudina	*Mentha piperita*	Lamiaceae
17.	Lavanga Tulas	*Ocimum tenuiflorum*	Lamiaceae
18.	Gavati chaha	*Cymbopogon flexuosus*	Poaceae
19.	Rose	*Rosa damascena*	Rose family
20.	Shatavari	*Asparagus racemosus*	Asparagaceae
21.	Ten o'clock	*Portulaca grandiflora*	Portulacaceae
22.	Parijatak	*Nyctanthes arbor-tristis*	Oleaceae
23.	Ratrani	*Cestrum nocturnum*	Solanaceae
24.	Bakul	*Mimusops elengi*	Sapotaceae

6.6.1 Availability of adequate and qualified technical supporting staff for program specific laboratories **10**

Sr. No	Name of Technical Staff	Designation	Date of Joining	Qualification		Other Technical Skill Gained	Responsibility
				At Joining	Now		
1	Mr. D. P. Talele	Clerk	01/04/2015	BA	NA	NA	Administers the day-to-day activities of the office. Coordinates with accountant in preparing budget accounts. Provides assistance in the understanding of university policies and ensures that office operations are in compliance.
2	Mr. K. M. Mahajan	Comput Operato	01/08/2007	Diploma in Computer Tech.	NA	NA	Maintenance of Computers
3	Mrs. L. K. Patil	Libraria	03/05/2014	M. Lib	NA	NA	Maintaining all records (purchase orders, Processing of invoices and issue of books). Collecting the list of books (reference and text) and journals required from concerned teachers, compiling the list and getting approval from principal. Requesting the quotation from suppliers and forwarding to the purchase department. Proper maintenance of books and journals including binding process. Issue of book sets and books to the students maintaining their records.
4	Mr. V. V. Kakade	Asst. Librarian	01/08/2007	MA	Master of Library & Informa Science	NA	Proper maintenance of books and journals including binding process. Issue of book sets and books to the students and maintaining their records. Keeping the issuing and reference books at appropriate place.
5	Mr. K. J. Chaudhari	Store Keeper	01/08/2007	D. Pharm	NA	NA	Maintaining all records (purchase orders, delivery of items and processing of invoices) as per the act and periodic approvals Compiling the list of requirements of chemicals, solvents, glassware and other items list forwarded by the lab technicians. Preparing the indents and getting approval from the vice president, through principal. Issue of items to the individual labs through lab technicians for the indents approved by t concerned teachers and principal
6	Mr. K. C. Nehete	Lab Attend	01/08/2007	SSC	NA	NA	Preparation of required reagents. Maintenance of equipment's and instrument

		ant					Maintain stock registers. Keep the lab neat and clean.
7	Mr. B. R. Talele	Peon	03/04/2009	SSC	NA	NA	Arrangement of classrooms, labs, seminar hall and auditorium for routine activities. Helping in photocopying of materials. Going to banks, post office etc., as per the needs of institute. Arrangement of snacks and food during meetings, seminars e
8	Mr. K. D. Chaudhari	Lab Attend ant	01/04/2010	Diploma in Vegetable Production	NA	NA	Preparation of required reagents. Maintenance of equipment's and instrument Maintain stock registers. Keep the lab neat and clean.
9	Mr. M. S. Bakshe	Lab Assistar	01/09/2016	D. Pharm	NA	NA	Identifying the lab requirements (crude drugs, chemicals, solvents, glass wares and others), preparing the list of such items and getting approval from concerned teachers. Preparing the indents for conduct of regular labs on weekly basis and getting approval from concerned teachers and principal. Receiving the items from the central stores as per the approved indent and storing them in a specified manner. Issuing the glassware, microscopes, specime and other instruments to students for their la work and maintaining records.
10	Mr. M. N. Warade	Lab Assistar	01/09/2016	D. Pharm	NA	NA	
11	Mr. L. K. Waghulde	Lab Assistar	11/09/2017	BSc (Computer Science)	NA	NA	
12	Mr. Y. D. Nehete	Lab Attenda	01/07/2017	ITI (Electric HSC	NA	NA	Preparation of required reagents. Maintenance of equipment's and instrument Maintain stock registers. Keep the lab neat and clean.
13	Mr. A. S. Salunke	Lab Attend ant	11/09/2017	BA	NA	NA	
14	Mr. J. B. Patidar	Lab Attend ant	13/09/2017	Diploma in Computer	NA	NA	
15	Mr. T. M. Patil	Lab Attend ant	01/11/2018	Diploma in Agriculture	NA	NA	
16	Mr. P. C. Saraf	Lab Atten dant	29/03/2010	HSC	NA	NA	
17	Mr. B. S. Bhole	Peon	01/08/2007	HSC	NA	NA	Arrangement of classrooms, labs, seminar hall and auditorium for routine activities. Helping in photocopying of materials. Going to banks, post office etc., as per the needs of institute. Arrangement of snacks and food during meetings, seminars e

6.6.2. Incentives, skill upgrade, and professional advancement 10

Incentives:

Ladies staff is allowed to have one time Maternity leave (6 months). Staff pursing higher studies is allowed to avail study leave for carrying out their examination and to attend evening classes outside the college, such as to the training centers, workshops, short tern training programs etc.

- Maternity leave sanctioned to Mrs. K. C. Chaudhari
- Educational leave for higher studies sanctioned to Mr. L. K. Waghulde
- TA & DA facility available for official work
- Duty Leave facility available for attending Seminar, Workshop etc.

Professional advancement:

- Non-Teaching faculty successfully completed One Day Orientation programme on topic **"Effective Communication at Workplace"** held at KYDSCT's College of Pharmacy Sakegaon- Bhusawal on dated 15th Feb. 2019.
- Non-Teaching faculty successfully completed One Week Faculty Development programme on topic **"Soft Skill at Workplace"** held at KYDSCT's College of Pharmacy Sakegaon- Bhusawal on dated 14-19 September 2018.

The non-teaching staffs supported to pursue their higher studies.

- Mr. Vinod Kakade, Librarian was allowed to do M. Lib & he was awarded with token of love for his completion of course.
- Non-Teaching faculty successfully completed one day Staff Orientation programme on topic **"One Day Non-Teaching Staff Orientation Programme"** held at Institute of Management & Science Sakegaon- Bhusawal on dated 25 APR 2018.
- Non-Teaching faculty successfully completed Three days Staff Orientation programme on topic **"Management Development Programme"** held at Institute of Management & Science Sakegaon- Bhusawal on dated 07 May to 09 May 2018.
- Mrs. L. K. Patil completed Two days Staff Orientation programme on topic **"Leadership Development Programme"** held at Institute of Management & Science Sakegaon-Bhusawal on dated 05 March to 06 March 2018
- Mr. V.V. Kakade completed One day Staff Orientation programme on topic **"User Awareness Programme on N-List"** held at North Maharashtra University Jalgaon on dated 19th January 2012

Skill up gradation:

The non-teaching staffs are encouraged to improve their skills and gain knowledge by providing registration fees for attending various workshops and conferences. The following table provides the details of staff attended various conferences and workshops. Training program are organized by the college for imparting the necessary skills to non-teaching staff. The details are given below.

Aim and Objective of Skill Up gradation programme as per Department wise

Department of Pharmaceutics

- They should know the requirements of practical's like chemicals, instruments,equipment's etc. and from where they can get it.
- They should have the list of practical's conducted (or to be conducted) throughout the whole year/semester along with requirements of individual practical's

- They should maintain the record of practical conducted.
- To maintain clean lab is its prime responsibility make cleaning record as well.
- They should know how to prepare several commonly used chemicals and solutions (like diff molar solutions and reagents). If they don't we should provide the necessary calculations for its preparation.
- They should know how to issue chemicals or requirements from the store.
- They must be regular in time and remain in lab during practical schedule.
- Maintain of student attendance record.

Department of Pharmaceutical Chemistry & Pharmaceutical Analysis

- Preparation of Normal solution.
- Preparation of Molar solution.
- Preparation of buffer solution as per IP/BP/USP.
- Preparation of general reagent & dilute solution.
- Maintenance of instruments.
- Maintenance of log book for instrument.
- Maintenance of log book for use of chemicals
- Cleaning of instruments & balance.
- Cleaning of laboratory and its record.
- Maintain of student attendance record.

Department of Pharmacology

- Maintain the log book for chemical consumption.
- Keep the accounting for breakage
- Check the leakage in the water bath.
- They should know about the preparation of reagents
- They should know how to issue chemicals or requirements from the store.
- They should know the requirements of practicals like chemicals, instruments, equipment's etc. and from where they can get it.
- They should have the list of practical's conducted (or to be conducted) throughout the whole year/semester along with requirements of individual practical's.
- They should maintain the record of practical conducted. (In daily lab attendance file).
- Switch on the drums before the practical & rotate for 10 minutes.
- Inspect the aerator & pipelines regularly.
- Cleaning of laboratory and its record.
- Maintain of student attendance record.

Department of Pharmacognosy

- Cleaning and maintenance of microscope.
- Decoration of laboratory with herbal drug plant photo posters
- Labelling of microscope as well as crude drugs.
- Cleaning of laboratory and its record.
- They should know how to issue chemicals or requirements from the store.
- They must be regular in time and remain in lab during practical schedule.
- Maintain of student attendance record.
- Maintenance and development of medicinal garden.
- All plant should be labeled with Name, Traditional Name, B.S., family & uses.
- Make a list of crude drugs and chemicals required during the current academic year.

- Maintain list of crude drugs, chemicals, lab attendance record, and list of instruments (with quantity) in a separate file.
- Maintain list of practical to be conducted during the academic year and collect it from respective subject in charge.
- Ensure that crude drugs required for practical have been purchased or not.
- Before one week of practical discuss with respective subject in charge about the preparation of chemicals and soaking of crude drugs.
- Ensure that all instruments (microscope, stage micrometer, eye-piece micrometer, muffle furnace, Hot air oven, soxhlet apparatus) are in adequate quantity or not and place order according to it.

Skill up Gradation (2018-19)
Two days' Workshop (05/10/2018 to 06/10/2018)

Date	Name of Speaker	Title of Topic	Participants
05/10/2018	Dr. Dipak D Khumbhar	Demonstration about Compression Machine	Mr. D. P. Talale, Mr. K. J. Chaudhari Mr. K. D. Chaudhari, Mr. Y. D. Nehete Mr. L.K. Waghulde, Mr. M. N. Warade Mrs. V. V. SarafMrs. S. P. Saraf Mr. M.S. Bakshe, Mr. K. C. Nehete Mr. A.S. Saraf, Mr. P. C.Saraf Mr. J. B. Patidar, Mr. A. S. Salunke Mrs. L.K. Patil, Mr. V. V. Kakade
06/10/2018	Mr. Suraj S Patil	Demonstration about Brookfield Viscometer	

Skill up Gradation (2017-18)
Three days' Workshop (15/11/2017 to 18/11/2017)

Date	Name of Speaker	Title of Topic	Participants
15/11/2017	Mr. M. R. Bhurat	Maintenance of Herbal & Medicinal garden	Mr. D. P. Talale, Mr. K. J. Chaudhari Mr. K. D. Chaudhari, Mr. Y. D. Nehete Mr. L.K. Waghulde, Mr. M. N. Warade Mrs. V. V. SarafMrs. S. P. Saraf Mr. M.S. Bakshe, Mr. K. C. Nehete Mr. A.S. Saraf, Mr. P. C.Saraf Mr. J. B. Patidar, Mr. A. S. Salunke Mrs. L.K. Patil, Mr. V. V. Kakade
15/11/2017	Dr. U. B. Gandagule	Medicinal use of plant present in Herbal garden	
16/11/17	Mrs. B. Y. Rane	Use of fire extinguishers	
16/11/17	Mrs. B. Y. Rane	Safety Measures	
17/11/17	Mr. S. W. Rangari	Maintenance of stores	
17/11/17	Mr. S. W. Rangari	Maintenance of Laboratories	

Skill up Gradation (2016-17)
Three Day's Workshop (20/06/2016-22/06/2016)

Date	Name of Speaker	Title of Topic	Participants
20/06/2016	Mr. K. G. Ingale	Handling of microscope	Mr. K. J. Chaudhari Mr. K. D. Chaudhari
20/06/2016	Mr. K. G. Ingale	Measurement of BP, blood group testing - importance	Mrs. V. V. Saraf Mrs. S. P. Saraf Mr. K. C. Nehete
21/06/2016	Mr. S. S. Patil	Handling and usage of dissolution apparatus	Mr. A.S. Saraf Mr. P. C. Saraf
21/06/2016	Mr. S. S. Patil	Use of Laboratory Appratus	Mr. D. P. Talele Mr. C. U. Patil
22/06/2016	Mr. S. S. Patil	Handling of computers – preparing word and excel documents	Mr. K. M. Mahajan Mrs. L. K. Patil Mr. V. V. Kakade
22/06/2016	Mr. S. S. Patil	Professionalism	Mrs. L.K. Patil Mr. V. V. Kakade

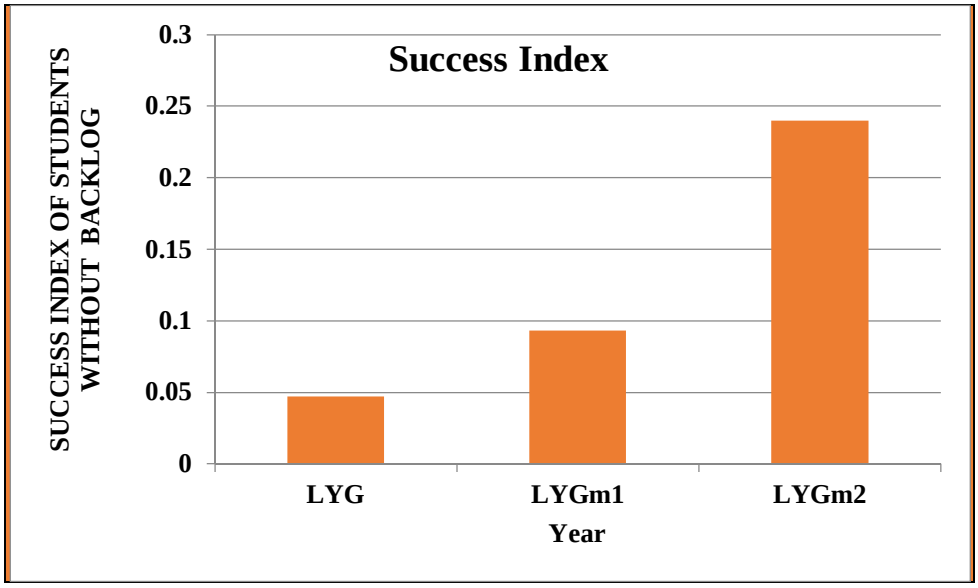
Criterion 7 Continuous Improvement 75

7.1. Improvement in Success Index of Students without the backlog 15

Note: Success Index data taken from 4.2.1

Items	LYG(17-18)	LYG*m1*(16-17)	LYG*m2(15-16)*
Success index	0.047	0.093	0.24

SI= (Number of students who graduated from the Program without backlog) / (Number of students admitted in the first year of that batch and admitted in 2nd year via lateral entry) Assessment shall be based on improvement trends in success indices. Marks are awarded accordingly.



7.2. Improvement in Placement and Higher Studies 15

Assessment is based on improvement in: Placement, number, quality placement, core industry, pay packages etc.

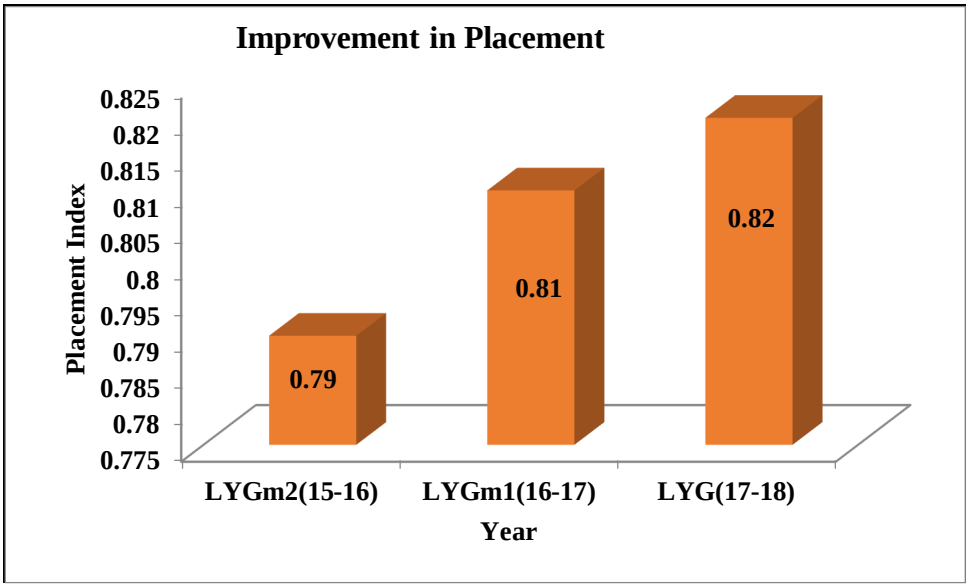
Higher studies: Performance in GPAT etc., and admissions in premier institutions

The college Training and Placement Cell is taking persistent efforts in the continuous improvement of the placement of the students. College always helps student for placement. Our students working in reputed industries such as Ajanta Pharma Ltd., GSK, Cipla, FDC Ltd. etc. and some other Indian pharmaceutical companies. Also considerable improvement is seen in the average pay packages offered to the students over past few years.

College organizes guest lecturers for understanding the importance of various postgraduate courses such as M. Pharmacy, M.B.A., M. S. etc. Every year nearly more than 50% of final year students appear for entrance exam of M. Pharmacy, i.e. GPAT and MH - CET. Many of our students are admitted in renowned institutes of Maharashtra.

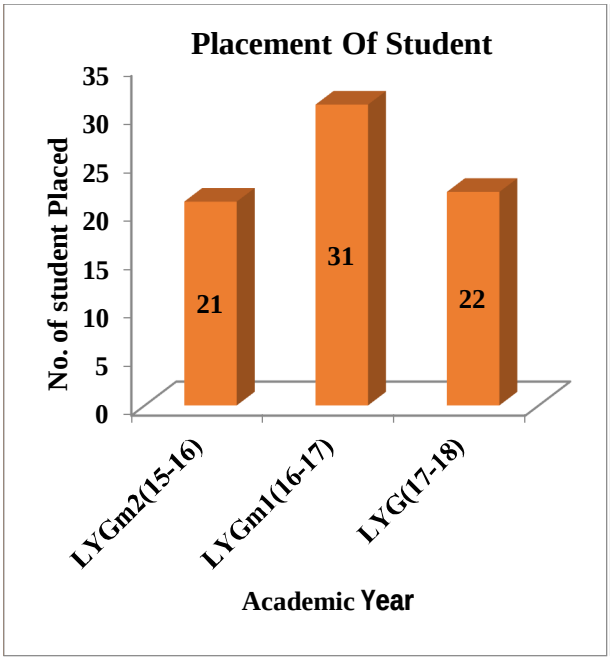
Note: Placement Index data taken from 4.7

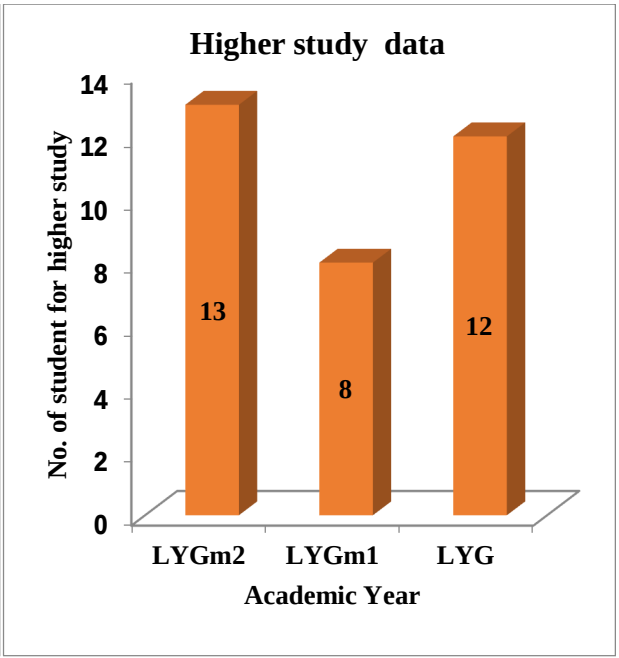
Items	LYG*m2*	LYG*m1*	LYG
Placement index	**0.79**	**0.81**	**0.82**



Data for Placement and Higher Studies

Item	LYG(2017-18)	LYG*m1*(2016-17)	LYG*m2*(2015-16)
Total No. of Final Year Students (N)	41	48	43
Number of students placed in Industries/ Hospitals/ Government sector through on/off campus recruitment or opted for Entrepreneurship(x)	22	31	21
No. of students admitted to higher studies with valid scores in various qualifying exams(y)	12	08	13
x + y	34	39	34
Placement Index : (x + y)/N	0.82	0.81	0.79
T = Average of (x + y)/N	2.42/3=0.8066		
Assessment = 40 X T	40*0.8066= 32.26		

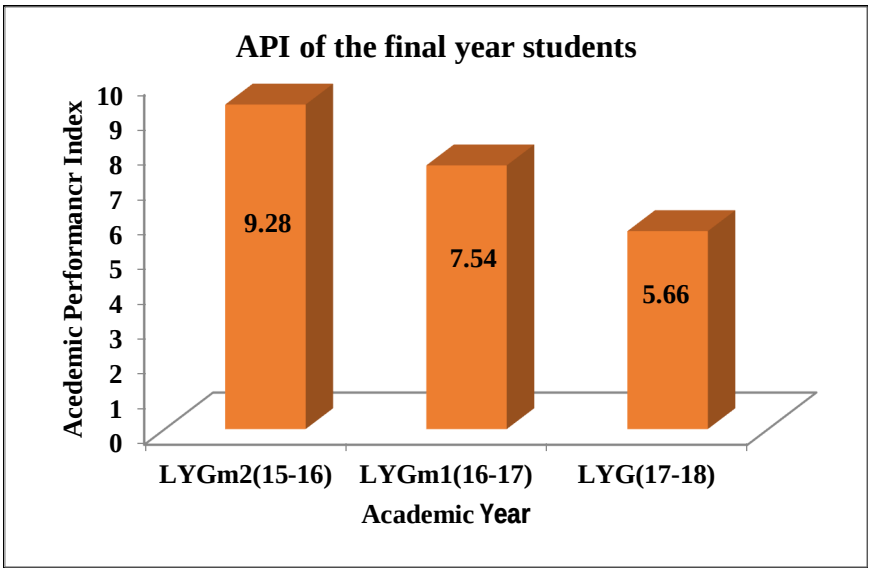




7.3. Improvement in the API of the Final Year Students **10**

Note: Academic Performance Index data taken from 4.3

Items	LYG*m2(15-16)*	LYG*m*1(16-17)	LYG(17-18)
Academic Performance	9.28	7.54	5.66



7.4 Improvement in the quality of students admitted to the Program 15

Item		CAY m1 (17-18)	CAYm2 (16-17)	CAY m3 (15-16)
National level Entrance examination (NEET)	**No. of student admitted**	**04**	NA	NA
	Opening score/Rank	**63.33**	NA	NA
	Closing score/Rank	**50.00**	NA	NA
State/University/ level examination/Other (MH-CET)	**No. of student admitted**	**56**	**60**	**42**
	Opening score/Rank	134	99	102
	Closing score/Rank	30	43	44
Name of examination for lateral entry (MSBT Diploma exam)	**No. of student admitted**	**9**	**9**	**2**
	Opening score/Rank	72.60%	72.60%	54.40%
	Closing score/Rank	55.90%	55.18%	51.00%
Average CBSE / Any other board result of admitted students(Physics, Chemistry, Math's or Bio)		**181**	**167**	**160**

The assessment is based on improvement in terms of ranks/score in qualifying state level/national level entrances tests, percentage marks in Physics, Chemistry and Mathematics in 12th Standard and percentage marks of the lateral entry students.

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

Identify the areas of weaknesses in the Program based on the analysis of evaluation of POs attainment levels. Measures identified and implemented to improve POs attainment levels for the assessment years. Actions to be written as per table in point 3.3.2.

Examples of analysis and proposed action

Sample 1-Course outcomes for a laboratory course in Pharmaceutical analysis did not measure up, as some of the laboratory instruments are not calibrated, standardized and not optimally used, as there was no laboratory work involving the use of HPLC and UV-visible spectrophotometer.

Action taken-The practical work in Pharmaceutical analysis has been upgraded by inclusion of analytical experiments involving the use of HPLC and UV-visible spectrophotometer with the help of SOPs generated.

Sample 2-In a course on Pharmaceutics theory, student performance has been consistently low with respect to some COs as analysis of answer scripts and discussions with the students revealed that this could be attributed to a weaker course and its delivery on GMP, GLP and Drug Regulatory Affairs.

Action taken-The theory course in Pharmaceutics and its delivery has been strengthened by including specific topics on quality control and quality assurance taught by experts drawn from Industry, Academia and Drug Regulatory Authorities.

Sample 3-In a course of Bio-pharmaceutics Theory and Practicals, the students' performance has been low with respect to attainment of some COs as it was revealed that theory and practical component in physical pharmacy is weak and contributed to poor basic concepts and their applications in higher classes.

Action taken- Extra classes were arranged for the students on the emphasis of the basic concepts in physicochemical properties like PKA, Partition Coefficient, Biopharmaceutical Classification System(BCS) and other terms

POs Attainment Levels and Actions for improvement

- Level 3 – High ≥ 90% of the set attainment level
- Level 2 – Medium -80 – 89.99% of the set attainment level
- Level 1 – Low ≤ 79.99% of the set attainment level

Target Level set for Academic year (2017-18)

POs	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11
Target level	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Attainment level(%)	78.26	65.06	94.06	66.99	80.73	42.53	97.06	63.73	79.73	54.73	80.66
Observation	High	Medium	High	High	Medium	Low	High	Medium	High	Low	High

POs Attainment Levels and Actions for improvement (17-18)

POs	Target Level	Attainment Level	Observations
PO1: Statement as mentioned in Annexure I Pharmacy Knowledge: **Possess knowledge and comprehension of the core and basic knowledge associated with the profession of pharmacy, including biomedical sciences; pharmaceutical sciences; behavioural, social, and administrative pharmacy sciences; and manufacturing practices.**			
PO1	75%	78.26%	**High**
PO2:Statement as mentioned in Annexure I 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.**			
PO2	75%	65.06%	**Medium**
Action 1: **In course of Pharmacy syllabus, Carrier in pharmacy and competitive exam in pharmacy GPAT and its planning how to crack and prepare for GPAT is important for the student development. But focus was not given properly in syllabus.** Action N: **The gap is filled by taking this topic in Extra lecture the focus is given on various tips was given to solve MCQ. By Dr. S. P. Warke, COP, Faizpur.** **Date : 15/09/2017**			
PO3: Statement as mentioned in Annexure I Problem analysis: **Utilize the principles of scientific enquiry, thinking analytically, clearly and critically, while solving problems and making decisions during daily practice. Find, analyse, evaluate and apply information systematically and shall make defensible.**			
PO3	75%	94.06%	**High**
PO4: Statement as mentioned in Annexure I Modern tool usage: **Learn, select, and apply appropriate methods and procedures, resources, and modern pharmacy-related computing tools with an understanding of the limitations.**			
PO4	75%	66.99%	**High**
PO5: Statement as mentioned in Annexure I Leadership skills: **Understand and consider the human reaction to change, motivation issues, leadership and team-building when planning changes required for fulfilment of practice, professional and societal responsibilities. Assume participatory roles as responsible citizens or leadership roles when appropriate to facilitate improvement in health and wellbeing.**			
PO5	75%	80.73%	**Medium**
Action 1: **In course of pharmacy syllabus, Motivation and its issues not given properly. But it is essential to student for further development. Motivated students can perform well as compared to others.**			

Action N:**Lecture was arrangedon motivation and its effect which is given by Dr. Mayur A. Chordiya, Chandwad, Nashik.**
Date: 04/01/2018
Action 2: **In course of Industrial Pharmaceutical Management (T.4.7.6.) syllabus, Entrepreneurship awareness and soft skill development not included in syllabus. But it was essential to develop leadership quality in students.**
Action N:**Lecture was arrangedon how to setup a business or businesses, taking on financial risks in the hope of profit. by Mr .Devdatta C. Gokhale and Rashmi Gokhale (Gokhale's Advanced training institute Jalgaon)**
Date: 27/03/2018

PO6: Statement as mentioned in Annexure I
Professional Identity: **Understand, analyse and communicate the value of their professional roles in society (e.g. health care professionals, promoters of health, educators, managers, employers, employees).**

PO6	75%.	42.53%	**Low**

Action 1: **In course of Pharmaceutical Industrial Management (T 4.7.6.) Communication tips for effective communication is very important for the student development. Communication skills also very important while working in Pharmaceutical industry. But focus was not given properly in syllabus.**
Action N: **Extra lecture was arranged the focus is given on various tips for better communication, how to improve language, Interview Techniques etc. by. Prof. Dr.D. D. Kumbhar.**
Date : 19th July 2017

PO7: Statement as mentioned in Annexure I
Pharmaceutical Ethics: **Honour personal values and apply ethical principles in professional and social contexts. Demonstrate behaviour 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.**

PO7	75%	97.06%	**High**

Action 1:
Action N:

PO8: Statement as mentioned in Annexure I
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.**

PO8	75%	63.73%	**Medium**

Action 1: **In course of Pharmacy syllabus, Personality development was not a part of syllabus. But it is essential for everywhere as pharmacy is professional course.**
Action N:**Lecture was arranged on personality development by Mr. Swapnil G. Patil.**
Date:27/10/2018
Action 2: **In course of Pharmacy syllabus, Interview techniques and communication skill for interview was not given properly. But focus was not given properly in syllabus.**
Action N:**Lecture was arrangedon various tips of Interview Techniques. By Mr. Swapnil G. Patil.**
Date : 24/3/2018

PO9: Statement as mentioned in Annexure I
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.**

PO9	75%	79.73%	**High**

PO10: Statement as mentioned in Annexure I
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.**

PO10	75%	54.73%	**Low**

Action 1: **In course of Environmental sciences (BP 206 T) Biodiversity and its conservation is very important thing to protect the whole universe. But focus was not given properly in syllabus.**
Action N:**Lecture was arrangedon Biodiversity and its conservation. by Prof. S.W. Rangari**
Date : 31th March 2018
Action 2: **In course of (BP104T) Pharmaceutical Inorganic Chemistry "Protective And Adsorbents." It is important aspect but focus was not given properly in syllabus.**
Action N:**Lecture was arrangedon above topic and It was covered by. Dr. D. G. Mundhe.**
Date : 08/10/2017

PO11: Statement as mentioned in Annexure I

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 on-going basis.**			
PO11	75%	80.66%	**High**

Target Level set for Academic year 16-17:

POS	PO 1	PO 2	PO3	PO4	PO5	PO 6	PO7	PO 8	PO 9	PO 10	PO 11
Target level	72.5%	72.5%	72.5%	72.5%	72.5%	72.5%	72.5 %	72.5%	72.5%	72.5%	72.5%
Attainment level(%)	91.44	71.40	67.63	81.79	60.58	75.30	72.28	65.16	75.51	69.87	87.48
Observation	High	High	Medium	High	Low	High	High	Medium	High	High	High

POs Attainment Levels and Actions for improvement (2016-17)

POs	Target Level	Attainment Level	Observations
PO1: Statement as mentioned in Annexure I Pharmacy Knowledge: **Possess knowledge and comprehension of the core and basic knowledge associated with the profession of pharmacy, including biomedical sciences; pharmaceutical sciences; behavioural, social, and administrative pharmacy sciences; and manufacturing practices.**			
PO1	72.5%	**91.44%**	**High**
PO2:Statement as mentioned in Annexure I 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.**			
PO2	72.5%	**71.40%**	**High**
PO3: Statement as mentioned in Annexure I Problem analysis: **Utilize the principles of scientific enquiry, thinking analytically, clearly and critically, while solving problems and making decisions during daily practice. Find, analyse, evaluate and apply information systematically and shall make defensible.**			
PO3	72.5%	**67.63%**	**Medium**
Action 1: **In syllabus of Pharmacology III (T.4.7.3.) Therapeutic drug monitoring of organ transplantation is not given adequate stress, though TDM depends on different organ systems.** Action N**: In regular Class the focus is given on TDM of separate organ transplantation like Kidney, Hepatic, Heart transplantation by Prof. K.G. Ingale.** **Date :29/8/16**			
Action 2: **In course of Pharmaceutical analysis IV (T.4.8.2.) Flash chromatography is very efficient and speedy technique for separation but very less focus is given in syllabus.** Action N::**Lecture was arranged on on Flash chromatography – Principle, Instrumentation, Application etc. by Prof. Dr.J.V. Manawr sir** **Date : 8/02/17**			
PO4: Statement as mentioned in Annexure I Modern tool usage: **Learn, select, and apply appropriate methods and procedures, resources, and modern pharmacy-related computing tools with an understanding of the limitations.**			
PO4	72.5%	**81.79%**	**High**
Action 1: **In syllabus of Pharmacognosy II (T.2.3.3.) The use of advance instruments for the estimation of tannins, resins, is not given adequate stress which is actually important for evaluation of crude drug or extract.** Action N::**Lecture was arranged on theory portion, to clarify the concepts, or above said topics by Prof. N. D. Bendale** **Date: 30/07/16**			

Action 2: **In course syllabus of pharmacy "Computer aided drug design" is not included properly though it is very important aspects for new drug design.**
Action N: **One day national level conference was arranged in college seminar hall in that topic was thought by Prof. Dr. Atul Shirkhedkar (RCPIPER, Shirpur)**
Date: 27/12/2016

Action 3: **In theory syllabus of Pharmaceutical Analysis IV (P.4.8.2.)The principles of instrumentation and data collection of HPLC system, though the practical component is not available. There is a need to improve the comprehension of the modern instruments and their utility.**
Action N: **The practical work is upgraded in pharmaceutical analysis by inclusion of a demonstration experiment on the use and handling of HPLC system with the help of SOPs, the HPLC systems is regularly used by PG students for their research work and hence facilitated the demonstration work by Dr. J. V. Manwar.**
Date: 21-3-2017 to 22-3-2017

PO5: Statement as mentioned in Annexure I
Leadership skills: **Understand and consider the human reaction to change, motivation issues, leadership and team-building when planning changes required for fulfilment of practice, professional and societal responsibilities. Assume participatory roles as responsible citizens or leadership roles when appropriate to facilitate improvement in health and wellbeing.**

PO5	72.5%	**60.58%**	**Low**

Action 2: **In course of Industrial Pharmaceutical Management (T.4.7.6.) syllabus, Entrepreneurship awareness not included in syllabus. But it was essential to develop leadership quality in students.**
Action N:**Lecture was arrangedon how to become enterpreneur in the hope of profit. by Mr .Devdatta C. Gokhale and Rashmi Gokhale (Gokhale's Advanced training institute Jalgaon)**

PO6: Statement as mentioned in Annexure I
Professional Identity: **Understand, analyse and communicate the value of their professional roles in society (e.g. health care professionals, promoters of health, educators, managers, employers, employees).**

PO6	72.5%.	**75.30%**	**High**

Action 1: **In the theory component, Pharmacognosy (III T.2.4.3.), alternative system of medicine was not included, though these systems are largely based on the tenants of Pharmacognosy by Prof. N. D. Bendale.**
Action N: **Time was devoted in the theory classes as beyond the syllabus component. The lecture highlighted the impact of general principles of alternative systems of medicine. Date: 23/01/2017**

Action 2: **In the theory component, Pharmaceutical Technology I (T.3.5.2), Rational approach to Drug Discovery was not included properly.**
Action N: **A guest lecture was arranged on Rational approach to Drug Discovery by Prof. Sushil S. Burle (Hi-Tech college of pharmacy Chandrapur). Date: 15-1-2017**

Action 3**: In course (T.4.7.2.) no attention is given on Ethno pharmacology Past present and future though it is essential for ethical support.**
Action N: **A guest lecture was arranged on Ethno pharmacology Past present and future by Dr. Satish Kosalge, Principal, Hi-Tech college of Pharmacy Chandrapur.**
Date:30-1-2017

PO7: Statement as mentioned in Annexure I
Pharmaceutical Ethics: **Honour personal values and apply ethical principles in professional and social contexts. Demonstrate behaviour 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.**

PO7	72.5%	**72.28%**	**High**

Action 1: **In Pharmaceutical microbiology (T.2.4.2.) Personal sterilization and hygiene is very ethical thing while we are working in Parental or in microbiology lab but in syllabus very less importance given to this topic.**
Action N: **Extra topic was covered on Importance Personal sterilization and hygiene in regular time schedule by Prof. U.M. Sonawane**
Date: 09/02/2017

Action 2:**In Pharmaceutical chemistry VIII (T.4.7.2.), the attainment for PO7 which is 'Pharmaceutical ethics' was less, so extra topic is covered on "Medicinal chemistry perspectives of drug acting on CNS".** Action N: **A guest lecture is arranged (Dr. Pravin onkar patil, Professor, RCPIPER, Shirpur) on the topic of Medicinal chemistry perspectives of drug acting on CNS. Date: 22-08-2016**			
In Pharmaceutics – IX (T.4.8.1.) several novel drug delivery systems are available, and the Action 3: **advancements are rapid. A few topics are included and they are in brief. There is a need to develop broadly on this new area as it is important for pharmaceutical ethics.** Action N: **A seminar topic is arranged on Development and characterization of Lipid Nanoparticles by Prof. Pankaj M Pimpalshende (Hi-Tech college of pharmacy Chandrapur). The principles, components, excipients, method of manufacture and therapeutic applications are highlighted. Date: 15-2-2017**			
PO8: Statement as mentioned in Annexure I 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.**			
PO8	72.5%	**65.16%**	**Medium**
PO9: Statement as mentioned in Annexure I 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.**			
PO9	72.5%	**75.51%**	**High**
PO10: Statement as mentioned in Annexure I 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.**			
PO10	72.5%	**69.87%**	**Medium**
Action 1: **In course of Environmental sciences (BP 206 T) Biodiversity and its conservation is very important thing to protect the whole universe. But focus was not given properly in syllabus.** Action N:**Lecture was arranged on Green pharmacy. by Prof. S.W. Rangari** **Date : 10th March 2017**			
PO11: Statement as mentioned in Annexure I 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 on-going basis.**			
PO11	72.5%	**87.48%**	**High**

POs Attainment Levels and Actions for improvement (15-16)

POS	PO1	PO 2	PO3	PO4	PO5	PO 6	PO 7	PO 8	PO 9	PO10	PO 11
Target level	70%	70 %	70%	70%	70%	70%	70%	70%	70%	70%	70%
Attainment level(%)	94.11	74.64	70.21	84.33	67.36	78.13	75.58	69.22	79.19	73.94	89.62
Observation	High	High	High	High	Medium	High	High	High	High	High	High

Actions for improvement (2015-16)

POs	Target Level	Attainment Level	Observations
PO1: Statement as mentioned in Annexure I Pharmacy Knowledge: **Possess knowledge and comprehension of the core and basic knowledge associated with the profession of pharmacy, including biomedical sciences; pharmaceutical sciences; behavioural, social, and administrative pharmacy sciences; and manufacturing practices.**			

PO1	70%	**94.11%**	**High**
PO2:Statement as mentioned in Annexure I 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.**			
PO2	70%	**74.64%**	**High**
PO3: Statement as mentioned in Annexure I Problem analysis: **Utilize the principles of scientific enquiry, thinking analytically, clearly and critically, while solving problems and making decisions during daily practice. Find, analyse, evaluate and apply information systematically and shall make defensible.**			
PO3	70%	**70.21%**	**High**
Action 1: **Anatomy, Physiology and Health Education (P 2.3.5) While studying theory part of subject students can't understand concept of reproductive system so different model and chart shown to the student at the time of practical for better understanding.** Action N: **At the regular time table extra focus is given on "Study of reproductive system using charts and models" by Prof. K. G. Ingale.** Date : **23/10/15**			
Action 2: **Pharmacognosy– I (T. 1.1.2.) As per syllabus study of Pharmacognosy I "factor affecting on storage" is not given much focus though it is essential for maintaining quality of drug at the time of storage if not sore properly we have to face several problem.** Action N::**Lecture was arranged on demo in regular schedule by Prof. S. P. Godi madam. Date: 21/9/15.**			
PO4: Statement as mentioned in Annexure I Modern tool usage: **Learn, select, and apply appropriate methods and procedures, resources, and modern pharmacy-related computing tools with an understanding of the limitations.**			
PO4	**70%**	**84.33%**	**High**
PO5: Statement as mentioned in Annexure I Leadership skills: **Understand and consider the human reaction to change, motivation issues, leadership and team-building when planning changes required for fulfilment of practice, professional and societal responsibilities. Assume participatory roles as responsible citizens or leadership roles when appropriate to facilitate improvement in health and wellbeing.**			
PO5	**70%**	**67.36%**	**Medium**
Pharmaceutical Management (T 4.7.6) communication skill is very important thing because pharmaceutical market is based upon marketing and communication. So extra topic is taken out to build communication skill in students. Action :**In regular lecture extra topic is delivered "Communication and personality development skills" by Prof V.C. Gurumukhi Date: 21/10/15**			
PO6: Statement as mentioned in Annexure I Professional Identity: **Understand, analyse and communicate the value of their professional roles in society (e.g. health care professionals, promoters of health, educators, managers, employers, employees).**			
PO6	**70%**	**78.13%**	**High**
PO7: Statement as mentioned in Annexure I Pharmaceutical Ethics: **Honour personal values and apply ethical principles in professional and social contexts. Demonstrate behaviour 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.**			
PO7	**70%**	**75.58%**	**High**
Pharmaceutical microbiology (T.2.4.2) A *vaccine* is a biological preparation that provides active acquired immunity to a particular disease. A *vaccine* typically contains an agent that resembles a disease-causing microorganism and is often made from weakened or killed forms of the microbe, its toxins, or one of its surface proteins. Storage of vaccine is very important but very less focus is given on it. Action: **In regular timetable extra focus is given on "Storage of vaccine" lecture was conducted by Prof. B. Y. Rane Date: 25/1/16**			
Pharmaceutics IV (Physical pharmacy- II) (T.2.4.1) in course Dissolution Apparatus as per USP was not included properly. It is essential for evaluation of tablet and other dosage forms. Action: **Extra time is given for topic" Dissolution Apparatus as per USP" by Prof. S. S. Patil Date: 22/2/16.**			

Pharmaceutics I (T 1.1.1) to obey standard procedure while manufacturing is very ethical thing. So introduction is given to student about different granulation techniques. Action: **Extra time is given for topic" Introduction to granulation techniques" by Prof. S. S. Patil Date: 27/10/15.**			
Pharmacognosy VI (T.4.8.4.) Extraction is most important step in herbal drug technology so to aware student's proper extraction process a topic covered "A Introduction to extraction processes". Action : **In regular lecture extra topic is delivered "Introduction to extraction processes" by Prof. S. P. Godi Date: 27/2/16**			
PO8: Statement as mentioned in Annexure I 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.**			
PO8	**70%**	**69.22%**	**High**
PO9: Statement as mentioned in Annexure I 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.**			
PO9	**70%**	**79.19%**	**High**
PO10: Statement as mentioned in Annexure I 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.**			
PO10	**70%**	**73.94%**	**High**
PO11: Statement as mentioned in Annexure I 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 on-going basis.**			
PO11	**70%**	**89.62%**	**High**

Criterion 8 Student Support Systems 50

8.1. Mentoring system to help at individual levels 5

Type of mentoring: Professional guidance/career advancement/course work specific/laboratory specific/all-round development. Number of faculty mentors: Number of students per mentor: Frequency of meeting:

(The institution may report the details of the mentoring system that has been developed for the students for various purposes and also state the efficacy of such system)

The class teachers are appointed for the first to final year classes. Each faculty member is assigned a fixed number of students, right at the time of their joining of the Program .i.e. approximately 20 students per mentor. The faculty conducts periodical meeting with students in order to evaluate their academic performance and proper orientation towards the Program, as well as guide them to rectify any short comings and to solve any problems.

Following issues are discussed with students:

1. Attendance
2. Economic status
3. Behavior
4. Personal study time table
5. Study pattern
6. Extra hobby classes etc.
7. Travelling details and difficulties
8. Difficulty in writing / speech
9. Confidence level
10. Ragging
11. Food issues
12. Women related issues
13. In case of any other observations, it is noted and discussed.
14. Students are motivated to participate in co-curricular and extra-curricular activities.

Following information about students is collected by individual mentors and a record maintained

- Students Personal Information
- Previous Record
- Academic Performance
- Competitive Examination Details
- Details of Internship and Industrial Trainings
- Scholarships Received
- Co-Curricular and Extra-Curricular activities.
- The mentors meet the students periodically and monitor their performance and their activities.

Parents'-Teacher Meeting is held once in each year to brief the progress of their wards to their parents. This process has improved students' academic performance, attendance and participation in co-curricular and extra-curricular activities.

List of Mentors:

2018-2019

Sr. no.	Name of Course and class	Name of Faculty and Respective Batches
01	B. Pharm Final Year	Batch A- Mrs. U.M. Sonawane Batch B-Mrs. R.V. Patil Batch C- Mr. K.G. Ingale
02	B. Pharm Third year	Batch A-Mrs. B.Y. Rane Batch B- Mr. S.S. Patil Batch C- Mr. S.W. Rangari
03	B. Pharm Second year	Batch A-Mr. M.R. Bhurat Batch B- Dr. U.B. Gandagule Batch C- Mrs. U.M. Sonawane
04	B. Pharm First year	Batch A- Mr. S. S. Chaudhari Batch B-Mr. S. S. Patil Batch C- Mr. R.G. Jadhao

2017-2018

Sr. no.	Name of Course and class	Name of Faculty and Respective Batches
01	B. Pharm Final Year	Batch A- Mr. S.A. Nagdev Batch B- Mr. R.G. Jadhao
02	B. Pharm Third year	Batch A- Mrs. U.M. Sonawane Batch B-Mr. A.B. Wadekar Batch C- Mr. K.G. Ingale
03	B. Pharm Second year	Batch A-Mrs. B.Y. Rane Batch B- Mr. S.S. Patil Batch C- Mr. S.W. Rangari
04	B. Pharm First year	Batch A-Mr. M.R. Bhurat Batch B- Dr. U.B. Gandagule Batch C- Mrs. U.M. Sonawane

2016-17

Sr. no.	Name of Course and class	Name of Faculty and Respective Batches
01	B. Pharm Final Year	Batch A- Mr. S. A. Nagdev Batch B- Mr. N. D. Bendale
02	B. Pharm Third year	Batch A-Mr. N.A. Sheikh Batch B-Mr. R. G. Jadhao
03	B. Pharm Second year	Batch A-Ms. U.M. Sonawane Batch B-Mr. A. B. Wadekar Batch C-Mr. K.G. Ingale
04	B. Pharm First year	Batch A-Mrs. B. Y. Rane Batch B-Mr. S.S. Patil Batch C- Mr. S.W. Rangari

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

- Feedback collected for all courses **YES**/NO
- Specify the feedback collection process
- Percentage of students who participated
- Specify the feedback analysis process:
- Basis of reward / corrective measures, if any
- Number of corrective actions taken in the last three years

(The institution needs to design an effective feedback questionnaire. It needs to justify that the feedback mechanism developed by the institution really helps to evaluate teaching, and finally, contributes to the quality of teaching and ensure attainment of set levels for each PO)

Feedback about the teaching staff is collected every semester. The mechanism and implementation is as described hereunder.

Method Followed For Students' Feedback Collection

Mid-course & Course Survey feedback

- This is taken within 4 weeks of commencement of every new semester so as to assess the compatibility between the subject teacher and the class.
- The suggestions/complaints/appreciations from the students are shared with the concerned teacher and HODs.
- The teachers are counseled in case if the feedback is poor by the HOD, senior staff member of the department and Principal.
- The Mid-course and Course Survey feedback is not taken as a criterion for adjudging the best teacher.

Course end survey feedback and Faculty feedback

- This is taken one week before the end of each semester in the questionnaire format.
- The feedback is analyzed and a report is generated for each faulty for every subject.
- However, the feedback is not shared with the teachers until the beginning of the following semester.
- The final feedback is used for assessing the teacher for the "BEST TEACHER" award. (50% weightage is given to students' final feedback)
- As a corrective measure against possible prejudices.

Method followed for collection of feedback

- Students' feedback format was devised after a number of discussions with the faculty
- All students of each class are given an opportunity to express their opinion with regards to effectiveness in teaching by a teacher, which are detailed in the feedback format.
- The opinions of students are taken within 4 weeks of commencement of each semester which helps the institute to take corrective measures at an early stage.
- This also helps the teachers in improving their teaching methodology.
- However, the result of the preliminary feedback is not taken as a criterion for adjudging the best teacher and is only utilized by the teacher/s as guidance for improvement.
- There are always possibilities of certain students developing prejudices against a teacher if he/ she is a strict disciplinarian. This may lead to a negative impression about the teacher concerned. This factor is taken into consideration while analyzing the final students' feedback.
- As a corrective measure against such prejudices, 10% of worst opinions are not considered while analyzing the feedback. However, the experience of the college shows that the feedback is largely based on the teaching efficiency of a faculty irrespective of his/ her strictness.
- By and large this system has been functioning well and is integrated into teaching excellence awards being conferred by the college wherein half the weightage is reserved for students' feedback. By and

large this system has been functioning well and is integrated into teaching excellence awards being conferred by the college wherein half the weightage is reserved for students' feedback.

- Regular meetings of the Principal and a few students from each class are held to get an update on syllabus completion, teaching methodology, and conduct of teaching, non-teaching and administrative staff, facilities and infrastructure. Prompt action is taken in case of any issues brought to notice by students.

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.

List of actions taken in the previous 3 years

Term	Letters of appreciation	Memo	Counselled
2018-19(Odd Sem)	04	-	
2017-18(Even Sem)	05	-	
2017-18(Odd Sem)	04	-	01
2016-17(Even Sem)	05	-	
2016-17(Odd Sem)	04	-	02

8.3. Feedback on facilities 5

(Assessment is based on feedback collection, analysis and corrective action taken in respect of library, computing facilities, canteen, sports etc.)

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 to check the changes made and if they are continued.

8.4. Self-Learning 5

(*Specify the facilities, materials and scope for self-learning / learning beyond syllabus and creation of facilities for self-learning / learning beyond syllabus*)

Internet facility is provided at the college; many e- journals and national digital library are subscribed and made available to the students at the college library to help them develop the habit of self-learning and learning beyond syllabus.

- Students are generally encouraged to attend seminars/ workshops conducted in /outside college.
- Internet Facility is Available for the students to help them the habit of self-learning and learning beyond syllabus.
- Our college had subscribed the VMEDULIFE portal for digital learning in which students go through subject wise online test and also used this platform for peer-learning.
- The library and information Centre has subscribed to **National digital library**.
- Various Guest Lectures were organized for students to getting knowledge about self-learning & Also extra lecture were arranged for student to understand content beyond the syllabus.
- Students are generally motivated to attend seminars/ workshops conducted in /outside college. To enable learning beyond syllabus for UG students

List of Guest lecture for self-Learning & content beyond syllabus

Date	Audience	Name of Resource person	Topic
22-08-2016	B. Pharm Final year	Dr. Pravin Onkar Patil H R Patel institute of Pharmaceutical education and research, Shirpur	Medicinal chemistry perspectives of drug acting on CNS
19/09/2016	Third to Final year B. Pharm	Dr. Bhushan Sathe College of Pharmacy, Chopda	QSAR AND Molecular Modeling
26-08-2017	B. Pharm first to final year	Dr. K. L. Mahajan Asst. Prof. Chaitanya Ayurvedic Mahavidyalay Bhusawal.	Motivation and inspiration against addiction
15-1-2017	B. Pharm Third year	Prof. Sushil S. Burle Hi-Tech college of Pharmacy, Chandrapur	Rational approach to Drug Discovery
15-2-2017	B. Pharm Final year	Prof. Pankaj M. Pimpalshende Hi-Tech college of pharmacy, Chandrapur	Development and characterization of Lipid Nanoparticles
30-1-2017	B. Pharm Final Year	Dr. Satish Kosalge Principal Hi-Tech college of Pharmacy, Chandrapur.	Ethno pharmacology Past present and future
16/02/2018	B. Pharm First to final year	Mr. Pravin Dandage Mr. Manoj Mahajan Social worker Anulom, Jalgaon	Social media Mahamitra
8/02/2018	B. Pharm First to final year	Dr. Dipali N. Ghotwar (MD Gynecologist)	Gender Identification abortion and discrimination
13/4/2018	B. Pharm First to Final Year	Mr. Vijay Jadhao Ciron Drugs pharmaceutical Tarapur, Bhoisar Mumbai	Current qualification & validation need in pharmaceutical industry
14/7/2018	B. Pharm Third year	Dr. S. V. Gandhi Department of Pharmaceutical chemistry AIMMS COP, Pune	Recent trends in spectroscopy
23/8/2018	T.Y. B. Pharm	Mr. S. L. Mevati Quality Assurance Executives, Siddharth Carbochem. Pvt. Ltd. Jalgaon	Modern Practical Research in pharmaceutical analysis and Opportunities in QA&QC
18/9/2018	S.Y. B. Pharm	Mr. Rahul Wagh Assistant Supervisor Fresenius Kabi Pvt. Ltd Goa	Scope and application of Microbiology
4/10/2018	S.Y. B. Pharm	Mr. Tarachand Kapade Assistant officer Soveregn Pharma Pvt. Ltd	Design and maintenance of clean room and sterility testing
22/9/2018	Final yearr. B. Pharm	Mr. Shubham Zope Associate Clinical Operations Excel Life Science Pvt. Ltd	Clinical trails
1/10/2018	S.Y B. Pharm	Dr. Mayur A. Chordiya S.S.D.J.C.O.P. Neminagar Chandwad	Distillation and Evaporation
26/10/2018	All B. Pharm girls	Dr. Mrunal Patil B.A.M.S. Secretary Inner Wheel rail Club	How to take care of health by women

8.5. Career Guidance, Training, Placement **10**

(*Specify the facility, its management and its effectiveness for career guidance including counseling for higher studies, campus placement support, industry interaction for training/internship/placement, etc.)*

Career Guidance FACILITY:

- The Campus Training and Placement Cell undertake activities in this regard.
- Various Professionals are invited for guest lectures.
- Through these activities, the students are made aware of the opportunities in various fields along with the required job profile. At the same time, they get a chance to interact with these professionals to take advantage of their experience in respective field of expertise.

List activities conducted for career guidance & training placement

2018-19		
29/09/2018	Mr. Pratap Pawar MET-Bhujbhal Knowledge City	Workshop on "GPAT Preparation"
27/10/2018	Mr. Swapnil G Patil Pharmacovigilance specialist plus Tata consultancy services	Interview techniques & Grooming lecture for interview
22/9/2018	Mr. S. M. Zope Associate Clinical Operations, Excel Life science Pvt. Ltd	Opportunities in clinical research
15/2/2019	MR. Sudhir .R. Patil Asst. Prof Lotus business School Pune	Recent trends and opportunities In pharmacy sector
2017-18		
15/09/2017	Dr. Mrs. S. P. Warke COP, Faizpur	Carrier in pharmacy and competitive exam in pharmacy-GPAT.
24/3/2018	Mr. Swapnil G Patil Pharmacovigilance specialist plus Tata consultancy services	Interview techniques.
2016-17		
17/09/16	Dr. Amol. Landage Associate Prof. Gangamai college of Pharmacy, Dhule	Carrier in Pharmacy and competitive exam in pharmacy-GPAT.
18/3/2017	Mr. Swapnil G. Patil Pharmacovigilance specialist plus Tata consultancy services	Interview techniques.

8.6 Enterpreneurship Cell:

The Entrepreneurship Development Cell aims to improve and generate a culture of innovation and development of entrepreneurial spirit amongst the students and budding entrepreneurs and start their own enterprise. It also attempts to train and equip them with the knowledge and resources they need to build a successful business.

Facility: The Entrepreneurship Cell is attached with the training & placement cell. All the members of the training and placement cells are available throughout the day for the students to help them regarding starting

up their own business venture. The activities are not just limited to the current students but even the alumni are encouraged to take benefits of the services offered by the cell.

Training: The students are exposed to different seminars, workshops and interactive sessions to make them a perfect entrepreneur.

List of Enterpreneurship Cell

2018-2019

Sr No.	Name of Faculty	Designation
1.	Dr. P. R. Patil	Chairman
2.	Dr. D. D. Kumbhar	Members
3.	Mr. P. D. Warke	Members
4.	Mrs. B. Y. Rane	Members
5.	Mr. P. R. Tijare	Members

2017-2018

Sr No.	Name of Faculty	Designation
1.	Dr. R. L. Bakal	Chairman
2.	Dr. D. D. Kumbhar	Members
3.	Dr. J. V. Manwar	Members
4.	Mrs. B. Y. Rane	Members

2016-2017

Sr No.	Name of Faculty	Designation
1.	Dr. R. L. Bakal	Chairman
2.	Dr. J. V. Manwar	Members
3.	Mr. N. A. Shaikh	Members
4.	Mr. R. G. Jadhao	Members

List of activities conducted for Enterpreneurship

Date	Speaker	Title
28/2/2017	Prof. Sandeep D. Chaudhari JSPM College of Pharmacy, Pune	Emerging opportunities in science & technology &Entrepreneurship
27/03/2017	Mr. Devdatta C. Gokhale Gokhale's Advanced Training Institute, Jalgaon	Entrepreneurship awareness and soft skill development
27/03/2018	Mr. Devdatta C. Gokhale and Rashmi Gokhale Gokhale's Advanced Training Institute, Jalgaon	Entrepreneurship awareness and soft skill development
14/9/2018	Mr. Devdatta C. Gokhale and Rashmi Gokhale Gokhale's Advanced Training Institute, Jalgaon	Entrepreneurship awareness and soft skill development
15/9/2018	Mr. Devdatta C. Gokhale and Rashmi Gokhale Gokhale's Advanced Training Institute, Jalgaon	Entrepreneurship awareness and soft skill development

8.7. Co-curricular and Extra-curricular Activities 10

Apart from the academic activities, the students are also involved in various extra-curricular and co - curricular activities organized at Inter-Collegiate as well as Intra-collegiate level. Student council committee and Faculty in-charge for extra and co-curricular activity are organizing and conducting all activity. The college giving chance to new student sport team as their excellence in particular sport like cricket & basketball & participating inter college & interuniversity's tournament. The council has formed PHARMA-CORNER platform for students to empower their imagination and creativity by displaying their articles on the display board. Along with these activities college form the RED RIBBON CLUB for spreading awareness about AIDS. College collaborated with INNERWHEEL RAIL CITY CLUB, Bhusawal to organize healthcare program & social activities for Girls student.

8.7.1. Extra-curricular activities:

Intra-collegiate Activities:

Academic Year: 2018-19

Sr. No	Event	Date
1	Orientation program	1/8/2018
	Program on biography of Kavayitri Bahinabai Chaudhari under university a) Poem b) Assay	 14/8/2018 20/8/2018
2	Fresher party	30/08/2018
3	Teachers day	05/09/2018
4	Ganesh festival Ganesh Sthapana Ganesh Visarjan	 13/9/2018 19/09/2018
5	Dahi handi (Janmashtami)	3/09/2018
6	Rashtriya Ekta Diwas celebration	12/1/2019

Academic Year: 2017-18

Sr. No	Event	Date
1	Orientation program	20/12/2017
2	Fresher party	31/08/2017
3	Teachers day	05/09/2017
4	Ganesh festival Ganesh Sthapana Ganesh Visarjan	 25/09/2017 29/09/2017
5	Dahi handi (Janmashtami)	16/08/2017
6	Rashtriya Ekta Diwas celebration	12/1/2018
7	Shivaji Maharaj Jayanti	19/02/2017
8	Annual gathering (Rhythm), Singing, Dance, Various day celebration, Prize distribution and DJ night	25/2/18 to 26/2/18 & 27/2/18
9	Sports week, Cricket, Volleyball, Chess, Carrom, Badminton, Rangoli, Mehandi	20/2/18 to 25/2/18
10	Farewell party	09/04/2018

Academic Year: 2016-17

Sr. No	Event	Date
1	Orientation program	26/12/2016
2	Fresher party	06/09/2016
3	Teachers day	05/09/2017
4	Ganesh festival Ganesh Sthapana Ganesh Visrajan	 05/09/2016 09/09/2016
5	Rashtriya Ekta Diwas celebration	12/1/2017
6	Dahi handi (Janmashtami)	25/08/2016
7	Shivaji maharaj Jayanti	
8	Annual gathering (Rhythm), Singing Dance, Various day celebration, Prize distribution and DJ night	23/2/2017 to 24/2/2017 &25/2/2017
9	Sports week, Cricket, Volleyball, Chess, Carrom, Badminton, Rangoli, Mehandi	20/2/2017 to 24/2/2017

Inter- collegiate Extra-curricular participation of student:

Sr. No	Event	Date
	2018-19	
1.	Inter college basketball competition, Dr. Annasaheb J. D. Bendale Mahila Mahavidyalay, Jalgaon	14/9/18
	2017-18	
1.	Pharma cricket league Dadasaheb Balpande college of pharmacy	27/1/2017-2/2/2017
	2016-17	
1.	Pharma cricket league Dadasaheb Balpande college of Pharmacy	28/1/2017-1/2/2017

8.7.2. Co-curricular Activity
Academic Year: 2018-19

Sr. No	Event	Date
1	Seminar- Entrepreneurship awareness and soft skill development By- Mr. Devdatta. C. Gokhale and Rashmi Gokhale Gokhale's Advanced training institute, Jalgaon Health care program by Inner wheel rail city club Bhusawal	14/9/2018 15/9/2018 26/10/2018
2	Blood donation camp	13/9/2018

3	Pharmacy week	25/9/ 2018
4	Conference	2/2/2019
5	Hospital visit	12/2/2019

Academic Year: 2017-18

Sr. No	Event	Date
1	Seminar- Entrepreneurship awareness and soft skill development By- Mr. Devdatta C. Gokhale and Rashmi Gokhale Gokhale's Advanced training institute Jalgaon	27/03/2018
2	Guest Lecture Gender Identification abortion and discrimination by Dr. Dipali N. Ghotwal (MD Gynecologist)	8/02/2018
3	Conference -	11/01/2018
4	Hospital visit	20/03/2018
5	Industrial visit	26/03/2018
6	Blood donation and detection camp	09/02/2018
7	Pharmacy week	25/9/ 2017

Academic Year: 2016-17

Sr. No	Event	Date
1	Seminar 1. Prof. Sandeep D. Chaudhari JSPM college of Engineering, Pune 2. Mr. Devdatta C. Gokhale, Gokhale's Advanced training institute Jalgaon- Entrepreneurship awareness and soft skill development	28/02/2017 14/09/2016 27/03/2017
2	Guest Lecture 1. Prof. Sushil S. Burle Hi-Tech college of pharmacy Chandrapur for B. Pharm Third year 2. Prof. Pankaj M. Pimpalshende Hi-Tech college of pharmacy chandrapur for B. Pharm Final year 3. Dr. Satish Kosalge Principal Hi-Tech college of Pharmacy, Chandrapur for B. Pharm Final Year	15-1-2017
3	Conference	30-1-2017
4	Hospital visit	20/3/2017
5	Industrial visit	26/3/2017
6	Blood donation and detection camp	9/3/2017
7	Pharmacist day	25/9/ 2016

Inter-collegiate co-curricular participation of student in last three year:

Sr. No.	Author Name	Conference name	Conference venue	Year of conference
1	Dhananjay Kakad,Bagwan Arbaz,Muzzamil Khan, Khatik Parvej, Harun, Mohammad, Gaytri Malpure, Arshi Khan, Pallavi Borase, Ujjawala Kumawat, Vaishali Baviskar	Radiopharmaceutical enhancement by drug delivery system	A.R.A. College of Pharmacy, Nagaon	19/01/2019
2	Prerana Barhate, Aniruddha Tayade Moin Nadim Pinjari, Laxmi Sarag Prashant Sabale	Regulatory aspects and challenges in Herbal Formulations	SNJB'S Shreeman Sureshdada Jain College Of Pharmacy, Nashik	11 & 12 Jan 2019
3	Dawange Shubham	Pharma Quiz	MET Institute of pharmacy Bhujbal Knowledge study	26/09/2018
4	Dhananjay Kakad, Arshi Khan	Innovations, development and standardization of novel herbal formulation	Konkan Gyanpeeth Rahul Dharkar CPRI, Karjat, dist. Raigad	24/9/2018 & 25/9/2018
5	Joshi Prasad & Sonwane Rushikesh	State levels seminar and Poster presentation on "Recent trends in Pharmaceutical Science"	HLMC COP Faizpur	15/9/2018
6	Tarachand Kapade, Sameer Mevati	Recent advances in cancer therapeutics and its molecular targets	Konkan Gyanpeeth Rahul Dharkar CPRI, Karjat dist. Raigad	14/01/2017
7	Bhagyashri Patil,Bushra Deshpande, Abdul Rehman, Reshma Bano, Rubina Bano	Recent trends in computer aided drug design and chromatographic sciences	KYDSCT COP Sakegaon	27/12/2016
8	Vaibhav Jangale, Tarachand Kapade, Jayesh Zambare	Emerging trends in drug discovery and drug development	SNJB'S Shreeman Sureshdada Jain College Of Pharmacy, Nashik	21 and 22/10/2016
9	Vaibhav Jangale, Sameer Mevati Swapnpurti Bharambe, Jayesh Zambare	Structure interpretation of organic compounds	RCPIPER Shirpur	24/09/2016

Criterion 9 Governance, Institutional support and Financial Resources 100

9.1. Organization, Governance and Transparency 50

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. 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

Organization and Governance:

Constitution of the Governing Body:

The governing body of an Institution shall have equal representation from the Society/ Trust on the one hand and the Government, Council and Affiliating Body on the other hand. The Principal of the Institution shall be the Member-Secretary of the Governing Body. The constitution is so prescribed that the collective wisdom of the members of the society, Government officials, officials of the affiliating body and the expert members is available for smooth running of the institution. The Governing Body constitutes of 11 members including the Chairman and Member Secretary.

Composition of Governing body:

Sr. No.	Name	Designation
01	Mr. Pandurang Dagadu Saraf	President
02	Mrs. Poonam Prashant Warade	Vice President
03	Mr. Aashish Pandurang Saraf	Secretary
04	Mr. Sanjay Pandit Ingle	Joint Secretary
05	Prof. H.V. Chaudhari	Academician
06	Dr. Parag R. Patil	Principal
07	Mr. Kundan G. Ingale	College Faculty
08	Mrs. Bhuvaneshwari Y. Rane	College Faculty
09	Nominee of Regional Officer, Western AICTE office, Mumbai	Member
10	Nominee of Director,DTE Mumbai	Member
11	Nominee of KBCNorth Maharashtra University, Jalgaon	Member

Powers and Functions of the Governing Body:

The Governing Body, besides being the supreme administrative authority of the college, shall have the following additional functions:

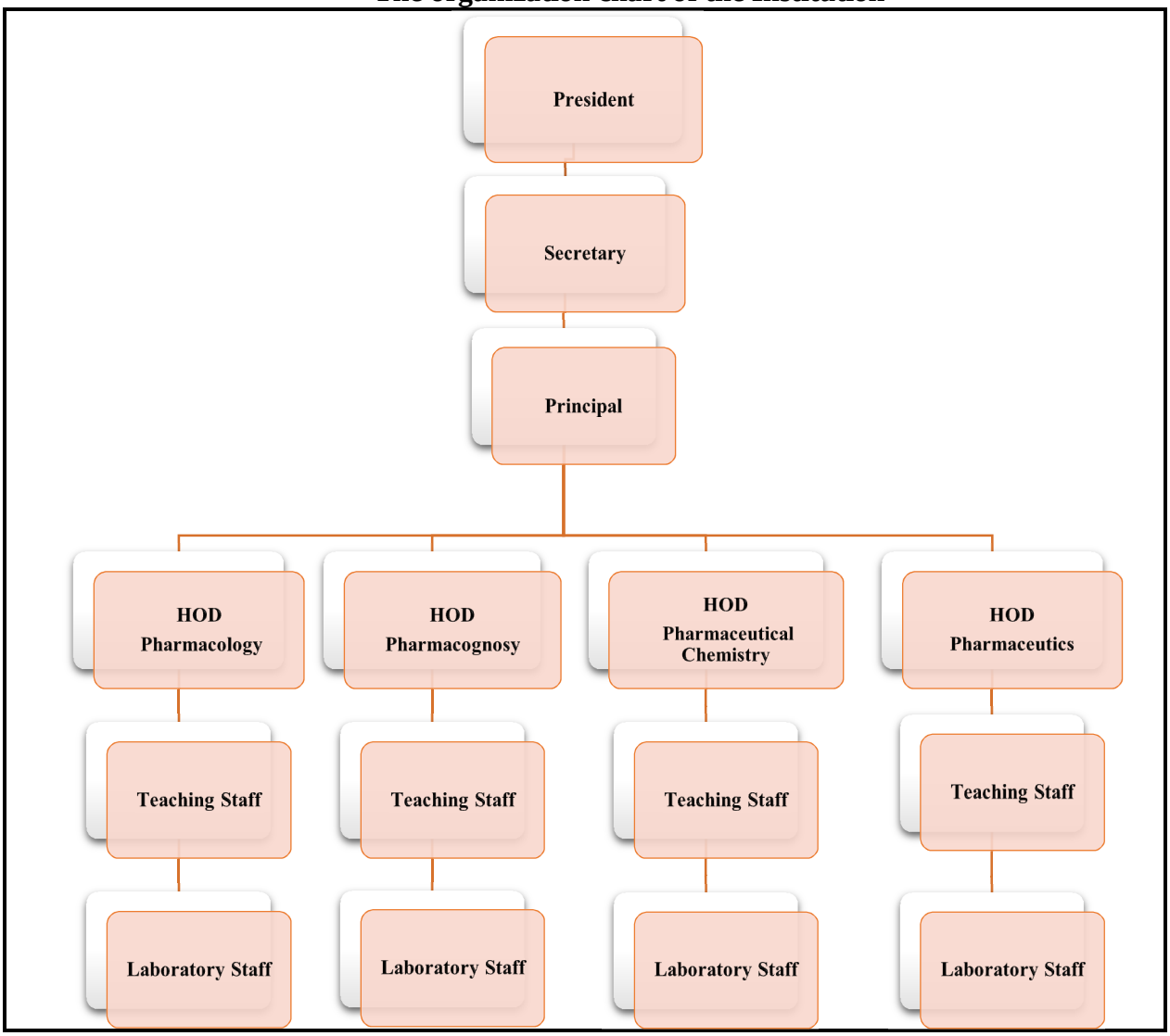
i. To monitor the academic and other related activities of the college.
ii. To consider the recommendations of the staff selection committee.
iii. To consider the important communications, policy decisions received from the University, Government, and AICTE etc.
iv. To monitor the development programmes of students and faculty.
v. To make recommendations on the planning and monitoring the college.
vi. Fixation of the fee and other charges that are payable by the students to the college based on the recommendations of the AICTE, Govt. of Maharashtra.
vii. Perform such other as may be necessary and deemed fit for the proper development and fulfil the objectives of the college.
viii. To pass the annual budget of the college.
ix. To check the audited income and expenditure accounts and approve the same for the college annually.

Scheduled Meetings of Governing Body:

Ideally two meetings should be conducted in one year.

2016-17	2017-18	2018-19
01/06/2016	12/06/2017	15/07/2018
15/07/2016	10/09/2017	10/11/2018
30/08/2016	10/11/2017	
	05/02/2018	

The organization chart of the Institution



Local Management Committee

Sr. No.	Name of the Member	Designation
1	Hon. Mr. Pandurang D. Saraf	President
2	Mr. S. P. Ingale	Joint Secretary
3	Prof H. V. Chaudhari	Management nominee (Academician)
4	Dr. P. R. Patil Principal, KYDSCT's College of Pharmacy, Sakegaon	Member secretary
5	Mrs. Aparna P Patil	Member from industry
6	Dr. D. D. Kumbhar KYDSCT's College of Pharmacy Sakegaon	Member College faculty
7	Mr. K. G. Ingale KYDSCT's College of Pharmacy Sakegaon	Member College faculty
8	Mrs. B. Y. Rane KYDSCT's College of Pharmacy Sakegaon	Member College faculty
9	Mr. D. P. Talele KYDSCT's College of Pharmacy	Non-Teaching's Representative

Powers and Functions of the Local Monitoring Committee (LMC):

The IDMC shall be the principal academic body of the institute and shall, in addition to all other powers and duties vested in it, have the following powers and duties.

i. To exercise general supervision over the academic work of the institute and to give directions regarding methods of instructions, evaluation, research or improvements in academic standards.

ii. To consider matters of academic interest either on its own initiative or at the instance of the Governing Body and to take proper action thereon.

iii. To make arrangements for the conduct of examinations in conformity with the laws of KBC North Maharashtra University.

iv. To maintain proper standards of the examinations.

v. To promote research within the institute, acquire reports on such research activities from time to time.

vi. To suggest measures for co-ordination for individual classes

vii. To make recommendations to the board of management on

a) Measures for improvement of standards of teaching, training and research.

b) Institution of fellowships, travelling fellowships, scholarships, medals, prizes, etc.

c) Establishment or abolition of departments/centers and on byelaws covering the academic functioning of the institute, discipline, admissions, examinations, award of fellowships, studentships, concessions, attendance, etc.

viii. To make periodic review of the activities of the departments/canters and to take appropriate action (including making of recommendations to the Governing Body) with a view to maintaining and improving the standards of instruction.

ix. To exercise such other powers and perform such other duties as may be conferred or imposed upon it by the rules and byelaws.
x. To recommend institution of teaching posts of professors, associate professors and assistant professors to the Governing Body of the college.

Scheduled Meetings of LMC:
Ideally two meetings should be conducted in one year.

2016-17	2017-18	2018-19
15/06/2016	22/06/2017	15/06/2018
12/08/2016	25/07/2017	10/11/2018
09/09/2016	10/10/2017	
22/9/2016	15/12/2017	
02/12/2016	06/01/2018	
1/02/2016	22/02/2018	
	10/03/2018	

Defined rules, procedures, recruitment, and promotional policies, etc.

1. The rules are well defined. The policies and procedures are made clear. Rules concerned with the general administration of the college, recruitment procedure and service conditions of the staff, leave rules of the staff, policies of promotion and increment are framed properly.
2. All the newly recruited staff and the newly admitted students are made aware of these rules through orientation Programs. These are also made available on the college website
3. Recruitment is done in a transparent manner purely on the basis of merit, after notifying the vacancies in the leading newspapers.
4. Recruitment of faculty and staff for regular appointment is done by the University of Mumbai Staff Selection Committee comprising of the subject experts, the management representative and the Principal.
5. In case of immediate requirement, recruitment is done by the college Staff Selection Committee consisting of the management members, Principal and the subject experts.
6. The published rules, policies and procedures with regard to faculty and staff recruitment, promotions, leaves and retirement are made available on the college website.
1. Following acts and rules are adopted as guidelines for procedures, recruitment, promotional policies, code of conduct issued from time to time by the regulatory bodies:

- AICTE Norms
- Rules for Affiliation by KBCNorth Maharashtra University
- All other applicable state/central government rules/regulations
- Rules and By-laws of Society
- Norms of Pharmacy Council of India (PCI)

i) **Recruitment for Teaching Staff**

Cadre Structure

(a) Director/Principal
(c) Professor
(d) Associate Professor
(e) Assistant Professors

Qualifications

Faculty is recruited based on the qualifications prescribed by the AICTE, PCI and KBCNorth Maharashtra University from time to time.

Recruitment Procedure

1. Introduction

The vision of KYDSCT's College of Pharmacy, Sakegaon is translated into an organizational goal to identify and recruit and retained highly qualified, talented and diverse faculty/staff for positions in all academic fields. The recruitment of faculty/staff is a crucial activity at KYDSCT's College of Pharmacy, Sakegaon. The staff selection committee is constituted specifically for the governing the recruitment procedure.

The process of recruitment includes:

a. Search for prospective candidates
b. Short listing of prospective candidates
c. Preliminary selection- staff selection committee
d. University approval of selected candidates

2. Search for prospective candidates:

The search for prospective candidates implemented in the following 2 days simultaneously:

- Advertisements are placed in the leading Marathi daily newspapers listing the openings
- The details of the openings including eligibility criterion, scale of pay and other conditions are displayed in the advertisement.
- The candidates have to satisfy the eligibility criterion to facilitate further consideration of their candidature.

3. Application procedures:

- The application can also be downloaded from the website and should be submitted along with all necessary enclosures to the administrative office, on or before, the scheduled date.
- Retired personnel from teaching/industry and R &D are encouraged to apply for the post.
- The application should include all the relevant authenticated data regarding age, academic qualifications with clause/grades, experience, post held, publication list, statement of teaching interests, phone no., e-mail ID and the names of 3 references (with contact information) together with attested copies of certificates and marks cards (of all the years/semester) etc., in duplicate (in 2 sets)
- Separate application is to be submitted in the event of candidates applying for more than one category of post.
- Candidates, who had applied for the same post before, have to apply a fresh again.
- The age limit is as per the AICTE/UGC norms and subsequent orders in force.

4. Short listing of prospective candidates

Applications, when received, are organized, relevant information summarized, and sent to the respective HODs by the administrative office for short listing. The objective of short listing is two folds:

a. To reject applications that does not meet the eligibility criteria
b. To short list the candidates from the remaining list so that the number of candidates to be called for the interview with the Staff Selection Committee remains within manageable limits. Usually, primary concerns at the stage are the educational back ground previous experience and research activities done by the candidates. The concern HOD short list the candidates based on the requirement of the respective department. The resumes of the short listed candidates are further ranked in the order of merits by the concern HOD and sent to the administrative office along with their comments and observations for the next level of the recruitment process.

5. Staff selection committee:

The selection committee is constituted in the following manner, with representatives as listed under each department.

Staff Selection Committee	
Head of the Institution/ Principal	Chairman of the selection committee
Representative of the management	Member of the selection committee
HOD of the department	Member of the selection committee
Subject expert	Member of the selection committee

The committee will evaluate the suitability of prospective candidates for a particular position.

Based on their observations, the committee will recommend the list of selected candidates. The succeeded candidates are issued offer letters with a 15 days' time frame to accept the offer. After recent acceptance letters from the candidates, appointment orders are issued to them. The Principal of college has a refusal in selection.

6. University Approval

A committee with the following members is constituted under the chairmanship of the vice chancellor the affiliating university, to oversee the approval procedure, the members of committee include:

a. Subject expert (2 to 3)
b. Principal of the affiliated college
c. Secretary or nominee of the correspondent
d. Nominee of the commissioner of technical education
e. Registered Nominee of the affiliated university

Director of academic and planning of the affiliated university

The committee interviews and the candidate and recommends the list of selected candidates to the institution. The process involves appointing newly approved faculty and also approves the services of existing faculty.

The procedure is carried out on basis as per the requirement.

ii) Recruitment for Non-Teaching Staff

Cadre Structure

a) Office

i. Administrative Officer (Graduate with experience)
ii. Senior Assistant (Graduate with experience)
iii. Junior Assistant (Graduate)
iv. Attender (below or equal to SSC)

b) Laboratories (other than computer Labs)

i. Lab Technician (Diploma in Pharmacy / DMLT / B.Sc.)
ii. Lab Attender (below or equal to SSC)

c) Computer Labs

i. System Administrator
ii. Lab Technician (Graduate with experience)

Qualifications

Non-teaching staff are recruited based on the qualifications prescribed by the State Government.

Recruitment procedure for Non – Teaching Staff

All positions are advertised in the newspapers or notified in the local notice boards. After scrutiny of received applications, a short list is made by the name of institution, Secretary/Principal; Interview call

letters are sent to eligible candidates to appear for a test and subsequent personal interview. The selection committee consists of some or all of the following:

a. President/nominee of President of the Educational Society
b. Principal
c. Administrative Head

- All appointments (Teaching and Non-teaching staff) made after selection, are forwarded to the Chairman for approval and to the Governing Body.

iii) Promotion Policy for Teaching Staff

- Career Advancement Scheme is implemented strictly in accordance with AICTE Rules.
- Higher posts such as Professor and Associate Professor are offered through selection committee constituted by the Registrar, KBC North Maharashtra University.

Kindly mention promotions of the faculty for CAY, CAY -1, CAY – 2

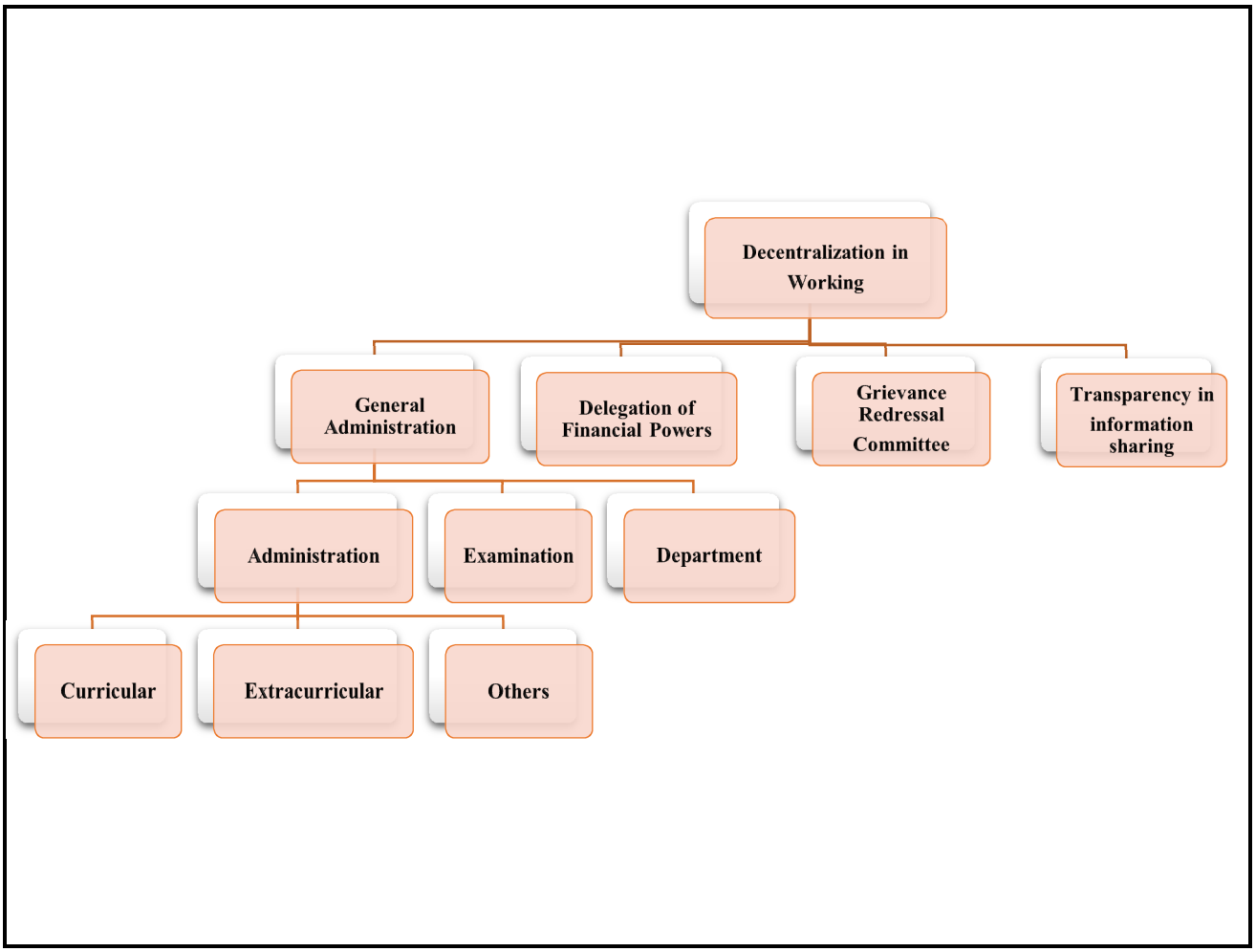
Sr. No.	2016-17	2017-18	2018-19
1	Dr. D. G. Mundhe promoted from assistant professor to associate professor.	Dr. J. V. Manvar &Dr. D. D. Kumbhar promoted from associate professor to professor	Dr. P. R. Patil promoted from Professor to Principal

iv) Promotion Policy for Non-Teaching Staff

- Time bound promotions given to Non-Teaching Staff.
- Promotion to higher post through select

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.



a) Administration

- 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 andmaintenance.

Sr. no	Name of the Committee	Name of Faculty (In-charge)	Name of Faculty (Member)	Name of Non - Teaching (Member)
1	Academic In-charge & Time Table Committee-B. Pharm	Mr. K. G. Ingale	Mrs. B. Y. Rane	Mr. K.M. Mahajan
	Academic In-charge & Time Table Committee-M. Pharm	Dr. D. D. Kumbhar	Mr. S. A. Nagdev	
2	College proposal to be submitted to Govt. agencies (AICTE, PCI)	Mr. K. G. Ingale	Mr. S. A. Nagdev	Mr. K.M. Mahajan Office staff
	NMU, M. Pharm, DTE etc.	Mr. S. S. Patil	Mr. R.G. Jadhao	Mr. K.M. Mahajan Mr. K C. Nehete
	Shikhshan Shulk Samiti	Dr. U. B. Gandagule	Mr. P. R. Tijare	Mr. C. U. Patil
3	Governing Body, Local Management Committee, Principal teaching/non-teaching meeting	Mr. K. G. Ingale	Ms. U.M. Sonawane Mrs. B. Y. Rane Mrs. P. P. Warade	Mr. C. U. Patil

4	Discipline and Student Attendance report Committee	Mrs. B. Y. Rane Mr. P. D. Warke	All teaching staff	All Nonteaching Staff
5	Library committee, National digital library	Mr. S. A. Nagdev	Ms. U.M. Sonawane	Ms. L.K. Patil Mr.V. V. Kakade
6	Store/Inventory(instrument/chemical) Committee	Mr. S. W. Rangari	Mr. P. R. Tijare Mr. Sandip S. Chaudhari	Mr. Virendra Bendale
7	Examination Section	Mr. S. W. Rangari	Ms. U.M. Sonawane Mr. S. A. Nagdev Ms. R. V. Patil	Mr. J. B. Patidar Mr. K. C. Nehete
8	Extracurricular Committee: Induction Program, Fresher's Party, NPW, AIDS awareness, Blood donation, Parent Meet, Pharma week& Annual social gathering/Club activities etc	Dr. Mrs. S. P. Warke	Mr. S.S. Patil Ms. U.M. Sonawane Mr. S. S. Chuadhari	All Nonteaching Staff
9	Sports Committee/Students participation data collection	Mr. S. A. Nagdev	Mr. P. R. Tijare Mr. S. S. Chuadhari	Mr.B. S. Bhole Mr. R. N. Rane Mr. L. K. Waghulde
10	Guest Lecture and Seminar Conference Committee(Students participation data collection)	Mr. K. G. Ingale	Ms. Aishwarya Patil	All non-teaching staff
11	Purchase Committee	Dr. D. D. Kumbhar	Dr. S. P. Warke Mr. R. G. Jadhao	Mr.D. P. Talele
12	Training and Placement	Mr. P. D. Warke	Mr. P. R. Tijare	Mr. D. P. Talele
13	Industrial Visit Committee	Mr. S. S. Patil	Dr. S. P. Warke	Mr. L. K. Waghulde
14	Computer Laboratory and internet	Mrs. B. Y. Rane	Mr. S. S. Chaudhari	Mr. J. B. Patidar Mr. K.M. Mahajan
15	Feedback Committee	Ms. U. M. Sonawane	Mr. S. A. Nagdev Mr. S.S. Chaudhari	All non-teaching staff
16	Alumni Committee	Mr. S. S. Patil	Mr. A. R. Jadhao	Mr. J. B. Patidar
17	Grants / Sponsored Projects	Dr. D. D. Kumbhar	All staff	Mr. D. P. Talele
18	Technical News Letter & Magazine	Mr. S. A. Nagdev	Ms. R. V. Patil Mr. S. S. Chaudhari Ms. Snehal Jaiswal	Mr. J. B. Patidar
19	News and Website	Mr. S. A. Nagdev	Ms.Snehal Jaiswal	Mr. K.M. Mahajan
20	Herbal garden/drug museum	Dr. U. B. Gandagule	Mr. P. D. Warke	Mr. K. J. Chaudhari
	Class Teachers			
21	B. Pharm M. Pharm	**Sem -II** **Sem -IV** **Sem -VI** **Sem -VIII** **I Year** **II Year**	Mr. S. W. Rangari Mrs. U. M. Sonawane Mr. P.D. Warke Mr. S. A. Nagdev Dr. D. D. Kumbhar NA	NA

22	**Head of Departments** Pharmaceutics Pharm. Chemistry Pharmacology Pharmacognosy Pharmaceutics (PG) Quality Assurance (PG)	 Dr. Mrs. S. P. Warke Mr. R. G. Jadhao Mr. K. G. Ingale Dr. U. B. Gandagule Dr. D. D. Kumbhar Mr. S. A. Nagdev		
23	Building Facilities and instrument maintenance	Mr. R. G. Jadhao	Dr. D. D. Kumbhar Mr. P. R. Tijare	Mr. D. P. Talele Mr. Y. D. Nehate
24	Admission Cell	Mr. S. S. Patil	Mr. R. G. Jadhao Mr. P. R. Tijare	Mr. K. M. Mahajan
25	Grievance Redressal Committee/anti-ragging/internal complaint/Anti-sexual harassment	Mr. K. G. Ingale	Mr. S. S. Patil Ms. Aishwarya Patil Mrs. B. Y. Rane Dr. U.B. Gandagule	Mr. D. P. Talele
26	Identity card/ Uniform	Mr. S. W. Rangari	Mr. S. A. Nagdev Ms. Aishwarya Patil	Mr. A. S. Salunke
27	Animal House	Mr. K. G. Ingale	-	Yuvraj Nehete Mr. K. D. Chaudhari

b) Examinations

Examinations are an important component for assessment of the progress of the learning.

- All the examination matters are dealt by Controller of Examinations, KBC North Maharashtra University, Jalgaon.
- Internal examinations are conducted by examinations cell by cell in-charge and assisted by class teachers.

Members of the examination cell

	2016-17	2017-18	2018-19
Exam In charge	Mr. K. G. Ingale	Mr. S. W. Rangari	Mr. S. W. Rangari
Members	Mr. S. W. Rangari	Mrs. B. Y. Rane	Mrs. R. V. Patil
Members	Mr. A. B. Wadekar	Mrs. U. M. Sonawane	Mrs. U. M. Sonawane
Member	Mr. N. D. Bendale	Mr. S. A. Nagdev	Mr. S. A. Nagdev

Though all teachers are involved in the examinations, the class teachers assist in compilation of marks, attendance, etc.

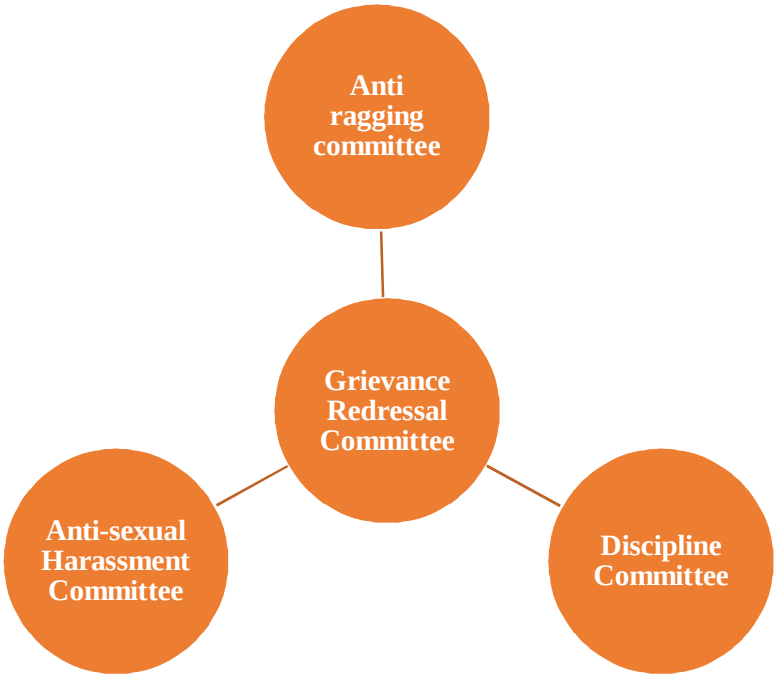
c) Grievance Redressal Committee

All grievances of staff are redressed expeditiously, as each staff is a key member of the organization. Any grievances reported verbally or written are appropriately dealt with by the concerned Head of the Department. However, the staff, if desires or not feel that his/her grievance is not redressed satisfactorily, can approach the Grievance Cell for redressal. The grievance redressal committee also identifies the nature and appropriate to the other committees depending on the nature of complaint and action of the member.

Grievance Redressal CommitteeComposition

2016-17	2017-18	2018-19
Hon. Shri. Pandurang. D. Saraf	Hon. Shri. Pandurang. D. Saraf	Hon. Shri. Pandurang D. Saraf
Mr. Sanjay P. Ingale	Mr. Sanjay P. Ingale	Mr. Sanjay P. Ingale
Dr. R. L. Bakal	Dr. R. L. Bakal	Dr. Parag R. Patil
Mr. S. S. Patil	Dr. S. S. Patil	Mr. S. S Patil

Mrs. B. Y. Rane	Mrs. B. Y. Rane	Mrs. B. Y. Rane
Mr. Vaibhav Jangale	Mr. Amol Bhalerao	Mr. Mayur R. Bhurat
Ms. Neha Bhaktani	Ms. Priya Patil	Mr. Aditya P. Patil
		Ms. Sharayu S. Chaudhari



1) Discipline Committee

Disciplinary matters are dealt with stern approach expeditiously. Any matter communicated verbally, written form or in anonymous format are viewed with due weightage. Matters reported concerning ragging reports by any means or by the anti-ragging squad are dealt with utmost seriousness. KYDSCT'S COP follows a well-documented Anti-Ragging policy.

2016-17	2017-18	2018-19
Principal	Principal	Principal
Heads of the Departments	Heads of the Departments	Heads of the Departments
Class in-charge	Class in-charge	Class in-charge
Examination cell in-charge	Examination cell in-charge	Examination cell in-charge
Non-Teaching staff	Non-Teaching staff	Non-Teaching staff

2) Anti ragging committee

Ragging though a universal phenomenon, it often takes a malignant form wherein the juniors and new students may be subjected to physiological or physical discomfort or harassment. To prevent and deter such incidents in higher educational institutions, the Government of India has taken a serious view on the cases of ragging. The AICTE, UGC and PCI and statutory bodies implement the provisions. The following members of the college are being appointed to form the anti-ragging committee in the previous years. Besides looking after general discipline, the committee will supervise all anti-ragging measures.

The composition ofAnti ragging committee is given below:

2016-17	2017-18	2018-19
Hon. Shri. P. D. Saraf	Dr. U. B.Gandagule	Dr. Parag R. Patil
Mrs. Sangita P. Saraf	Mrs. B. Y.Rane	Dr. Upendra. B. Gandagule
Dr. U. B. Gandagule	Mr. K. G. Ingale	Mr. Kundan. G. Ingale
Mr. V. C. Gurumukhi	Ms. Bhagyashri Patil	Mrs. Bhuvaneshwari Y. Rane
Mrs. Geeta G Pal	Mr. Chandrashekhar Patil	Mr. AdityaPatil
Mr. Vaibhav Jangale		Mr. Pravin Patil
		Mr. Dhanraj P. Talele
		Mr. Ravindra J. Bhirud
		Mr. Vaishnavi Jangale

Awareness, Avoidance and Action (3A's), all staff work together to stop this menace. Detailed composition will be announced in the beginning of the year. Recommendations are put up for approval to the Principal.

NMU Procedures against Anti-ragging:

The directorate of Academic Audit of KBC North Maharashtra University, Jalgaon, outlined anti-raging policy in the form of principal manual, with a motto to zero tolerance to ragging. The KYDSCT'S COP follows the policy. As per the guidelines, the college follows the procedures.

1. A pledge is administered to the students by the principal/ class in-charge.
2. The students submit the affidavit to the college as per the format.
3. An undertaking from the students and parents.

The salient features of the Prohibition of Ragging Act, 1997, are displayed in the college premises.

3) Anti-sexual Harassment Committee:

The college has constituted a committee as per the direction of honorable Supreme Court of India and is known as 'anti-Sexual Harassment Committee'. The following are the members for the previous three years.

2016-17	2017-18	2018-19
Hon. Shri. P. D. Saraf	Hon. Shri. P. D. Saraf	Shri. Pandurang D. Saraf
Mrs. Sangita P. Saraf	Mr. S. P. Ingale	Mr. Sanjay P. Ingale
Dr. D. D. Kumbhar	Dr. D. D. Kumbhar	Dr. Parag R. Patil
Mr. V. C. Gurumukhi	Mrs. U. M. Sonawane	Mrs. Uttara M. Sonawane
Mrs. Geeta G Pal	Ms. Priyanka Patil	Mrs. Bhuvaneshwari Y. Rane
Ms. Bhagyashri Koli	Mr. Shubham Patil	Ms. Sharayu S. Chaudhari

The following are the schedule of meeting of the committee

Dates of Meetings		
2016-17	2017-18	2018-19
13/07/2016	20/07/2017	18-9-2018
3/1/2017	13/3/2018	5-2-2019

The committee took contingence of the definitions of behavior on sexual harassment, preventive steps, criminal proceedings and legal procedures to be followed by the committee. The miscellaneous provisions are understood for the full implementation of the Act. The committee meets once in six months and deliberates on the issues and document the minutes of the meeting. With regard to the Supreme Court Judgment and guidelines issued in 1997 to provide for the effective enforcement of the basic human right of gender equity and guarantee against sexual harassment and abuse, more particularly against harassment at work places. The University Grants Commission (UGC) has issued circulars since

1998 to all the universities, advising them to establish a permanent cell and a committee and to develop guidelines to combat sexual harassment, violence against women and ragging at the universities and colleges. It has further advised the universities to be proactive and they are treated with. Keeping the above guidelines in view, KYDSCT COP has constituted a committee against sexual harassment since 2007.

The sexual harassment includes the

1. Physical contact and advances.
2. A demand or request for sexual favours.
3. Sexually coloured remarks.
4. Showing pornography.
5. Any other unwelcome physical, verbal or non-verbal conduct of sexual nature. Where any of these acts committed in circumstances where-under the victim of such conduct has a reasonable apprehension that in relation to the victim's employment or work, whether she is drawing salary, or honorarium or voluntary, whether in. government, public or private enterprise, such conduct can be humiliating and may constitute a health and safety problem.

Role of the committee:

1. The committee shall decide whether the facts contained in the complaint make out a case of "sexual harassment" in light of the definition contained in the policy.
2. The committee shall recommend the penalties/action to be taken against any person found guilty of having sexually harassed the complainant, up to and including termination, from of job.
3. The committee shall recommend the penalties/action to be taken against any person found guilty of having retaliated against/victimized the complainant or any other person assisting her as a result of such complaint having been made or such assistance having been offered.
4. The committee shall monitor the follow-up action to be taken by the organization on receipt of the report of committee.

Preventive steps: All employers or person in-charge of work place, whether in public or private sector, should take appropriate steps to prevent sexual harassment. Without prejudice to the generality of this obligation, they should take the several steps as per the Act.

9.1.3. Delegation of financial powers **15**

The principal has the financial powers to spend Rs 10,000/- at a time, keeping in view of the urgency and needs. These are to authorize the purchase of consumables for laboratories (books etc.) over and above the general procedure of annual purchases.

- To permit the reimbursement of travelling (conferences and workshops) and other expenses for official purposes.
- To take care of guests, parents, alumni and stakeholders.
- To sponsor faculty/staff for any academic activities as per norms.
- To authorize any other expenses, he may deem essential.

Head of the Department: The Head of the Department have the financial powers to spend Rs 5, 000/- at a time, keeping in view of the urgency and needs (chemicals, recurring expenses), repair of equipment.

Staff member: Each staff member handling laboratory work has the financial powers to spend Rs 2,000/- at a time, keeping in view of the laboratory needs for conducting experiments (medicines, oils, commodities of domestic market). All such financial decisions are exercised in consultation with the principal, administrative officer and joint secretary. These officers are available in the campus every day.

Table of financial tasks delegated by faculty

Name of staff	Department	Date	Service provider details and bill no	Amount
Mr. K. G. Ingale	Pharmacology	3/10/2016	Printer care, 245	750
Mr. S. W. Rangari	Pharma chemistry	13/8/2016	Prince enterprises, 1632	3000
Mr. S. W. Rangari	Pharma chemistry	17/9/2016	Prince enterprises, 1632	800
Principal	Principal	9/9/2016	Vighnaharta Sound system , 163	9500
Mrs. B. Y. Rane	Pharma chemistry	16/9/2016	Chamundai electrical,49	2186
Principal	Principal	16/2/2016	Quality book distributors, 104	4964
Dr. U. B. Gandagule	Pharmacognosy	4/11/2017	Prince enterprises, 1350	1720
Mr. S. S. Patil	Pharmaceutics	20/1/2017	Jinendra scientific, 267	4516

9.1.4. Transparency and availability of correct/unambiguous information 10

Information on the policies, rules, processes is to be made available on web site. Information on the policies, rules and processes is made available on website.

- The arrival, all students joining KYDSCT'S COP are informed about the rules, regulations and procedures at college during orientation program. The same are available in the society manual.
- Periodic reminders are done through circulars which get inputs.
- All information relevant or needed by all stakeholders is available in web. Periodic communications are sent to parents/guardians.
- SMS communications are sent to the parents regarding absentees, sessional marks, monthly attendance, examination absentees etc.
- At the time of joining new staff, personal information qualifications, professional skills and experience are collected and used for strengthening the course and the college.
- The data of all staff are periodically updated and uploaded in the college website.
- The administrative rules and regulations covering all cadre of staff employed are mentioned in the manual. The employees are given uniform consideration. Transparency is maintained relating to rules followed which include general administration, service conditions, duties, promotion policies, increments, awards and also disciplinary action.
- The program syllabus book (of KBC North Maharashtra university) is available in the library which provides transparency in implementing academic plans and current regulations, courses, marks, attendance, examination, etc.
- Recruitment and interview of all staff is done by issuing advertisements and following the regulations of KBC North Maharashtra University, AICTE and Pharmacy Council of India (PCI). Thus reference points are made clear to the staff.
- Communications are displayed in the notice boards. Several boards are available for each department, placement, training, library, etc. In total, the administration and staff are available to open the communication with students, employers (for placement) etc. To a largest extent, paper work and communications are few and technology (SMS) is employed.

9.2. Budget Allocation, Utilization and Public Accounting At Institute Level 30

Summary of current financial year's budget and actual expenditure incurred (for the institution exclusively) in the three previous financial years.

For (2018-2019)							
Total Income:				Actual Expenditure till date			Total No. of students:262
Fee	Govt.	Grant(s)	Other sources (specify)	Recurring including Salaries	Nonrecurring	Special Projects/Any other,	Expenditure per student
5082889	---	----	50111	3200579	432013	---	13865

For (2017-2018)							
Total Income:				Actual Expenditure			Total No. of students:222
Fee	Govt.	Grant(s)	Other sources (specify)	Recurring including Salaries	Nonrecurring	Special Projects/Any other,	Expenditure per student
16182889	---	---	1987329	14566302	684787	---	68698.59

For (2016-2017)							
Total Income: 15915432				Actual Expenditure			Total No. of students:221
Fee	Govt.	Grant(s)	Other sources (specify)	Recurring including Salaries	Nonrecurring	Special Projects/Any other,	Expenditure per student
15915432	---	----	4741934	18833366.43	2405633	----	96104.06

Budget expenditure

Items	Budgeted in 2018-19	Actual expenses in (18-19)	Budgeted in 2017-18	Actual expenses in (2017-18)	Budgeted in 2016-17	Actual expenses in 2016-17
Infrastructure Built-Up	---	----	----	----	----	----
Library	12953	12660	-	50080	--	391667
Laboratory equipment		20905	----	104680	--	284592
Laboratory consumables	676463	103794	1334778	---	1213434	1571154
Teaching and non-teaching staff salary	13992224	7318456	28312543	1325928	26215318	23522941

Maintenance and spares	151953	297475	1050000	144717	500000	154212
R&D			---	--	---	--
Training and Travel	23783	30576	---	22650	--	221220
Miscellaneous expenses *	165000	177981	---	74721	--	68695
Others, specify	2588243	50111	6721111	1987329	6235513	4741934
Total	**17610619**	**8011958**	**37418432**	**15710105**	**34164265**	**30956415**

9.2.1. Adequacy of budget allocation **10**

The yearly budget is prepared according to the needs & requirements of the institute taking into consideration annual intake of students, laboratory & infrastructure requirements. Formal budget estimates are prepared by Local Managing Committee of the college and reviewed by the governing body. In cases where there are urgent requirements not taken into consideration while preparing budget, special allocation of funds are made on a case to case basis.

Budget Allocation Procedure:

An Institution's budget is one embodiment of its values. It reflects the campus's balance between central control and unit initiative. In an era of high costs and limited resources, the budget process is the mechanism for a campus to focus resources and make difficult decisions. At college, every year in the month of January, the Principal asks the Heads of the Department, College Administrative Office, and Examination Section, Library and other central departments, to prepare the budget estimate for the next academic year.

The estimates of the budget from the departments will have provisions under following heads,

(a) Lab Equipment
(b) Lab Consumables
(c) Lab Maintenance
(d) Seminars /Conferences/ FDP
(e) Guest Lectures
(f) Industrial visits
(g) Books & Journals
(h) Research & Development
(i)Staff Incentives
(j) Stationary and other consumables
(k) Display charts & Models

Apart from the budget requirements, the following budget estimates are obtained from the Central Officers.

Offices of the institution:

a) Educational & General - The education and general budget funds the general instruction, research, administration, admission, and public service operations of the institution.

b) Examination Related Expenditure - Various annual estimates are prepared for conduct of examination, including, exam related stationary, question paper setting, valuation, recording & publishing of results, exam remuneration, infrastructural requirements etc.

c) Auxiliary Enterprise Budget - Includes budget for various student support services offered by the institution, including transport, facilities management, IT services, etc.

d) Students Activities: Budget estimates for organizing various student activities, including cultural events, student organizations & Sporting events are prepared under this head.
e) The budget estimates from all these sources are collected and grouped to prepare the consolidated Budget Estimation of the institution. The same is submitted to governing body for approval.
f) Governing body, after careful examination, approves the budget for the academic year.
g) The accounts department, on receiving the approved budget estimate from finance committee, prepares the schedule for the release of payments, in consultation with the Department Heads.
h) The sanctioned budget is released, as per the schedule, for accomplishing the specified goals.

9.2.2. Utilization of allocated funds 15

The respective academic and supportive units are informed on allocation of funds under various heads. The guidelines towards making purchase of laboratory equipments, programs, conducting training activities and other miscellaneous activities. The Local Management committee (LMC) decides the utilization for the financial year's allocated funds in consultation with the concerned experts including Principal. The utilization is made as per the plans and projections. The priorities are identified. Emphasis is made on increasing the quality of academic inputs that positively contribute to the development. The following is the purchase procedures.
Purchases are done up to the level of allocated funds, however, under some special priority considerations, the purchases can go beyond the allocated funds which will be later ratified by the Governing Body. Delegation of financial powers is promoted to keep the autonomy of the college and to reduce time delays.
Every effort is made for providing the best and updated infra-structural facilities to students and staff. Optimum utilization of this attitude and policy of the management by utilizing the funds in the lines of the mission statement and objectives regular auditing and inventory checks (in-house) keep the mechanism free from over or unjust spending.

9.2.3. Availability of the audited statements on the institute's website 5

Yes, the audited statements are available on college website **www.bpharmacysakegaon.org**

9.3. Library and Internet 20

It is assumed that zero deficiency report was received by the Institution, Effective availability and utilization to be determined.

9.3.1. Quality of learning resources (hard / soft) 10

1. Library is automated with software: Qualsoft library management software with bar code system.
2. Relevance of available learning resources including e-resources:

- No. of volumes: 8350
- No. of titles: 1290
- Newspapers: 5
- National Journals : 15
- International Journals: 06
- E-journals- Bentham Science Pharmacy Collection(2015)

3. E- information resources-

- CDs:20
- Digital Library- National Digital Library
- No of PCs: 3

- Internet facility available- speed 40 mbps
- Accessibility to students, faculty and staff: 9:00 am to 5:00 pm
- Number of library staff with degree in Library 02

Table of library Staff

Sr. no	Name	Designation
1	Mrs. L. K. Patil	Librarian
2	Mr. V. V. Kakade	Asst. Librarian
3	Mr. B. S. Bhole	Peon

9.3.2. Internet **10**

- Name of the Internet provider : BSNL
- Available bandwidth : 40 Mbps
- Wi-Fi availability **: Yes**
- Internet access in labs, classrooms, library and other offices: Yes
- Security arrangements : **Yes(**Quick Heal Internet Security)

PART C: Declaration by the Institution

Declaration

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 institute 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, post visit and subsequent to grant of accreditation.

Date: 16/02/2019
Place: Sakegaon

Principal
College of Pharmacy
Sakegaon Bhusawal. Dist. Jalgaon

Dr. Parag Ramchandra Patil

KYDSCT's College of Pharmacy Sakegaon 425201 Maharashtra
Office Seal

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; behavioural, 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.