

(Recognised by the Govt. of Karnataka, Affiliated to Rajiv Gandhi University of Health Sciences,

Karnataka;

Approved by Pharmacy Council of India, New Delhi)

Accredited by NAAC and International Accreditation Organization (IAO)

# 7.1.10 - The Institution has a prescribed code of conduct for students, teachers, administrators and other staff and conducts periodic programmes in this regard.

Human Values and Professional Ethics Code of conduct (handbooks) for various stakeholders

Note: Uploaded in The Oxford College of Pharmacy website

http://www.theoxford.edu/pharmacy/code-ethics.htm

Human Values and Professional Ethics

7.1.15 The institution offers a course on Human Values and professional ethics (1)

Provide/upload supporting documents

As per the syllabus prescribed by the Rajiv Gandhi University of Health Sciences, Karnataka, Bangalore. The Oxford College of Pharmacy Bangalore conducting a courses related to Human Values and professional ethics for III.B. Pharm, III. Pharm. D. students. These subjects are 1. Pharmaceutical Jurisprudence (for III.B. Pharm, III. Pharm. D. students) and 2. Environmental Sciences (for I B. Pharm. II Semester students)





No.6/9, 1<sup>st</sup> Cross, Begur Road, Hongasandra, Bengaluru –560 068 ①: +91- 80 - 61754694; Fax: +91- 80 -61754699; www.theoxford.edu e-mail: pharmacyprincipal@theoxford.edu; info@theoxford.edu;



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### Human Values and Professional Ethics

7.1.16 The institutional functioning is as per professional code of prescribed / suggested by statutory bodies / regulatory authorities for different professions (1)

### Provide/upload supporting documents

The code of pharmaceutical ethics in India is framed by Pharmacy council of India. The code of ethics is meant to guide the Indian pharmacist as to how he/she should conduct in relation to himself, his/her patrons, and general public, co-professionals, and members of the medical and other health professionals.

Pharmacy education in India is regulated by 2 organizations: the Pharmacy Council of India (PCI), under the Pharmacy Act of 1948, and the All India Council for Technical Education (AICTE), which was established under the AICTE Act of 1987. PCI prescribes conditions to be fulfilled by the institutions seeking approval of the PCI for imparting education in pharmacy and educational standards. Pharmacy institutions have to seek approval of PCI and get verified prescribed norms are met. Curriculum, for all the programs in pharmacy education, is followed as per the affiliating University-Rajiv Gandhi University of Health Sciences, Bangalore. While, Pharmacy education at all levels is regulated by the AICTE and all these programs must be approved by it. The AICTE is primarily responsible for planning, formulating, and maintaining norms and standards in technical education, which include pharmacy. The programs at The Oxford College of Pharmacy, Bangalore are approved by these regulatory authorities.

### Functions and Duties of PCI

- 1. To prescribe minimum standard of education required for qualifying as a pharmacist. (Ref.: section 10 of the Pharmacy Act)
- 2. Framing of Education Regulations prescribing the conditions to be fulfilled by the institutions seeking approval of the PCI for imparting education in pharmacy. (Ref.: section 10 of the Pharmacy Act)
- 3. To ensure uniform implementation of the educational standards through out the country. (Ref. : section 10 of the Pharmacy Act)
- 4. Inspection of Pharmacy Institutions seeking approval under the Pharmacy Act to verify availability of the prescribed norms. (Ref.: section 16 of the Pharmacy Act)
- 5. To approve the course of study and examination for pharmacists i.e. approval of the academic training institutions providing pharmacy courses. (Ref. : section 12 of the Pharmacy Act)
- 6. To withdraw approval, if the approved course of study or an approved examination does not continue to be in conformity with the educational standards prescribed by the PCI. (Ref.: section 13 of the Pharmacy Act)
- 7. To approve qualifications granted outside the territories to which the Pharmacy Act extends i.e. the approval of foreign qualification. (Ref. : section 14 of the Pharmacy Act)
- 8. To maintain Central Register of Pharmacists. (Ref. : section 15 A of the Pharmacy Act)





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PRINCIPAL The Oxford College Of Phore acy No 6\9.1st Cluss, Segur Rond Hongasandra Bangalore - 560 068



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### BP 505 T. PHARMACEUTICAL JURISPRUDENCE (Theory)

#### 45 Hours

**Scope:** This course is designed to impart basic knowledge on important legislations related to the profession of pharmacy in India.

Objectives: Upon completion of the course, the student shall be able to understand:

- 1. The Pharmaceutical legislations and their implications in the development and marketing of pharmaceuticals.
- 2. Various Indian pharmaceutical Acts and Laws
- 3. The regulatory authorities and agencies governing the manufacture and sale of pharmaceuticals
- 4. The code of ethics during the pharmaceutical practice

### **Course Content:**

#### UNIT-I

#### 10 Hours

#### Drugs and Cosmetics Act, 1940 and its rules 1945:

Objectives, Definitions, Legal definitions of schedules to the Act and Rules

Import of drugs – Classes of drugs and cosmetics prohibited from import, Import under license or permit. Offences and penalties.

Manufacture of drugs - Prohibition of manufacture and sale of certain drugs,

Conditions for grant of license and conditions of license for manufacture of drugs, Manufacture of drugs for test, examination and analysis, manufacture of new drug, loan license and repacking license.

### UNIT-II

#### 10 Hours

### Drugs and Cosmetics Act, 1940 and its rules 1945.

Detailed study of Schedule G, H, M, N, P,T,U, V, X, Y, Part XII B, Sch F & DMR (OA)

Sale of Drugs – Wholesale, Retail sale and Restricted license. Offences and penalties

Labeling & Packing of drugs- General labeling requirements and specimen labels for drugs and cosmetics, List of permitted colors. Offences and penalties.

Administration of the Act and Rules – Drugs Technical Advisory Board, Central drugs Laboratory, Drugs Consultative Committee, Government drug analysts, Licensing authorities, controlling authorities, Drugs Inspectors

### UNIT-III

• Pharmacy Act -1948: Objectives, Definitions, Pharmacy Council of India; its constitution and functions, Education Regulations, State and Joint state pharmacy councils; constitution and functions, Registration of Pharmacists, Offences and

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### 10 Hours

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- Angasandra

Penalties

- Medicinal and Toilet Preparation Act –1955: Objectives, Definitions, Licensing, Manufacture In bond and Outside bond, Export of alcoholic preparations, Manufacture of Ayurvedic, Homeopathic, Patent & Proprietary Preparations. Offences and Penalties.
- Narcotic Drugs and Psychotropic substances Act-1985 and Rules: Objectives, Definitions, Authorities and Officers, Constitution and Functions of narcotic & Psychotropic Consultative Committee, National Fund for Controlling the Drug Abuse, Prohibition, Control and Regulation, opium poppy cultivation and production of poppy straw, manufacture, sale and export of opium, Offences and Penalties

### UNIT-IV

#### **08** Hours

- Study of Salient Features of Drugs and Magic Remedies Act and its rules: Objectives, Definitions, Prohibition of certain advertisements, Classes of Exempted advertisements, Offences and Penalties
- Prevention of Cruelty to animals Act-1960: Objectives, Definitions, Institutional Animal Ethics Committee, CPCSEA guidelines for Breeding and Stocking of Animals, Performance of Experiments, Transfer and acquisition of animals for experiment, Records, Power to suspend or revoke registration, Offences and Penalties
- National Pharmaceutical Pricing Authority: Drugs Price Control Order (DPCO)-2013. Objectives, Definitions, Sale prices of bulk drugs, Retail price of formulations, Retail price and ceiling price of scheduled formulations, National List of Essential Medicines (NLEM)

### UNIT-V

### 07 Hours

- **Pharmaceutical Legislations** A brief review, Introduction, Study of drugs enquiry committee, Health survey and development committee, Hathi committee and Mudaliar committee
- Code of Pharmaceutical ethics D efinition, Pharmacist in relation to his job, trade, medical profession and his profession, Pharmacist's oath
- Medical Termination of Pregnancy Act
- Right to Information Act
- Introduction to Intellectual Property Rights (IPR)

### **Recommended books: (Latest Edition)**

1. Forensic Pharmacy by B. Suresh

- 2. Text book of Forensic Pharmacy by B.M. Mithal
- 3. Hand book of drug law-by M.L. Mehra
- 4. A text book of Forensic Pharmacy by N.K. Jain
- 5. Drugs and Cosmetics Act/Rules by Govt. of India publications.
- 6. Medicinal and Toilet preparations act 1955 by Govt. of India publications.
- 7. Narcotic drugs and psychotropic substances act by Govt. of India publications
- 8. Drugs and Magic Remedies act by Govt. of India publication

9.Bare Acts of the said laws published by Government. Reference books (Theory)

### 3.4 PHARMACEUTICAL JURISPRUDENCE (THEORY)

### Theory: 2 Hrs. /Week

- 1. Scope of the Subject: This course exposes the student to several important legislations related to the profession of pharmacy in India. The Drugs and Cosmetics Act, along with its amendments are 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, patent and design Act will be discussed.
- Objectives of the Subject: Upon completion of the subject student shall be able to (Know, do, and appreciate) –
  - a. practice the Professional ethics;
  - b. understand the various concepts of the pharmaceutical legislation in India;
  - c. know the various parameters in the Drug and Cosmetic Act and rules;
  - d. know the Drug policy, DPCO, Patent and design act;
  - understand the labeling requirements and packaging guidelines for drugs and cosmetics;
  - f. be able to understand the concepts of Dangerous Drugs Act, Pharmacy Act and Excise duties Act; and
  - g. other laws as prescribed by the Pharmacy Council of India from time to time including International Laws.

#### Text books (Theory)

Mithal B M. Textbook of Forensic Pharmacy. Calcutta: National; 1988.

### **Reference books (Theory)**

- Singh, KK, editor. Beotra's the Laws of Drugs, Medicines & cosmetics. Allahabad: Law Book House; 1984.
- b. Jain, NK. A Textbook of forensic pharmacy. Delhi: Vallabh prakashan ; 1995.
- c. Reports of the Pharmaceutical enquiry Committee
- d. I.D.M.A., Mumbai. DPCO 1995
- e. Various reports of Amendments.
- f. Deshapande, S.W. The drugs and magic remedies act 1954 and rules 1955. Mumbai: Susmit Publications; 1998.
- g. Eastern Book Company .The narcotic and psychotropic substances act 1985, Lucknow: Eastern; 1987.

### 3. Detailed syllabus and lecture wise schedule:

SI. NO	TITLE OF THE TOPIC	TOTAL HOURS
1	Pharmaceutical Legislations – A brief review.	1 Hour
2	Principle and Significance of professional ethics. Critical study of the code of pharmaceutical ethics drafted by PCI.	2 Hours
3	<b>Drugs and Cosmetics Act, 1940, and its rules 1945.</b> Objectives, Legal definition, Study of Schedule's with reference to Schedule B, C&C1, D, E1, F&F1, F2, F3, FF, G, H, J, K, M, N, P, R, V, W, X, Y. Sales, Import, labeling and packaging of Drugs And Cosmetics Provisions Relating to Indigenous Systems. Constitution and Functions of DTAB, DCC, CDL. Qualification and duties – Govt. analyst and Drugs Inspector.	23 Hours
4	Pharmacy Act –1948. Objectives Legal Definitions, General Study, Constitution and Functions of State & Central Council, Registration & Procedure, ER.	3 Hours
5	Medicinal and Toilet Preparation Act –1955. Objectives, Legal Definitions, Licensing, Bonded and Non Bonded Laboratory, Ware Housing, Manufacture of Ayurvedic, Homeopathic, Patent & Proprietory Preparations.	3 Hours
6	Narcotic Drugs and Psychotropic substances Act-1985 and Rules. Objectives, Legal Definitions, General Study, Constitution and Functions of narcotic & Psychotropic Consultative Committee, National Fund for Controlling the Drug Abuse, Prohibition, Control and regulations, Schedules to the Act.	4 Hours
7	Study of Salient Features of Drugs and magic remedies Act and its rules.	2 Hours
8	Study of essential Commodities Act Relevant to drugs price control Order.	2 Hours
9	Drug Price control Order & National Drug Policy (Current).	2 Hours
10	Prevention Of Cruelty to animals Act-1960.	3 Hours
11	Patents & design Act-1970.	3 Hours
12	Brief study of prescription and Non-prescription Products.	2 Hours

### 4. Assignments:

#### Format of the assignment

- 1. Minimum & Maximum number of pages
- 2. It shall be a computer draft copy
- 3. Reference(s) shall be included at the end.
- 4. Name and signature of the student
- 5. Assignment can be a combined presentation at the end of the academic year.
- 6. Time allocated for presentation may be 8+2 Min

### Case studies relating to

- Drugs and Cosmetics Act and rules along with its amendments, Dangerous Drugs Act, Medicinal and Toilet preparation Act, New Drug Policy, Professional Ethics, Drugs (Price control) Order, Patent and Design Act.
- 2. Various prescription and non-prescription products.
- 3. Medical and surgical accessories.
- 4. Diagnostic aids and appliances available in the market.

### 3.5 MEDICINAL CHEMISTRY (THEORY)

#### Theory: 3 Hrs. /Week

- 1. Scope of the subject:
- 2. Objectives of the subject: Text Books:

#### **Reference Books:**

- a. Wilson and Gisvold's Text book of Organic, Medicinal and Pharmaceutical Chemistry, Lippincott-Raven Publishers-New York, Philadelphia.
- b. William.O.Foye, Principles of Medicinal Chemistry, B.I. Waverly Pvt. Ltd., New Delhi.
- c. Burgers, Medicinal Chemistry, M.E., Welly Med. Chemistry M.E. Walffed Johnwilley and Sons, Wiley-interscience Publication, New York, Toranto.
- d. A Text Book of Medicinal Chemistry Vol. I and II by Surendra N. Pandeya, S.G. Publisher, 6, Dildayal Nagar, Varanasi -10.
- e. Indian Pharmacopoeia 1985 and 1996. The Controller of Publications, Civil Lines, Delhi 54.
- f. Current Index of Medical Specialities (CIMS) and MIMS India, MIMS, A.E. Morgan Publications (I) Pvt. Ltd, New Delhi-19.
- g. Organic Drug Synthesis-Ledniser Mitzsher Vol. I and II.
- h. Pharmaceutical Chemistry drug Synthesis Vol. I and II by H. J. Roth and A. Kleemann.
- i. The Science and Practice of Pharmacy Vol. 1 and 2, Remington, MACK Publishing Company, Easton, Pennsylvania.

### BP 206 T. ENVIRONMENTAL SCIENCES (Theory)

### 30 hours

**Scope:**Environmental Sciences is the scientific study of the environmental system and the status of its inherent or induced changes on organisms. It includes not only the study of physical and biological characters of the environment but also the social and cultural factors and the impact of man on environment.

Objectives: Upon completion of the course the student shall be able to:

- 1. Create the awareness about environmental problems among learners.
- 2. Impart basic knowledge about the environment and its allied problems.
- 3. Develop an attitude of concern for the environment.
- 4. Motivate learner to participate in environment protection and environment improvement.
- 5. Acquire skills to help the concerned individuals in identifying and solving environmental problems.
- 6. Strive to attain harmony with Nature.

#### **Course content:**

#### Unit-I

The Multidisciplinary nature of environmental studies

Natural Resources

Renewable and non-renewable resources:

Natural resources and associated problems

a) Forest resources; b) Water resources; c) Mineral resources; d) Food resources; e) Energy resources; f) Land resources: Role of an individual in conservation of natural resources.

#### Unit-II

Ecosystems

- Concept of an ecosystem.
- Structure and function of an ecosystem.
- Introduction, types, characteristic features, structure and function of the ecosystems: Forest ecosystem; Grassland ecosystem; Desert ecosystem; Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

### Unit- III

Environmental Pollution: Air pollution; Water pollution; Soil pollution

### 10hours

## 10hours

10hours

#### **Recommended Books (Latest edition):**

- 1. Y.K. Sing, Environmental Science, New Age International Pvt, Publishers, Bangalore
- 2. Agarwal, K.C. 2001 Environmental Biology, Nidi Publ. Ltd. Bikaner.
- 3. Bharucha Erach, The Biodiversity of India, Mapin Pu blishing Pvt. Ltd., Ahmedabad 380 013, India,
- 4. Brunner R.C., 1989, Hazardous Waste Incineration, McGraw Hill Inc. 480p
- 5. Clark R.S., Marine Pollution, Clanderson Press Oxford
- 6. Cunningham, W.P. Cooper, T.H. Gorhani, E & Hepworth, M.T. 2001, Environmental Encyclopedia, Jaico Publ. House, Mumbai, 1196p
- 7. De A.K., Environmental Chemistry, Wiley Eastern Ltd.
- 8. Down of Earth, Centre for Science and Environment

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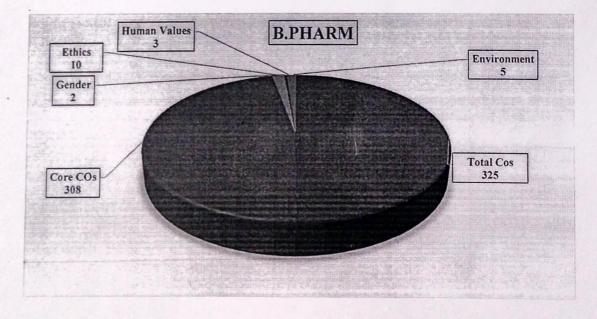


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### Departmental wise - Course Outcome's (COs) with Cross cutting Issues -

Academic year-2023-2024

Department	Total Cos	Core COs	Ethics	Gender	Human Values	Environment
B. Pharm	325	308	. 10	2	3	5
M. Pharm	80	65	9	0	3	3
Pharm D	124	97	7	0	1	0
TOTAL	529	470	26	2	7	8

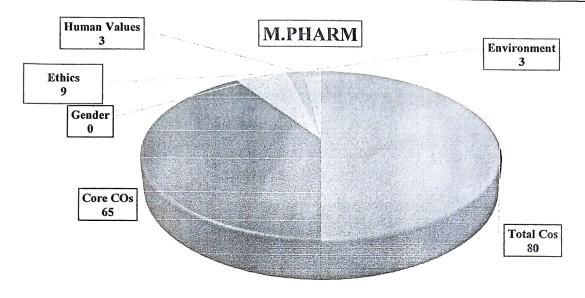


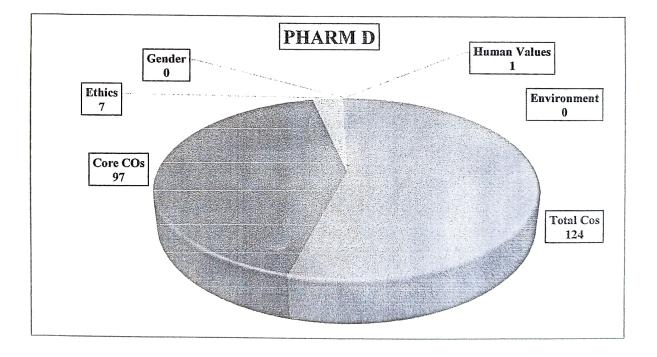


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The Oxford College of Pharmacy has a well-defined Course Outcomes for all course as per RGUHS Guideline. For the Academic Year 2023-2024 there is no change in the COs. Those Course Outcomes (COs) are what the student should be able to do at the end of a course. The most important aspect of those COs are that it should be observable and measurable.

Each COs are assessed by using Direct assessment tools that reflect the knowledge level and skills of the students based on their performance in Continuous Assessment Test, Assignments, Tutorials, Concept Test etc. This Direct assessment is taken to attain individual Course Outcomes (COs) as per the university guidelines. As University has not given any POs so partial attainment only done and no weightage attainment is calculated.

When assessing student learning, two of the most common approaches followed by college are formative and summative assessments. The uses of a formative assessment is to gauge student understanding and identify knowledge gaps that may need extra work. Summative assessments are conducted at the end of a defined learning period and often represent the final grade for the course.





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### Summary on Crosscutting Institution integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum

The Oxford College of Pharmacy in Bangalore has incorporated a variety of courses into its curriculum, some of which aim to improve professional competencies and others of which aim to instil general competencies such as social ethical values, human values, environmental sensitivity, and so on, resulting in students' holistic development.

Ethics in education supports in educational system management and ensures that these behaviours contribute favourably to human well-being. The college has worked hard to provide value-based education to students in order to help them understand moral values and professional ethics, with the goal of strengthening values for a better citizen. Students in all pharmacy programmes are taught a variety of courses in order to instil and practise human values and professional ethics. Human values and professional ethics are addressed through the course "Pharmaceutical jurisprudence" offered in the V semester of UG programme.

Gender equality safeguards women and girls from harm. It is required for economic growth. The institution, imparting quality education to shape global leaders has firm belief in gender equity which is indispensable to ensure sustainable development of a country. To provide counselling to students, promote gender equity among students, and handle issues impacting the safety and security of female students, employees, and professors, the college has a Women's Grievance Cell.

To enhance awareness of environmental and sustainability issues, a variety of activities were organised for students from all programmes, including seminars, workshops, guest lectures, industry visits, and field excursions. The issues of Environment and Sustainability are addressed through the course "Environmental Studies" offered to Pharmacy students in the V semester as well.

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### SYLLABUS CROSS CUTTING

### **B. PHARMACY**

### Semester I

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

### Semester II

Course Code	Name of the course	No. of hours	Tutorial	Credit points
BP201T	Human Anatomy and Physiology II – Theory	3	1	4
BP202T	Pharmaceutical Organic Chemistry I - Theory	3	1	4
BP203T	Biochemistry-Theory	3	1	4
BP204T	Pathophysiology-Theory	3	1	4
BP205T	Computer Applications in Pharmacy – Theory *	3	-	3
BP206T	Environmental sciences – Theory *	3	-	3
BP207P	Human Anatomy and Physiology II – Practical	4	-	2
BP208P	Pharmaceutical Organic Chemistry I- Practical	4	-	2
BP209P	Biochemistry – Practical	4	-	2
BP210P	Computer Applications in Pharmacy – Practical*	2	-	1
¢	Total	32	4	29
	Semester III		1	P. Pad





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

### Semester IV

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

### Semester V

Course code	Name of the course	No, of hours	Tutorial	Credit points
BP501T	Medicinal Chemistry II – Theory	3	1	4
BP502T	Industrial PharmacyI- Theory	3	1	4



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BP503T	Pharmacology II – Theory	3	1	4
BP504T	Pharmacognosy and Phytochemistry II- Theory	3	1	4
BP505T	Pharmaceutical Jurisprudence – Theory	3	1	4
BP506P	Industrial PharmacyI – Practical	4	-	2
BP507P	Pharmacology II – Practical	4	-	2
BP508P	Pharmacognosy and Phytochemistry II –	4	-	. 2
	Practical	-		
	Total	27	5	26

### semester VI

Course	Name of the course	No. of	Tutorial	Credit
code		hours		points
BP601T	Medicinal Chemistry III – Theory	3	1	4
BP602T	Pharmacology III – Theory	3	1	4
BP603T	Herbal Drug Technology – Theory	3	1	4
BP604T	Biopharmaceutics and Pharmacokinetics -	3	1	4
DI 0041	Theory	5	Ĩ	
BP605T	Pharmaceutical Biotechnology – Theory	3	1	4
BP606T	Quality Assurance – Theory	3	1	4
BP607P	Medicinal chemistry III – Practical	4	-	2
BP608P	Pharmacology III – Practical	4	-	2
BP609P	Herbal Drug Technology – Practical	4	-	2
	Total	30	6	30

### Semester VII

Course code	Name of the course	No. of hours	Tutorial	Credit points
BP701T	Instrumental Methods of Analysis – Theory	3	1	4
BP702T	Industrial PharmacyII – Theory	3	1	4
BP703T	Pharmacy Practice – Theory	3	1	4
BP704T	Novel Drug Delivery System – Theory	3	1	4
BP705P	Instrumental Methods of Analysis – Practical	4	-	2



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BP706PS	Practice School*	12	-	6
	Total	28 5	5	24

### Semester VIII

Course code	Name of the course	No. of hours	Tutorial	Credit points
BP801T	Biostatistics and Research Methodology	3	1	4
BP802T	Social and Preventive Pharmacy	3	1	4
BP803ET	Pharma Marketing Management			
BP804ET	Pharmaceutical Regulatory Science			4 + 4 =
BP805ET	Pharmacovigilance			
BP806ET	Quality Control and Standardization of			
BP800E1	Herbals	3+3=	1 + 1 = 2	
BP807ET	Computer Aided Drug Design	6		8
BP808ET	Cell and Molecular Biology	]		
BP809ET	Cosmetic Science			
BP810ET	Experimental Pharmacology	1		
BP811ET	Advanced Instrumentation Techniques			
BP812ET	Dietary Supplements and Nutraceuticals			
BP813PW	Project Work	12	-	6
	Total	24	4	22

### PHARM D

### FIRST YEAR

S. No	Name of Subject	No. of hours of Theory	No. of hours of Practical	No. of hours of Tutorial
(1)	(2)	(3)	(4)	(5)
1.1	Human Anatomy and Physiology	3	3	l
1.2	Pharmaceutics	2	3	l
1.3	Medicinal Biochemistry	3	3	l
1.4	Pharmaceutical Organic Chemistry	3	3	l
1.5	Pharmaceutical Inorganic Chemistry	2	3	1



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1.6	Remedial Mathematics/ Biology**	3	3*	1
	Total Hours	16	18	6 = (40)

### SECOND YEAR

S. No	Name of Subject	No. of hours of Theory	No. of hours of Practical	No. of hours of Tutorial
(1)	(2)	(3)	(4)	(5)
2.1	Pathophysiology	3	-	1
2.2	Pharmaceutical Microbiology	3	3	1
2.3	Pharmacognosy & Phytopharmaceuticals	3	3	1
2.4	Pharmacology-I	3	3	1
2.5 ·	Community Pharmacy	2	-	1
2.6	Pharmacotherapeutics-I	3	3	1
	Total Hours	17	12	6 = (32)

### THIRD YEAR

S. No	Name of Subject	No. of	No. of	No. of
	-	hours of	hours of	hours of
		Theory	Practical	Tutorial

(1)	(2)	(3)	(4)	(5)
3.1	Pharmacology-II	3	3	1
3.2	Pharmaceutical Analysis	3	3	1
3.3	Pharmacotherapeutics-II	3	3	1
3.4	Pharmaceutical Jurisprudence	2	-	-
3.5	Medicinal Chemistry	3	3	1
3.6	Pharmaceutical Formulations	2	3	1
	<b>Total Hours</b>	16	15	6 = (36)

### FOURTH YEAR

S. No	Name of Subject	No. of	No. of	No. of
		hours of	hours of	hours of
		Theory	Practical	Tutorial



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(1)	(2)	(3)	(4)	(5)
4.1	Pharmacotherapeutics-III	3	3	1
4.2	Hospital Pharmacy	2	3	1
4.3	Clinical Pharmacy	3	3	1
4.4	Biostatistics & Research Methodology	2	-	1.
4.5	Biopharmaceutics & Pharmacokinetics	3	3	1
4.6	Clinical Toxicology	2	-	1
	Total Hours	15	12	6 = (33)

### FIFTH YEAR

S. No	Name of Subject	No. of hours of Theory	No. of hours of Practical	No. of hours of Tutorial
(1) ·	(2)	(3)	(4)	(5)
5.1	Clinical Research	3	-	1
5.2	Pharmacoepidemiology and Pharmacoeconomics	3	-	1
5.3	Clinical Pharmacokinetics & Pharmacotherapeutic Drug Monitoring	2	-	1
5.4	Clerkship *	-	-	1

### FIRST PB

S. No	Name of Subject	No. of hours of Theory	No. of hours of Practical	No. of hours of Tutorial
(1)	(2)	(3)	(4)	(5)
1.1	Pharmacotherapeutics- I & II	3	3	1
1.2	Hospital & Community Pharmacy	3	3	1
1.3	Clinical Pharmacy	3	3	1
1.4	Biostatistics & Research Methodology	2	-	1
1.5	Clinical Toxicology	2	-	1
1.6	Pharmacotherapeutics-III	3	3	1
1.7	Biopharmaceutics & Pharmacokinetics	3	3	1
	Total Hours	19	15	7 = (41)

### SECOND PB



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S. No	Name of Subject	No. of	No. of	No. of
		hours of Theory	hours of Practical	hours of Tutorial
(1)	(2)	(3)	(4)	(5)
2.1	Clinical Research	3	-	1
2.2	Pharmacoepidemiology and Pharmacoeconomics	3	-	1
2.3	Clinical Pharmacokinetics & Pharmacotherapeutic Drug Monitoring	2	-	1
2.4	Clerkship *	-	-	1
2.5	Project Work (Six Months)	-	20	-
	Total Hours	8	20	4 = (32)

### M.PHARM PHARMACEUTICS

Course Code	Course	Credit Hours	Credit Points	Hrs./wk	Marks
	Semester I				
MPA101T	Modern Pharmaceutical Analytical Techniques	4	4	4	100
MPH101T	Modified Release Drug Delivery System	4	4	4	100
MPH102T	Modern Pharmaceutics	4	4	4	100
MPH103T	Pharmaceutical Regulatory Affair	4	4	4	100
MPH104P	Pharmaceutics Practical I	12	6	12	150
-	Seminar/Assignment	7	4	7	100
	Total	35	26	35	650
	Semester I	I			
MPH201T	Molecular Pharmaceutics(Nano Tech and Targeted DDS)	4	4	4	100
MPH202T	Advanced Biopharmaceutics & Pharmacokinetics	4	4	4	100
MPH203T	Computer Aided Drug Delivery System	4	4	4	100

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MPH204T	Cosmetic and Cosmeceuticals	4	4	4	100
MPH205P	Pharmaceutics Practical I	12	6	12	150
-	Seminar/Assignment	7	4	7	100
	Total	35	26	35	650

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### M.PHARM PHARMACOGNOSY

Course	Course	Credit Hours	Credit Points	Hrs./wk	Marks
	Semester	[			
MPA101T	Modern Pharmaceutical Analytical Techniques	4	4	4	100
MPG101T	Advanced Pharmacognosy-1	4	4	4	100
MPG102T	Phytochemistry	4	4	4	100
MPG103T	Industrial Herbal drug technology	4	4	4	100
MPG104P	Pharmacognosy Practical I	12	6	12	150
· _	Seminar/Assignment	7	4	7	100
	Total	35	26	35	650
	Semester I	I			
MPG201T	Medicinal Plant biotechnology	4	4	4	100
MPG102T	Advanced Pharmacognosy-II	4	4	4	100
MPG203T	Indian system of medicine	4	4	4	100
MPG204T	Herbal cosmetics	4	4	4	100
MPG205P	Pharmacognosy Practical II	12	6	12	150
-	Seminar/Assignment	7	4	7	100
	Total	35	26	35	650

### M.PHARM PHARMACOLOGY

Course Code	Course	Credit Hours	Credit Points	Hrs./wk	Marks
	Semester I				
MPA101T	Modern Pharmaceutical Analytical Techniques	4	4	4	100
MPL101T	Advanced Pharmacology-I	4	4	4	100
MPL102T	Pharmacological and Toxicological Screening Methods- I	4	4	4	100
MPL103T	Cellular and Molecular Pharmacology	4	4	4	100
MPL104P	Pharmacology Practical I	12	6	12	150
-	Seminar/Assignment	7	4	7	100
	Total	35	26	35	650
	Semester I	I			
MPL201T	Advanced Pharmacology II	4	4	4	100



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MPL102T	Pharmacological and Toxicological Screening Methods- II	4	4	4	100
MPL203T	Principles of Drug Discovery	4	4	4	100
MPL204T	Experimental Pharmacology practical- II	4	4	4	100
MPL205P	Pharmacology Practical II	12	. 6	12	150
_	Seminar/Assignment	7	4	7	100
	Total	35	26	35	650

# M.PHARM III SEM (PHARMACEUTICS, PHARMACOGNOSY, PHARMACOLOGY)

Course	Course	Credit	Credit
Code		Hours	Points
MRM101T	Research Methodology and Biostatistics*	4	4
-	Journal club	1	1
-	Discussion / Presentation	2	2
	(Proposal Presentation)		
-	Research Work	28	14
	Total	35	21

# M.PHARM IV SEM (PHARMACEUTICS, PHARMACOGNOSY, PHARMACOLOGY)

Course	Course	Credit	Credit
Code		Hours	Points
-	Journal Club	1	1
-	Research Work	31	16
-	Discussion/Final Presentation	3	3
	Total	35	20





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CLASS         COURST         SLNO           CLASS         COURST         SLNO           TSEN B.FH.ARM         Human Anatomy and Physiology -1         1           Explain the gross morphology, structure and functions of ratious organs of the human body.         Describe the various homeostatic mechanisms and their imblances.           Intentify the various structure and functions of the numan body.         1         Describe the various structure and functions of the human body.           Partorn the various structure and functions of the numan body.         1         Identify the various structure and functions of strens and nervous system.           Pharmaceutical Analysis-1         1         Identify the various structure and hector chemical analysis.           Pharmaceutical Analysis-1         1         Understand the principles of volumetric and electro chemical analysis.           Pharmaceutical Inalysis-1         1         Understand the principles of volumetric and electro chemical analysis.           Pharmaceutical Inalysis-1         1         Understand the principles of volumetric and electro chemical analysis.           Pharmaceutical Inalysis-1         1         Understand the principles of volumetric and electro chemical analysis.           Pharmaceutical Inalysis-1         1         Understand the principles of volumetric and electro chemical analysis.           Pharmaceutical Inalysis-1         1         Understand the principles of volumetric and
Juman Anatomy and Physiology -I 1 E 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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Analysis I I S S S S S S S S S S S S S S S S S
Ataalysis-I 1 2 2 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2
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-1
C.)
Understand the behavioural needs for a Pharmacist to function effectively in the areas of phan
2 Communicate effectively. (Verbal and Non-Verbal)
Effectively manage the team as a team player
4 Develop interview skills
5 Develop Leadership queities and essentials
Remitial Biology
2
3 Know understand the basic components of anatomy & physiology animal with special reference to human.
Kno
2 Done fire different types of problems by applying theory

11 SEAL D. F. CLANNI DUMAR ADATOMY AND PDVSIOLOGY - LI	Explain the gross morphology, structure and functions of various or gains of the Jurnan body.
	Describe the various homeostatic mechanisms and their intratances.
	Identify the various tissues and organs of different systems of human body.
	Perform the haematological tests like blood cell counts, haemoglobin estimation, bleeding/clotting time etc and also record blood pressue, heart rate, pulse and respiratory
~	volume.
	Appreciate coordinated working pattern of different organs of each system
	Appreciate the interlinked mechanisms in the maintenance of normal functioning (homeostasis) of human body
Pharmaceutical Organic Chemistry -I	Write the structure, name and the type of isomerism of the organic compound
~~~~V	Write the reaction, name the reaction and orientation of reactions
3	
	Identify/confirm the identification of organic compound.
Biochemistry	Undestand the catalytic role of enzymes, importance of enzyme inhibitors in design of new drugs, therapeutic and diagnostic applications of enzymes.
P 2	Understand the metabolism of nutrient molecules in physiological and pathological conditions.
	Understand the genetic organization of manumatian genome and functions of DNA in the synthesis of RNAs and proteins.
Pathophysiology	Describe the etiology and pathogenesis of the selected disease states;
	Name the signs and symptoms of the diseases;
	Mention the complexitions of the diseases
Computer Applications in Pharmacy	Know the various types of application of computers in pharmacy
2	
	Know the various applications of databases in pharmacy
Environmental Sciences	
	its alled problems.
	Develop an attitute of concean for the anvironment
	tion and environment improvement

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2 W 3 Act Physical Pharmaceutics -1 1 10r	Write the reaction again the reaction and orientation of reactions	
· ·		_
	Account for reactivity/stability of compounds.	
-	Prepare corganic compounds	
and the second s	Understand various physicocchemical properties of drug molecules in the desioning the Arccuse form	
2 Kn	Know the principles of chemical kinetics & to use them in assignment of the for formulation	
	Demonstrate use of physicochemical properties in evaluation of dosage forms.	
4	Appreciate physicochemical properties of drug molecules in formulation research and development	
	Inderstand methods of identification, cutivation and preservation of various microorganisms	
1	Inportance of sterilization in microbiology, and pharmaceutical industry	
1	Learn sterility testing of pharmaceutical products.	
	Microbiological standardization of Pharmaceuticals.	
Dhamacantical Francisco	Understand the cell culture technology and its applications in pharmaceutical industries.	
-	10 know various unit operations used in Pharmaceutical industries.	
	To understand the material handling techniques.	
i	10 Petform various processes involved in pharmaceutical manufacturing process.	
i	To carry out various test to prevent environmental pollution.	
1	10 appreciate and comprehend significance of plant lay out design for optimum use of resources.	
0	To appreciate the various preventive methods used for corrosion control in Pharmacentical industries	
A SEA DE LA	Understand the methods of preparation and properties of organic compounds	
	Explain the steree chemical aspects of organic compounds and steree chemical reactions	
Medicinal Chemister: T	know the medicinal uses and other applications of organic compounds	
-	Understand the chemistry of drogs with respect to their pharmacological activity	
5	Understand the drog metabolic pathways, adverse effect and therapeutic value of drogs	
1	Anow the Structural Activity Relationship (SAR) of different class of drugs	
Dhurden Dhurden T	Write the chemical synthesis of some drugs	
	Understand various physicocchemical properties of drug molecules in the designing the dosage form	
1	Abow the principles of chemical kinetics & to use them in assigning expiry date for Formulation	
1	Demonstrate use of physicochemical properties in evaluation of dosage forms.	
<b>T</b>	Appreciate physicochemical properties of drug molecules in formulation research and Development	
-	Udderstand the pliarmacological actions of different categories of dngs	-
;	Explain the mechanism of drug action at organ system/sub celular/macromolecular levels.	
İ	Apply the basic pharmacological knowledge in the prevention and treatment of various diseases.	
4 00	Observe the effect of drogs on animals by simulated experiments	
$\gamma'$	Appreciate correlation of pharmacology with other bio medical sciences	
101. I I- LINGODO TO LONG LONG LONG LONG	to know the modern extraction techniques, characterization and identification of the herbal drugs and phytoconstituents	
	io understand the preparation and development of herbal formulation.	
3 10	To understand the herbal drug interactions	
Pharmacentical Jurismudance	10 curryout isolation and identification of phytoconstituents	
	the Priardmaceturical legislations and their implications in the development and marketing. 2. Various finding pharmaceturical Acts and Laws	
2 [Ine 3 m		
2 100		

2

<ul> <li>Understand the conversion of anga with respect to their biological activity.</li> <li>Understand the conversion of drugs with respect to their biological activity.</li> <li>Know the metabolism, average effects and therapeutic value of drugs.</li> <li>Know the importance of SAR of drugs</li> <li>Understand the mechanism of drug action and its relevance in the treatment of different infectious diseases</li> <li>Comprehend the principles of loxicology and treatment of various poisonings and</li> </ul>	m - ci m - cim	* v - d m * - d m * .		1 dimensional and another anoth
Pharmacology-III	Berbal Drug Technology Biopharmaceutics and Pharmacokinetic	Pharmaceutical Biotechnology Pharmaceutical Quality Assurance	Industrial Pharmacy Industrial Pharmacy Pharmacy Practice	

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4     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1     1 <th>B.PHARM VIII SEBiostatistics and Research Methadology</th> <th> -</th> <th>Know the operation of M.S. Excel SPSS. R and MINTTAB (8) Date (Design of Francingue)</th> <th></th>	B.PHARM VIII SEBiostatistics and Research Methadology	-	Know the operation of M.S. Excel SPSS. R and MINTTAB (8) Date (Design of Francingue)	
<ol> <li>Approvise statistical letringiues in solving the problemes</li> <li>Approvise statistical letringiues in solving the problemes</li> <li>Reverse the consciousness realization of current issuess related to health: and phomacconical problemes within the continty and working the problemes</li> <li>Final and a letrative ways of solving problemes explored to health: and phomacconical problemes within the continty and working the problemes explored to health: and phomacconical problemes within the continty and working problemes explored to health: and phomacconical problemes explored to health: and phomacconical problemes within the continty and working problemes explored to a the synthesized extending of matching and headponent.</li> <li>Incow about the process of dang discovery: and development.</li> <li>Kow the regulatory authorities and agreeds generating the manufacture and sale of pharmacconicals</li> <li>Kow the regulatory authorities and agreeds generating the manufacture and sale of pharmacconicals</li> <li>Bishory and development of futurancovopilance.</li> <li>Bound and of the future of the costing sale of manufacture and sale.</li> <li>Bound and the matching state and future dimension of the same of chags. The costing state sale future of the costing state and or distribution in future and sale and the costing state sale of the costing state and costing and to costing state state of the costing stat</li></ol>		2	Kinow the variants statistical techniques in solve statistical nonlikeries	
1         Avoine light conscionances/relation of current issues related to health: and pharmacconical problems within the construction of current issues:           2         Prevalue all anterative ways of solving problems related to health: and pharmacconical problems within the construction of the same in the pharmacconical industry-           3         Frontate all anterative ways of solving problems related to health: and pharmacconical industry           4         Indove all understanding of marketing concepts and techniques and he application of the same in the pharmacconical industry           1         Incove about the process of ding sizowary and development.           2         Envoy the credition of anterschering. the manufacture and sale of pharmacconicals           3         Envoy the credition of anterschering.           4         Distroy authonics and agreences           5         Motional and international scenario of pharmacovigiture of the application of the same in the pharmacovigiture of the arrent	n an an ann ann ann an an ann ann ann a	~	Aboteviate statistical techniques in solving the moheme	
<ul> <li>2 Prove chrich dwy of timbing based on current healthcare development.</li> <li>3 Froukate alterative ways of solving poletens etabled to health and phraneaentical issues.</li> <li>4 Derovide an understanding of martening concepts and beaptication of the same in the pharmacentical inductry to now the regulatory authorities and spericis governing (the manual version) and version of the same in the pharmacentical inductry althorities and spericis governing the manufacture and sale of pharmacovilations.</li> <li>2 Know the regulatory authorities and spericis governing (the manufacture and sale of pharmacovilations).</li> <li>3 Know the regulatory authorities and spericis governing the manufacture and sale of pharmacovilations.</li> <li>3 Know the regulatory authorities and spericis governing the manufacture and sale of pharmacovilations.</li> <li>3 Know the regulatory authorities and spericis governing the manufacture and sale of pharmacovilations.</li> <li>4 Deriventies, cooling and terminologies used in pharmacovilations.</li> <li>4 Deriventies, cooling and terminologies used in pharmacovilations.</li> <li>5 Deriventies, cooling and terminologies used in pharmacovilations.</li> <li>6 International strate avers durg reactions and their assessment.</li> <li>6 International strate avers durg reactions and the averative and durgs. The cycle of the averate safety data during tre- clinical, clinical and dots approval phases of drugs life cycle.</li> <li>9 Dates after for the averative safety data during tre- clinical, clinical and dots approval phases of drugs.</li> <li>1 COMS requirements for AUM reporting.</li> <li>1 COMS requirements for AUM reporting.</li> <li>1 Priving caster antratives of advection in Indian and international markets.</li> <li>1 Priving caster antratives of advections.</li> <li>1 Priving caster antratives of advections.</li> <li>2 Deriver of the dot graph.</li> <li>3 The concet of COSN Radio concets.</li> <li>3 The concet of COSN Radio concets.</li> <li>3 The concet of COSN Radio concet</li></ul>	Social and Preventive Pharmacy	-	Acoute held contrologneess realization of current request related to the theorem of the second s	
<ul> <li>Evaluate alternative ways of solving problems replaced to behalts and pharmaceutical issues.</li> <li>Io provide an understanding of marking: concopts and the agnication of the same in the pharmaceutical inductry</li> <li>Know about the process of drog discovery and dovelopment.</li> <li>Know the regulatory authorities and segrencing the manufacture and sub of pharmaceuticals</li> <li>Know the regulatory authorities and segrencing the manufacture and sub of pharmaceuticals</li> <li>Know the regulatory authorities and segrencing the manufacture and sub of pharmaceuticals</li> <li>Know the regulatory authorities and segrencing the manufacture and sub of pharmaceuticals</li> <li>Ib huiton and and international accentio of pharmacovigilance</li> <li>Mutoral and international scenario of pharmacovigilance</li> <li>Mutora and international scenario of pharmacovigilance</li> <li>Mutora and international scenario of disease and duga</li> <li>Mutora and international scenario of disease and duga</li> <li>Mutora and and international scenario of disease and duga</li> <li>Mutora and and international matches</li> <li>Mutora and and international matches</li> <li>Mutora and and international matches</li> <li>Duga stative stative stative stative damine graditorice spanning</li> <li>Clositic scenario of diverse on and scenario scenario and scenario scenario scenario and heat quality.</li> <li>Clositic scenaratorice damine graditorice scenari and heat quality.</li></ul>		2		
<ol> <li>Io provide an understanding of martineng concepts and be application of the same in the plarmaceutical inverve about the regulatory authorities governing the manufacture and table of plarmaceuticals</li> <li>Know the regulatory authorities and agencies governing the manufacture and sale of pharmaceuticals</li> <li>Know the regulatory authorities and agencies governing the manufacture and sale of pharmaceuticals</li> <li>Know the regulatory authorities and agencies governing the manufacture and sale of pharmaceuticals</li> <li>Know the regulatory authorities and agencies governing the manufacture and sale of pharmaceuticals</li> <li>Retory and development of figurarsovigitance</li> <li>Bettory and development of figurarsovigitance</li> <li>Detection of new adverse drug reactions: and their assessment</li> <li>International standards for classification of fleeses and drugs</li> <li>Metors drug reactions and their assessment</li> <li>International standards for classification of fleeses and drugs</li> <li>Metors to generate stafty data during pre-chinical, clinical and post approval phases of drugs "the cycle</li> <li>Due stafty evaluation in packations, genatoring, pharmacovigitance</li> <li>Due stafty evaluation in packations, genatoring, pharmacovigitance</li> <li>Due stafty experiments for ADR reporting, pharmacovigitance pharmacovigitance pharmacovigitance pharmacovigitance pharmacovigitance pharmacovigitance pharmacovigitance pharmacovigitance pharmacovigitance and understanding and international standards for classification in head and ingentity.</li> <li>COMS requirements for ADR reporting, pharmacovigitance pharmaco</li></ol>		~		
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		<b>۳</b>	Writing case narratives of adverse events and their quality.	
2 4 3 3 2	Quality Control and Standardisation of	-	. WHO guidelines for quality control of herbal drugs	
w + - c w +		7	Quality assurance in herbal drug industry	
<b>4</b>  4 4		٣	The regulatory approval process and their registration in Indian and international markets	
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2         The role of drug design in drug discovery process           3         The concept of QSAR and docking           4         Various strategies to develop new doug like molecules.	Computer Aided Drug Design		Design and discovery of lead molecules	
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4 Various strategies to develop new drug tike molecules,		~	The concept of QSAR and docking	
		4	Various strategies to develop new drog fike molecules.	

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Arranced     3     Describe the chemical foundations of cell biology.     1     1       A summarize the DNA properties of cell biology.     5     Describe protein structure and function.     1       B scripte protein structure and function.     1     Describe protein structure and function.     1       D secribe protein structure and function.     1     Describe protein structure and function.     1       D secribe protein structure and function.     1     Describe protein structure and function.     1       D secribe protein structure and function.     1     Describe protein structure and function.     1       D secribe protein structure and function.     1     Describe protein structure and function.     1       D secribe protein structure and function.     1     Describe the application structure and function.     1       D secribe protein and demonstrate lis impostibility animity.     1     Appreciate and demonstrate lis impostibility animity.       Arbaneed Instrumentation Techniques     1     Describe proteins and demonstrate lis impostibility animity.       Arbaneed Instrumentation Techniques     1     Indestand the advanced material special structure and demonstrate lis impostibility and stracticity instruction and structure and demonstrate lis impostibility ani	The second	azise cellular functioning and composition.	2 Sumn	
4 V V C 8 - 7 C 7 A - 6 M		be the chemical foundations of cell biology.	3 Descr	
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~ ~ 4 – 7 m		ciate the applications of various continuity used biboratory animals.	1 Appre	xperimental Phrmacology
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~ ~		stand the advanced instruments used and its applications in drug analysis	1 Under	Advanced Instrumentation Techniques
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	and the second	analysis of drugs using various analytical instruments	4 Know	
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1 Describe the structure (gross and histology) and functions of various organs of the human body	<ol> <li>Describe the various homeostatic mechanisms and their imbelances of various systems</li> <li>Identify the various isonase and scenaes of the efficant numbers of the furness hade.</li> </ol>	Perform the hematological feets	Appreciate coordinated working	6 Appreciate the interlinked mechanisms in the maintenance of normal functioning (homeostassis) of the human body	1 Know the formulation aspects of different borage forms,	2 Do officient pharmaceutical calculation involved in the formulation;	3 Formulate different types of dosge forms, and	4 Appreciate the importance of good formulation for effectiveness.	I Understand the calabytic activity of enzymes and importance of iscenzymes in diagnosis of diseases;	2 Know the metabolic process of biomolecules in health and illness (metabolic disorders);	3 Understand the genetic organization of mammalian genome, protein synthesis, replication, mutation and repair mechanism,	4 Know the biochamical principles of organ function tests of kitney, fiver and endocrine gland; and	5 Do the qualitative analysis and determination of biomolecules in the body fluids.	1 IUPAC/ Common system of nomenclature of simple organic compounds belonging to different classes of organic compounds;	2 Some important physical properties of organic compounds,	Free radical nucleophyllic [alk	the reaction. order of reactivity	d Some named organic reactions with mechanisms; and	Ş	7 1 Understand the principles and procedures for analysis of drugs and also regarding the application of inorganic pharmaceulicals.		3 Appreciate the importance of inorganic pharmaceuticals in preventing and curing the disease.	1 Know Trignometry, Analytical generatry, Matrices, Determinant, Integration, Differential equation, Laplace transform and their applications;	2 Solve the problems of different troose by applying theory, and
Describe t	Describe (	Perform H	Appreciat	Apprecial	Know th	Do diffe	Formula	Appreci	Underst	Know th	Underst	Know th	Do the c	IUPAC	Some in	Free radi	the react	Some nat	Method	Understa	Kaow U	Appres	Know T	Solve the
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l Pharm Human Anatomy and Physiology					Pharamceutics				Medicinal biochemistry					Pharmacutical Organic Chemistry						Pharmaceutical Inorganic Chemistry			Remedial Mathematics/Biology	

Pathophysiology         3         Apprendent approximations of the diseases, and           IPharm D         Pathophysiology         1         Describe the etology and pathogenesis of the selected disease states;           Implay and pathogenesis         3         Menion the complexitions of the diseases, and           Implay and pathophysiology         1         Know the anatowy, identification of the disease states;           Implay and pathophysiology         1         Know the anatowy, identification of the disease states;           Implay and barreneouted         3         Mention the complexition of the disease state;           Implay and barreneouted         3         Do catination of disease state;           Implay and barreneouted         3         Appreciate the behavior of molity and behaviorid disease of disease state;           Implay and barreneouted         1         Understand the basic principles of finations, of the disease of disease of disease state;           Implay and barreneouted         3         Appreciate the pharmonolized state states and           Implay and barreneouted         1         Understand the basic principles of coulds disease of disease states; and           Implay and the basic principles of the moleconstant or states and states; and         3         Appreciate the pharmonology and level and state statestics; and           Implay and the basic principles of the miconcoreconstant and state statestis and         4	taterators up putranacy. the selected disease states; test, and actors and sterilization of microorganisms; actors actors and sterilization of microorganisms; actors actors ac	-
1     Describe the etiology and pathogenesis of 1       2     Name the signs and symptoms of the disease.       3     Mention the complications of the disease.       3     Do estimation of RNA and DNA and there of the disease.       3     Do estimation of RNA and DNA and there of disease.       3     Do stimutication, growth file mode of the mixer of the disease.       3     Do stimutication of RNA and there of disease.       4     Do utilivation and identification, growth file mixer of the disease.       5     Do stimutication of disease styperforming the photoming distribution of the mixer of the disease.       5     Do stimutication of disease styperforming distributions of the mixer of the disease.       6     Appreciate the balavior of motifity and balavior of motified and curvout the anomal appending and under the motification of	I disease states; sterilization of microorganisms; croorganism, symptoms of disease, and treatment aspect; ing the source; is in the laboratory; arcteristics of microorganisms.	-
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3     Mention the complications of the diseases.       biology     1     Know the anatomy, identification, growth face.       3     Do extination of RNA and DNA and there.       3     Do estimation of RNA and DNA and there.       5     Do identification and identification, growth face.       6     Appreciate the behavior of motility and behavior       1     Understand the basic principles of cultivation and identification  of continuery and behavior       2     Xnow the source, active constituents and use       3     Appreciate the applications of primary and behavior       3     Appreciate the importance of pharmacological aspects of the mixed behavior       3     Appreciate the importance of pharmacological aspects of the mixed behavior       3     Appreciate the importance of pharmacological aspects of the mixed behavior       3     Appreciate the importance of pharmacological aspects of the ontervection of the basic science of the and and cury out the busices and profits aspects of the and and cury out the animal aspect of the animat the the and apply the knowledge therapedic of the animat the importance of pharmacological practic       3     Appreciate the busices and profits and sprinted to the animat the animat approximate the and apply the knowledge therapedic approvide approximate the approximate the approximate the approximate the approximation of the animatic approvide approximation and and and theraped	sterilization of microorganisms; croorganism, symptoms of disease, and treatment aspect; ping the source; is in the laboratory; arclensities of microorganisms.	
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2     Know the mode of transmission of disease.       3     Do cultivation and identification of the mice       3     Do cultivation and identification of the mice       5     Do identification of diseases by performing       6     Appreciate the behavior of moltify and behavior       7     Do identification of diseases by performing       6     Appreciate the behavior of moltify and behavior       7     Do identification of diseases by performing       6     Appreciate the populcations of cultivativate       3     Appreciate the applications of primary and       1     Understand the barmacological aspects of       3     Appreciate the applications of primary and       3     Appreciate the applications of primary and       4     Correlate and apply the knowledge theraperiment       3     Appreciate the outry out the animal aspectiment       3     Appreciate the propriodical practication       4     Correlate and apply the knowledge theraperiment       5     More the business and profiles of patients;       6     Appreciate the contract of reacting and growing theraperiment       1     If the pathophysiology of selected disease staticate       3     Appreciate the contracting the contracting and growing the appreciate       3     Appreciate the contracting of reacting and growing therapy;       1     I     I<	croniganiam, symptoms of disease, and treatment aspect; ing the source; s in the laboratory; stile tests; and aracteristics of microorganisms.	
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5 and adverse effects);		
6 Describe the pathophysiology of selected disease states and explain the rationale for doug therapy.	es and explain the rationale for drug theapyr,	
7 Summarise the therapeutic approach to management o	ageneration of these diseases, including references to the latest available evidence;	-
8 Discuss the controversies in drug therapy;		
9 Discuss the preparation of individualised therapeutic plans based on diagnosis; and	plans based on diagnosits, and	
Identify the patient-specific parameters relevant in ini	Identify the patient-specific parameters relevant in initiating dorg therapy, and monitoring therapy (including alternatives, time-course of climical and abovatory indices of therapeutic response and advarse	

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3     Know the importance of president in draft       4     Know the importance of president is needs to ident       5     Interaceutic response and advecting the relation is in the various presimpler is in the various presimpler is in the various presimpler is in the various present is the relation is in the various present is in the various p		67	Know the theapevily approach to management of these diseases,
4     Know the importance of pre- short and advantage ad			Know the controversies in doug therapy;
Appreciate the needs to identify the needs to identify 1     Appreciate the Professional elling 1       2     Understand the various portainglety 3       3     Know the Drug policy_DPCO 4       4     Know the Pape labeling frequing 6       5     Understand the con- derstand the con- 1       7     Other laws as presented by for 1       9     Know the Shockrad the con- derstand the charies by the charactering metabol 2       1     Understand the characterid for con- derstand the characterid for con- derstand the characterid for con- 2       2     Prepare various pharmaceulie inv 2       3     Prepare various pharmaceulie inv 2       4     Understand the principle inv 4       5     Prepare various pharmaceulie inv 4		-	Know the importance of preparation of individualised therapeutic plane based on diagnosis; and
5     Ittractoruluc response and advection of the contensional ethic       1     Practice the Professional ethic       2     Understand the various joincy       3     Know the Drug policy       5     Understand the labeling inquisite;       6     Be able to understand the contexpended by I       1     Understand the chemistry of Understand the contexpended by I       2     Understand the drug metabol       3     Know the Shructural Activity       4     Study the chemistry of Chemistry of I       1     Understand the forgemetabol       2     Understand the principle inv       3     Know the Shructural Activity       4     Study the chemical synthesis       3     Perform evaluation of plasma outline in the introche inv			Appreciate the needs to identify the patient-specific parameters relevant in initialing dog therapy, and monitoring therapy (including alternatives, time-course of clinical and laboratory indices of
1     Practice the Professional ethics       2     Understand the various concepts of the pharmaceutical legislation in liddla;       3     Know the various paramipters in the Drug and Cosmetic Ack and onlies;       4     Know the brug policy. DPCO. Patient and distant act;       5     Understand the labeling requirements and packaging guidelines for drugs and packaging guidelines for drugs and packaging guidelines for drugs and packaging guidelines for the including Infernational Laws.       1     Other laws as prescribed by the Pharmacological activity       2     Understand the drug metabolic pathways, adverse effect and thranpoulde value of drugs.       3     Know the Structural Activity Relationship of different class of drugs.       4     Strody the chemical synthesis of selected drugs.       5     Understand the principle involved in formulations of various pharmacoulogical activity       6     Strody the chemical synthesis of selected drugs.       7     Understand the principle involved in formulations of various pharmacoulical dosee forms;       8     Strody the chemical synthesis of selected drugs.       9     Dinderstand the principle involved in formulations of various pharmacoulical dosee forms;       1     Understand the principle involved in formulations of various pharmacoulical dosee forms;       2     Preprior evaluation of pharmacoulical formulations;       3     Perform evaluation of pharmacoulical formulations;       4     Uinderstand the concept o		Ş	thraspeutic response and adverse effects).
2       Understand the various concepts of the pharmaceutical legistation in India;         3       Know the various parameters in the Drug and Cosmetic Act and relation and the various parameters in the Drug and Cosmetic Act and relation and the number of the Drug policy; DPCOC Patent and design act;         4       Know the various parameters in the Drug and Cosmetic Act and relation act;         5       Understand the burg policy; DPCOC Patent and design act;         6       Be able to understand the concepts of the Drugerous Drugs and cosmetics;         7       Other laws as presended by the Pharmacy Councel of India from time to time to time including International Laws         1       Understand the concepts of the Drugerous Drugs and the report of the concepts of the concepts of the pharmacological activity         2       Understand the concepts of the pharmacological activity         3       Know the Structural Activity Relationship of different class of drugs         4       Structural Activity Relationship of different class of drugs         9       Nody the chemical synthesis of selected drugs.         1       Understand the principle involved in formulations of various pharmacoulical dosege forms;         2       Understand the principle involved in formulations of various pharmacoulical dosege forms;         3       Preprint variation of pharmacoulical dosege forms;         4       Understand and appreciale the concept of biouvaliability and bioequinvalence, their rule	Pharameentical Jurisprudence	-	
3       Know the verious prantisters in the Drug and Costnetic Akt and rules;         4       Know the Drug policy, DPOO, Patent and dasign act;         5       Understand the befung requirements and positioning path rules; Akt and consister;         6       Be able to understand the concepts of the Dangerous Drugs Adt; Plainnecy' Akt and Strends;         7       Understand the concepts of the Dangerous Drugs Adt; Plainnecy Akt and Strends;         8       Be able to understand the concepts of the Dangerous Drugs Adt; Plainnecy Akt and At; and         9       Understand the concepts of the Dangerous Drugs Adt; Plainnecy At and Enviso         1       Understand the concepts of the Dangerous Drugs Adt; Plainnecy At and Enviso         2       Understand the channels with respect to their pharmacological activity         3       Know the Strond Nucle Strond Advisity Relationship of different class of drugs         4       Strudy the channel synthesis of selected drugs.         10       Understand the principle involved in formulations of various pharmaceutical dorsge forms;         2       Prepare various pharmaceutical formulations;         3       Reform evaluation of pharmaceutical dorsge forms;         4       Strudy the channel dossge forms;         5       Prepare various pharmaceutical dorsge forms;         6       Prepare various pharmaceutical dorsge forms;         6       Prepare va		1	uė plukmuscautical legislation in Ludia;
4     Know the Drug policy. DPGO, Patent and design act:       5     Understand the labeling requirements and packaging guidelines for througs and cosmetics.       6     Be able to understand the concepts of the Dangerous Dange Act, Planmacy Act and Excise duties Act; and       7     Other laws as preserubed by the Phermacy Council of India from time to finne in the induding International Laws.       1     Understand the chemistry of drugs with respect to their pharmacological activity       2     Understand the drug metabolic pathways, adverse effect and threapeutic value of drugs.       3     Know the Strockural Activity Relationship of different class of drugs       4     Study the chemistry of drugs with respect to their pharmacological activity       2     Understand the principle involved in formulations of various pharmacoultical dorsge forms;       3     Know the Strockural Activity Relationship of different class of drugs       4     Study the chemist of homolations of various pharmacoultical dorsge forms;       3     Perform evaluation of pharmacoultical formulations;       4     Understand the principle involved in formulations;       5     Prepare various pharmacoultical dorsge forms; and       6     Be abore various pharmacoultical dorsge form;       7     Orderstand the principle involved in formulations;       8     Provide variant and appreciate the concept of bioavailability and bioequivelence, their role in clinical       9     Printerstand and apprec		3	
5     Understand the labeling inquit       6     Be able to understand the con-       7     Other laws as prescribed by to       7     Other laws as prescribed by to       7     Understand the drug metabol       3     Know the Structural Activity of       3     Know the Structural Activities       1     Understand the principle involutions       1     Understand the principle involutions       2     Preprise vertical synthesis       3     Perform evaluation of pharmacoulic       4     Understand and appreciale the		*	, Patent and design act;
6     Be able to understard the com       7     Other laws as prescribed by f       1     Understand the chemistry of       2     Understand the functural Activity       3     Know the Structural Activity       4     Study the chemical synthesis       9     Perform evaluation of pharmacoulic       3     Perform evaluation of pharmacoulic       4     Understand the principle inv       5     Perform evaluation of pharmacoulic       6     Understand and appreciate the			Understand the labeling requirements and packinging puckelines for trongs and contrability.
		9	Be able to understand the concepts of the Dangerous Drigs Ad, Planmacy Adt and Encice dudts: Ad; and
		-	Other Laws as presenbed by the Prannecy Councel of Initia from time to film a Informational Laws.
	Medicinal Chemistry		
··· ·· ·· ·· ·· ·· ·· ··		1	Understand the drog metabolic pathways, adverse effect and therepeutic value of drogs
		~~	Know the Structural Activity Relationship of different class of drogs
		-	Study the chemical synthesis of salected drugs.
	Pharmaceutical Formulations	-	Understand the principle involved in formulations of various pharmaceutical dorage forms;
		- 7	Prepare various plarmaceutical formulations;
-			Perform evaluation of pharmaceutical dosage forms; and
-		4	Undestated and appreciate the concept of bioavuidabuilty and bioaquivulance, their role in clinical situations.
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i     Description structure of representing of the disease;     i     i     i     i       i     Decontorectation infort dimension;     i     i     i     i     i       i     An environmentant infort dimension;     i     in environmentant infort dimension;     i     i     i     i       i     An environmentant infort dimension;     in environmentant environment enviro	U.P.D	Pharmacotherapeutics III		The pathophysiology of selected disease states and the rationale for drug therapy;	
			¢.3	The theap-rotic approach to management of these diseases;	
				The controversies in drug therapy;	
			Ŧ	The importance of preparation of individualised therapeutic plane based on diagnosis;	
			-	Needs to identify the patient-specific perameters relevant in imitating drug therapy, and monitoring therapy (including alternatives, time-course of clinical and laboratory indices of therapeutic response	
			Ç	and adverse effects);	
			9		
			ķ	To summarize the theapevile approach to management of these diseases including reference to the latest available evidence;	
			8		
			6	To discuss the preparation of individualised therapeutic plans based on diaposity and	
<u>0</u> - ci m <del>4</del> · n <u>0</u> - ci m <del>4</del> · n <u>0</u>				Identify the patient-specific parameters relevant in initiating doug therapy, and monitoring therapy (including alternatives, time-course of clinical and laboratory indices of therapeutic response and adverse	
1     Know various drog distribution methods;       2     Know the professional practice management skills in hospital pharmacies;       3     Provide unbiased drog information to the doctors;       4     Know the manufacturing practices of various formulations in hospital set up;       5     Appreciate the practice based research methods; and       6     Appreciate the stores management and inventory control.       1     Monitor dong therapy of patient through medication chart review and chinical review;       2     Obtain medication history interview and councel the patients;       3     Identify and resolve drog related problems;       4     Detect, assess and monitor adverse drog reaction;       5     Interpret substact drog reaction;       6     Retrice; easeled aboratory results (as monitoring parameters in thereiver, and chinesh review; and chinesh review; and chinesh review;       7     Ditation; assess and monitor adverse drog reaction;       8     Methods; and monitor adverse drog reaction;       9     Retriev, analyze, interpret and formulate drog or medicine information.       6     Retriev, analyze, interpret and formulate drog or medicine information.			10	slied).	
2     Know the professional practice management skills in hospital pharmacies,       3     Provide unbiased drug information to the doctors,       4     Know the meanufacturing practices of various formulations in hospital set up;       5     Appreciate the practice based tesearch methods; and       6     Appreciate the stores management and inventory control.       1     Monitor drug therapy of patient through methods; and       2     Obtain medication thatory interview and councel the patients;       3     Identify and resolve drug related problems;       5     Interpret selected laboratory results (as monuloting parameters in therapeutics) of specific disease states; and       5     Interpret selected laboratory results (as monulotion;       6     Retirier, analyze, interpret and formulate drug or medicine information.		Hospital Pharmacy		Know various drug distribution methods;	
3     Provide unbiased drug information to the doctorx;       4     Know the manufacturing practices of various formulations in hospital set up;       5     Appreciate the practice based research methods; and       6     Appreciate the stores management and inventory control.       1     Monitor dong therapy of patient through medication chart review and chinkal review;       2     Obtain medication history interview and counsel the patients;       3     Identify and resolve drug related problems;       4     Detect, assess and monitor adverse drug fraction;       5     Interpret selected laboratory results (& monitoring parameters in therapeutics) of specific disease states; and       6     Relificat, analyse, interpret and formulate drug or medication.			57	Know the professional practice management skills in bospital pharmacies;	
4     Know the manufacturing practices of various formulations in hospital set up;       5     Appreciate the practice based research methods; and       6     Appreciate the stores management and inventory control.       1     Monitor dong therapy of patient through medication chart review and chineal review;       2     Obtain medication trakery interview and councel the patients;       3     Identify and resolve drug related problems;       4     Deletet, assess and monitor adverse drug reaction;       5     Interpret selected laboratory results (as monitoring parameters in therapeutics) of specific disease states; and       6     Retriev, analyze, interpret and formulate drug or medication.			3	Provide unbiased drug information to the doctors;	
5     Appreciate the practice based research methods; and       6     Appreciate the stores management and inventory control       1     Monitor done therapy of patient through medication chart review and chincal review;       2     Obtain medication thistory interview and counsel the patients;       3     Identify and resolve drong related problems;       4     Detect, assess and monitor adverse drong factorion;       5     Interpret selected laboratory results (as monitoring parameters in therapeutics) of specific disease states; and       6     Retriew, analyse, interpret and formulate drong or medicine information.			4	Know the memufacturing practices of various formulations in bospital set up;	
6     Appreciate the stores management and inventory control       1     Monitor dong therapy of patient through medication chart review and clinical review;       2     Obtain medication tistory interview and counsel the patients;       3     Identify and resolve drug related problems;       4     Detect, assess and monitor adverse drug reaction;       5     Interpret selected laboratory results (as monitoring parameters in therapeutics) of specific discuss states; and       6     Retrixe, atalyxe, interpret and formulate drug or medicine information.			~	Appreciate the practice based research methods; and	
1     Monitor dog therapy of patient through medication chart review and clarical review;       2     Obtain medication history interview and counsel the patients;       3     Identify and resolve drug related problems;       4     Delect, assess and monitor adverse drug reaction;       5     Interpret selected laboratory results (as monitoring parameters in therapeutics) of specific disease states; and       6     Retrieve, analyse, interpret and formulate drug or medicine information.			9	Appresaie the stores management and misaitory control.	
Obtain medication tuistory interview and counsel the patients, Identify and resolve drog related problems. Detect, assess and monitor adverse drog reaction; Interpret selected laboratory results (as monitoring parameters in therapeutics) of specific disease states; and Retrieve, analyse, interpret and formulate drog or medicine information.		Clinical Pharmacy		Monitor doug therapy of patient through medication chart review and clinical review;	
Identify and resolve drug related problems. Detect, assess and monitor adverse drug reaction; Interpret selected laboratory results (as monitoring parameters in therapeutice) of specific disease states; and Retrieve, analyse, interpret and formulate drug or medicine information.			2	Obtain medication history inleview and coursel the patients;	
			3	and the second second second second second	-
			*	Detect, assess and monitor adverse ding reacting;	-
Retriëve, analyse, interpret and				Interpret selected laborationy results (as monitoring parameters in therapoutices) of specific disease states; and	
			9	Retrieve, analyse, interpret and formulate drug or medicine information.	

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Double de la comparación de la compara De la comparación de la compara Comparación de la comparación	COURSE OUTCOMES	ination dosage forms	I drug delivery systems.	The criteria for selection of drugs and polymers for the development of the formulation and evaluation of Novel drug To understand the Active Pharmaceutical Ingredients and Genetic drug Product development to learn Industrial Management and GMP considerations.		ug development process ng and approval process egulatory apendes in different countries	Idrug delivery systems.	the development of NTDS	ery systems	imacokinetics.	The use raw data and derive the pharmacokinetic models and parameters the best describe the process of drug		is the critical evaluation of biopharmaceutic structes more product equivalency. The Jassign and evaluate gosage regimens of the druce using pharmacokinetic and biopharmaceutic parameters.	and apply basic pharmacokinetic		1 and Development			vulation					eceutioals.	1		
	0	The analysis of vatious drugs in single and combination dosage forms. Theoretical and manipul skills of the instrument	The various approaches for development of novel drug delivery systems	The criteria for selection of drugs and polymers for the development of the formulation and eval To understand the Active Pharmaceutical Ingredients and Genetic drug Product development To learn Industrial Management and GNP Considerations.	To understand Uptimization Teonniques & Filoy Flant Soale Up Leonniques To study Stability Testing, sterilization process & packaging of dosage forms	The Concepts of innovator and genetic drugs, drug development process The Regulatoryguidánce's and guidelinés förfilmá and an approval process Preparation of Dossiets and their submission or equalicity, approfes in different counties - An annoval and anni samans for actives and drug modulats	r os approvante data o y redarizante da construction da construction da construction da construction da constru The variance approaches for development of novel drug delivery systems.	The criteria for selection of drugs and polymers for the development of NTDS	The formulation and evaluation of novel drug delivery systems	The basic concepts in biopharmaceutics and pharmacokinetics.	The use raw data and derive the pharmacokin	absorption, distribution, metabolism and elimination.	I he critical evaluation of biopharmaceutic studies involving drug product equiva- teqimens of the drugs using pharmacokinetic and biopharmaceutic parameters.	The potential clinical pharmacokinetic problems and apply basic pharmacokinetic	The principles to solve them	History of Computers in Pharmaceutical Research and Development	Computational Modelling of Drug Disposition	Computers in Preclinical Development	Optimization Techniques in Pharmaceutical Formulation	Computers in Market Analysis	Computers in Clinical Development	Artificial Intelligence (AI) and Robotics	Computational fluid dynamics (CFD)	The key ingredients used in cosmetics and cosmeceuticals.	The key building blocks for various formulations.	The current technologies in the market	
	COURSE BLND	Modern Pharmaceutical Analytica 1	11	2 Modern pharmaceutios	4	Regulatory Affairs		2		Advanced Biopharmaceutics and 1		2	m	4	2	Computer Aided Drug Design		3	4	S	9	7	8	Cosmetics and Cosmeceuticals 1	2	ŝ	
	SSVIJ	RMACEUTICS)		2			M PHARM II SEM (PHARMACELITICS)   Modern Pharmaceutics (NTD			4		0															

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M. PHARM I SEM (PHARMACOLOGY) Modern Pharmaceutical Analyti	tica 1	The analysis of various divids in single and combination dosage forms
	2	
Advanced Pharmacology -I	-	Discuss the pathophysiology and pharmacotherapy of certain diseases
	2	2 Explain the mechanism of drug actions at cellular and molecular level
	3	1
Pharmacological and Toxicologic	gic 1	Appraise the regulations and ethical requirement for the usage of experimental animals.
	1	1
	2	1
	ო	
	4	
Cellular and Molecular Biology	-	1 Explain the receptor signal transduction processes.
	2	1
	3	1
	4	1
Advanced Pharmacology-II	-	1 Explain the mechanism of drug actions at cellular and molecular level
	2	1
	0	1
M. PHARM II SEM (PHARMACOLOGY) Toxicological Screening	-	1
	2	1
	<del>ر</del>	1
Principles of Drug Discovery	-	
	2	
	e S	3 Explain various targets for drug discovery.
	4	
Clinical Research and Pharma	acov 1	<ol> <li>Explain the regulatory requirements for conducting clinical trial</li> </ol>
	2	1
	3	1
	4	Execute safety monitoring, reporting and close-out activities
	2	5 Explain the principles of Pharmacovigilance
	9	1

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Modern Pharmaceutical Analytica 1	The analysis of various divigs in single, and combination dosage forms.
2	Theoretical and practical skills of the instrument
Advanced Pharmacognosy-1 1	Know the advances in production and cultivation of drugs
2	Know the various phyto-pharmaceuticals and their source, medical use and utilisation:
3	Know the various nutraceuticals! herbs and their health benefits
Phytochemistry 1	Know the various phytoconstituents and their properties & general process of natural product drug discovery
2	TO know the process of identification, purification and isolation of phytoconstituents
Industrial Pharmacognostical tec 1	Know the requirements for the setting up of herballnatural drug industry
2	To know and understand the guidelines for quality or herbal medicines
(C)	To know the patenting IIPR of herbals and trade of raw and finished materials
Medicianl plant biotechnology 1	Know the process like genetic engineering in medicinal plants for higher yield of Phytopharmaceuticals
2	Use the biotechnological techniques for obtaining and improving the quality of natural products/medicinal plants
M. PHARM I SEM (PHARMACOGNOSY) Advanced Pharmacognosy -II 1	Know the validation of herbal remedies
2	Know the methods of detection of adulteration and evaluation techniques for the herbal drugs
e	To know the methods of screening of herbals for various biological properties
Indian syatems of Medicine	To understand the basic principles of various Indian systems of medicine
	To know the clinical research of traditional medicines, Current Good Manufacturing Practice of Indian systems of
2	medicine and formulation
Herbal Medicines	Understand the basic principles of various herballnatural cosmetic preparations
2	Current Good Manufacturing Practices of heiball natural cosmetics as pet the regulatory authorities
SEMESTER-III AND IV RESEARCH WORK	The research methodology.
M. Pharm III SEM and IV SEM 2	The biostatistical methods.
3	To write the review and research articles
-	P. (Fadue
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Disciplinary Committee has been constituted to maintain proper discipline among students and to monitor their code of conduct.

### **DISCIPLINARY COMMITTEE**

S.NO	POST	NAME OF THE TEACHER	DEPARTMENT
1	CHAIRMAN	Dr Padmaa M Paarakh	Principal
2	MEMBER	Mrs Surinder Kaur	Pharmaceutics
3	MEMBER	Dr Nagalakshmi G	Pharmaceutical Chemistry
4	MEMBER	Dr G Parthasarathy	Pharmacy Practice
5	MEMBER	Ms Nagalakshmi R	Pharmacology
6	MEMBER	Dr ElsammaThomas	Manager Hostel
7	MEMBER	Mr Gurumurthi	Warden Boys Hostel
8	MEMBER	Mr Gireesha Naidu	UG Student
9	MEMBER	Mr Devaraj	PG Student

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### **RULES & REGULATIONS**

### GENERAL

- 1. All students shall attend classes right from the reopening day of the Semester.
- 2. Students shall be punctual and regular for lecture classes, laboratories, workshops, seminars etc. and any other activity organized by the college.
- 3. Students shall be attentive in the classes and labs without creating any disturbance.
- 4. Students shall compulsorily wear their identity cards whenever they are in the college campus.
- 5. Loss theft of ID cards / library cards and change of address or contact number shall be informed to HOD/ college office without delay.
- 6. Use of mobile phones, iPods. and Walkman are strictly banned in and around the campus. If any such item is in possession of the student, the same will be confiscated and will not be returned.
- 7. Students shall maintain strict discipline and good behaviour at all times.
- Smoking. chewing of pan masala/ gutka, consuming alcoholic drinks and drugs of any kind in the campus are strictly prohibited.
- 9. Strike or any such undesirable activities in the campus are not permitted and those involved in such activities will be severely punished.
- 10. Tuition fees shall be paid within one week after the reopening of the odd semester in every academic year.
- 11. Students shall take prior permission before availing leave from the HOD and inform the class teachers and mentors.





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- 12. Leave / Permission letters shall be counter signed by parents/guardians/ hostel wardens.
- 13. Students are encouraged to participate in co-curricular and extracurricular activities and develop their skills. Students are counselled periodically regarding academic performance, higher studies, placement. attendance, discipline etc.
- 14. Hostel students shall abide by the rules and regulations of the hostel.
- 15. Students are advised to park vehicles in the specified area and it is mandatory to wear helmets while riding two-wheeler vehicles.

### ACADEMIC RULES

- 1. Students shall submit their assignments, records, observation notebooks etc. within the specified time.
- 2. Each semester is considered as a unit and the candidate has to put in a minimum attendance of 80%.
- 3. Students shall equip themselves with approved record note books as required.
- 4. Lab equipment must be handled with care. Loss or damage attracts fine.
- 5. Students have to use official lab record books only to write the practical record. No other books shall be permitted.
- 6. Students are encouraged to participate in conferences, workshops, seminars and technical paper presentation.
- 7. Attendance is mandatory for all the internal tests and exams to ensure good Internal Assessment marks and overall academic performance.

### **GUIDELINES AND RULES OF THE LIBRARY**

1. Library will function from 9:00 A.M to 8:30 P.M from Monday to Friday & Saturday library functions between 9:00 A.M to 3: P.M.





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- 2. Mobile phones are strictly prohibited inside the library.
- Students should keep their bags, file, & apron inside the property counter, only papers
   & note books can take inside the library.
- 4. Library staff is not responsible for your valuable things/belongings.
- 5. Students should sign in the gate register, when they come to the library indicating the time in & time out.
- 6. Strictly personal books and issued books from library are not allowed to take inside the reference section of the library.
- 7. Students should maintain absolute silence in the library.
- 8. Students should leave the books on the table after the reference.
- 9. Students should read newspapers & magazines at the newspaper desk only.
- 10. Students/Staff should not tick, mark, write, and detach pages on any books or periodicals.
- 11. If the user has to take photocopy of any document, it has to take permission from the librarian.
- 12. Dissertations are not allowed to take Photocopy.
- 13. Students should make use of internet facility by showing ID cards.
- 14. Documents can be issued to students for a period of 7 days with their library cards.
- 15. Documents may be renewed for an additional 7 days & the librarian can recall the books issued without any prior notice.
- 16. If the student fails to return the documents on or before the due date library overdue charge of Rs. 5/- can be levied per day for issue books &Rs. 10/- for reference books.





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- 17. Reference books will be issued only after 3:30 P.M for PG students & Staff for overnight usages.
- 18. If the student has lost the books, they have to pay double the cost of the book.
- 19. If the user loses the library card, he/she will be responsible for the book borrowed on that card.
- 20. Duplicate library card will be issued, after the payment of duplicate library charge of Rs. 50/-

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05/10/2022

#### CIRCULAR

As per the advice of the Chairperson, Meeting of Disciplinary Committee is organized on 7<sup>th</sup> October 2022 at 12.40 PM in Room No: 507 to discuss various issues pertaining to student Discipline.

All members are requested to be present for the meeting.

Agenda for the Meeting

1. Discipline to be maintained by the students in the college campus

2. Awareness for students of first year on discipline to be maintained in the college campus, adhering to time -lines of classes and labs.

3. Awareness regarding the adherence to uniform is mandatory and also maintaining 80% attendance for appearing for exams.

4. Discussion on disciplinary action to be taken on students on the misconduct.

5. Any other points for discussions with the permission of Chairperson.

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Date: 07/10/2022

#### Minutes of the Meeting

The meeting of Disciplinary meeting was held on 07/10/2022 in Room No: 507 to discuss various issues pertaining to student Discipline. The following members were present for the meeting

S.	POST	NAME OF THE	DEPARTMENT	SIGNATURE
NO		TEACHER		
1	CHAIRPERSON	Dr Padmaa M Paarakh	Principal	P. Padma
2	MEMBER	Mrs Surinder Kaur	Pharmaceutics	ber
3	MEMBER	Dr Nagalakshmi G	Pharmaceutical	~
			Chemistry	Gin
4	MEMBER	Dr G Parthasarathy	Pharmacy Practice	elfut
5	MEMBER	Ms Nagalakshmi R	Pharmacology	A
6	MEMBER	Dr ElsammaThomas	Manager Hostel	Elsann
7	MEMBER	Mr Gurumurthi	Warden Boys Hostel	Guy
8	MEMBER	Mr Gireesha Naidu	UG Student	Gre
9	MEMBER	Mr Devaraj	PG Student	Dortot

Agenda:

- 1. Discipline to be maintained by the students in the college campus
- 2. Awareness for students of first year on discipline in the college campus, regarding the adherence to uniform and maintaining 80% attendance for appearing internal/university exams.
- 3. Discussion on disciplinary action to be taken on students on the misconduct.
- 4. Any other points for discussions with the permission of Chairperson.



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Chairperson welcomed the members of the Disciplinary Committee and briefed on the agenda of the meeting.

Agenda 1

Discipline to be maintained by the students in the college campus.

Chairperson emphasized that discipline has to be inculcated in the students from the beginning of the session by the members of the committee and for the same asked to brief the students in class with the Do's & Don'ts in the campus.

#### Agenda 2

Awareness for students of first year on discipline in the college campus, regarding the adherence to uniform and maintaining 80% attendance for appearing internal/university exams.

The discipline to be maintained by the students of first year was discussed by the committee and it was decided to have awareness program during the induction program for first year students. It was also decided to brief the students regarding the attendance maintenance to 80% as eligibility criteria for exams and inform them that uniform is mandatory. All the members have agreed for the same.

#### Agenda 3

Discussion on disciplinary action to be taken on students on the misconduct.

The committee discussed regarding the disciplinary action to be taken in case of any misconduct reported in depth. It was decided that in case of initial misconduct the student can be warned but if it is repeated then any disciplinary action taken should be such that it doesn't affect the career of the student.

#### Resolution

As there were no other points of discussion, Chairperson thanked all the members and the meeting was concluded.

The Oxford College Ot Philimacy No 6\9.1st Cross, Degur Rocd, Hongasandra Bangatore - 560 068

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14 /03/2023

#### CIRCULAR

As per the advice of the Chairperson, Meeting of Disciplinary Committee is organized on 16<sup>th</sup> March 2023 at 12.40 PM in Room No: 507 to discuss various issues pertaining to student Discipline.

All members are requested to be present for the meeting.

Agenda for the Meeting

1. Discipline to be maintained by the students in the college campus

2. Adherence to the timings of classes and labs.

3. Awareness regarding anti-ragging measures and how to curb sexual harassment

4. Any other points for discussions with the permission of Chairperson.

The Oxfor LCollege Or Pharmacy No 609. Ist Close, Reger Road, Hongssandra Bangalore - 560 008

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Date:16/03/2023

#### Minutes of the Meeting

The meeting of Disciplinary meeting was held on 16/03/2023 in Room No: 507 to discuss various issues pertaining to student Discipline. The following members were present for the meeting

S.	POST	NAME OF THE	DEPARTMENT	SIGNATURE
NO		TEACHER	· ·	
1	CHAIRPERSON	Dr Padmaa M Paarakh	Principal	p. Rad ma
2,	MEMBER	Mrs Surinder Kaur	Pharmaceutics	f Martine
3	MEMBER	Dr Nagalakshmi G	Pharmaceutical Chemistry	Gne
4	MEMBER	Dr G Parthasarathy	Pharmacy Practice	wind
5	MEMBER	Ms Nagalakshmi R	Pharmacology	A
6	MEMBER	Dr ElsammaThomas	Manager Hostel	Fleam
7	MEMBER	Mr Gurumurthi	Warden Boys Hostel	Absent
8	MEMBER	Mr Gireesha Naidu	UG Student	Son-
9	MEMBER	Mr Devaraj	PG Student	Dufty

Agenda:

1. Discipline to be maintained by the students in the college campus

2. Adherence to the timings of classes and labs.

3. Awareness regarding anti-ragging measures and how to curb sexual harassment

4. Any other points for discussions with the permission of Chairperson.





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Chairperson welcomed the members of the Disciplinary Committee and briefed on the agenda of the meeting.

Agenda 1

Discipline to be maintained by the students in the college campus.

Chairperson emphasized that discipline in the campus cannot be compromised and therefore along with the members of the committee decided that the 2/3 teachers should go in rounds three times a day, to make sure that no disciplinary activity is taking place in the premises.

Agenda 2

Adherence to the timings of classes and labs.

The members discussed this agenda in depth and decided to brief students time to time about the maintaining decorum in class and also should not be allowed to roam during free hours, instead let them use the library facility judicially.

Agenda 3

Awareness regarding anti-ragging measures and how to curb sexual harassment

The committee decided to conduct awareness to all students regarding the anti-ragging measures, informing students about the help line numbers, measures to curb sexual harassment, whom to approach if such things happen etc.

#### Resolution

As there were no other points of discussion, Chairperson thanked all the members and the meeting was concluded.

P. Padus Chairperson

PRINCIPAL

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