

**VIVEKANAND EDUCATION SOCIETY'S
COLLEGE OF PHARMACY**

Hashu Advani Memorial Complex, Behind Collector Colony, Chembur (E), Mumbai – 400 074

Sindhi Linguistic Minority, Approved by AICTE, DTE, Pharmacy Council of India & Govt. of
Maharashtra, Affiliated to University of Mumbai

B. Pharm Programme is accredited by NBA, New Delhi from 2016-17 to 2021-22

1.3.1

**The Institution integrates cross-cutting
social, environmental, and ethical issues
into the Curriculum**

VES COLLEGE OF PHARMACY

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Environment and Sustainability

Environment and Sustainability: Curriculum

Environment and Sustainability

A. Curriculum:

1.1. Environmental sciences:

Course - Environmental Science		
Course Code: BPH_C_205_T	First Year B. Pharm	Semester: II
Type of course: Theory		Contact Hours: 4 Hrs/week
Course Outcomes mapped with Environmental Science: After the completion of course, learner will be able to:		
CO1	Describe the basics of Environmental sciences like need and purpose of study the subject, Ecology, food chain and ecological pyramids, sustainable development	
CO2	Outline, Environmental Legislation, role of different ministries and environment control boards	
CO3	Classify and compare different sources of energies	
CO4	Relate technology to control pollution and economic benefits thereof, infer, the concept of green building, carbon credit and disaster management Realize the environment related moral responsibilities and identify Legal (environmental) aspects for becoming entrepreneur in future	
The entire curriculum of this course is designed to impart thorough understanding about environmental issues and solutions to tackle the problems.		

1.2. Hazards & Safety Management

Course: Hazards and safety Management (CBCS Revised 2019)		
Course Code: MQA201T	First Year M. Pharm	Semester: II
Type of course: Theory	Contact Hours: 4 Hours/week	Total Contact Hours: 60
Course Outcomes mapped with Environmental Science: Upon completion of the course the student shall be able to:		
CO1	Recall the environmental problems and develop an attitude of concern for the industry environment	
CO2	Make use of the knowledge gained to ensure safety standards in pharmaceutical industry	
CO3	Analyze and simplify the mechanism and management in different kinds of hazard management system	
CO4	Propose the method of Hazard assessment, procedure and methodology for safe industrial atmosphere.	
Entire syllabus of this course revolves around environmental cautions during pharmaceutical functioning. At completion of this course, it is expected that students will be able to understand about environmental problems. The course aims to impart basic knowledge about the environment and its allied problems, to develop an attitude of concern for the industry environment, ensure safety standards in pharmaceutical industry, provide comprehensive knowledge on the safety management.		



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1.3. Advanced Organic Chemistry II (Module on Green Chemistry)

Course: Advanced Organic Chemistry (CBCS 2016)		
Course Code: MPH_C_203_T	First Year M. Pharm	Semester: II
Type of course: Theory	Contact Hours: 4 Hours/week (3L + 1T)	Total Contact Hours:60
Course Outcomes mapped with Environmental Science: Upon completion of the current course the learner would be able to:		
CO6	Understand various greener chemistry approaches and compare them against conventional methods of Synthesis	
Module: Green Chemistry a. Introduction, principles of green chemistry b. Microwave assisted reactions: Merit and demerits of its use, increased reaction rates, mechanism, superheating effects of microwave, effects of solvents in microwave assisted synthesis, microwave technology in process optimization, its applications in various organic reactions and heterocycles synthesis c. Ultrasound assisted reactions: Types of sonochemical reactions, homogenous, heterogeneous liquid-liquid and liquid-solid reactions, synthetic applications d. Continuous flow reactors: Working principle, advantages and synthetic applications.		

1.4. Pharmaceutical Process Chemistry (Module on ISO-14001 - Environmental Management System, Effluents and its management)

Course: Pharmaceutical Process Chemistry (CBCS Revised 2019)		
Course Code: MPC204T	First Year M. Pharm	Semester: II
Type of course: Theory	Contact Hours: 4 Hours/week	Total Contact Hours:60
Course Outcomes mapped with Environmental Science: Upon completion of the current course the learner would be able to:		
CO3	Describe various principles of Industrial Safety.	
Module: Pharmaceutical Process Chemistry ISO-14001(Environmental Management System), Effluents and its management		

1.5. Pharmaceutical Quality Assurance Practical-II (Module on experimental determination of few environmental pollutants)

Course: Pharmaceutical Quality Assurance Practical-II (CBCS Revised 2019)		
Course Code: MQA205P	First Year M. Pharm	Semester: II
Type of course: Practical	Contact Hours: 12 Hours/week	Total Contact Hours: 60
Course Outcomes mapped with Environmental Science: Upon completion of the current course the learner would be able to:		
CO1	Understand the significance of control of hazardous substances and perform analysis to determine and report the content of hazardous substances in air/environment	



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Environment and Sustainability: Supporting Activities

Modules: Pharmaceutical Quality Assurance Practical-II

1. Organic contaminants residue analysis by HPLC
2. Estimation of Metallic contaminants by Flame photometer
3. Identification of antibiotic residue by TLC
4. Estimation of Hydrogen Sulphide in Air.
5. Estimation of Chlorine in Work Environment.
6. Sampling and analysis of SO₂ using Colorimetric method

B. Supporting Activities:

1.6. Solvent Recovery Process in place in CIL:

Solvent recovery process is in place for recovery of organic solvents.

Photographs of Solvent recovery register:

Academic Year 2021-22

Date	Name of the Student	Before Recovery Name of the Solvent	Volume (ml)	After Recovery Name of the Solvent	Volume (ml)
28/6/21	Pratibha Patil	Methanol	1.5L	Methanol	1.5L
19/11/21	Pratibha Patil	Acetonitrile	2.5L	Acetonitrile	2.5L
13/11/21	Abhishek Gadhane	Acetonitrile	2L	Acetonitrile	1.5L
18/11/21	Abhishek Gadhane	Methanol	2L	Methanol	1.5L
19/11/21	Shivani Mahule	Methanol	1L	Methanol	1.5L

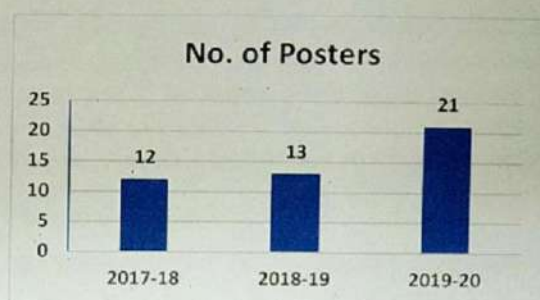
1.7. Poster Club Activity:

Poster Club Activity was implemented from academic year 2017-18 for S.Y.B.Pharm. Entire class is divided in groups (4-5 students per group). Each group is given a topic on the theme of **Environment and Sustainability**. Each group presents a digital poster on the topic which is evaluated by panel of teachers.

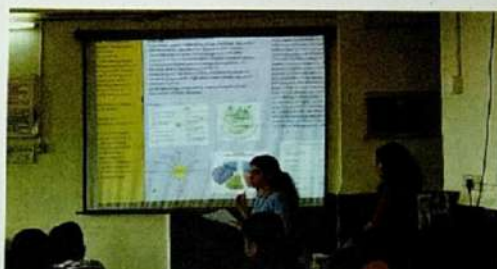


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- Posters presented per year:



- Representative Photograph of the activity:



1.8. PRME Signatory:

A United Nations-supported initiative, The Principles for Responsible Management Education's (PRME) mission is to transform education and develop the responsible decision-makers of tomorrow to advance sustainable development and work with . VESCO is a signatory of PRME and Conducts many activities in alignment with Sustainable Development Goals (SDGs) of PRME.

The membership proof can be found on following link: <https://www.unprme.org/vivekanand-education-society-ves-vesasc-vesit-vesim-vescop-vescol-vescoa>

- Screenshot of the PRME website:

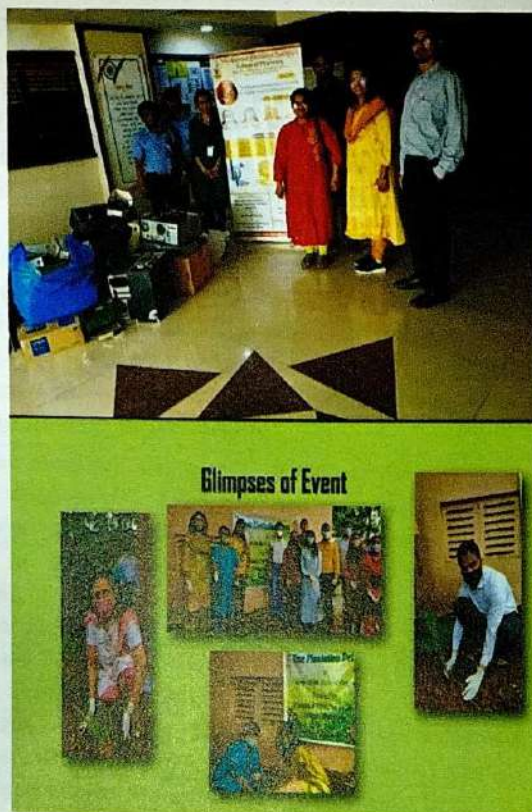


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1.9. E-Waste Collection Drive and Tree Plantation

In Collaboration with Ms. Rashmi Joshi and Environmental Consultant, an e-waste collection drive was initiated. A guest lecture on the sensitive issue of e-waste management and practices was delivered by Ms. Rashmi Joshi to F.Y. M. Pharm and B. Pharm Students, Teaching and non-teaching staff. A total of **250 kg** of e-waste was collected and handed over to the collaborator for systematic disposal on 17.02.2020. The tree plantation activity was conducted at medicinal garden of VESCOP

- Representative Photograph of the activity:



1.10. Survey based on environmental issues:

At First year B. Pharm Level, An environment related topic is given to all students and questionnaire is designed on the same. Students conduct a survey and analyze the data obtained.

Human Values, Physical, Mental, Emotional and Spiritual well-being:

A. Curriculum:

2.1. Communication Skills and Ethics

Communication Skills and Ethics		
Course Code: BPH_C_105_T	First Year B. Pharm	Semester: I



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Human Values, Physical, Mental, Emotional and Spiritual well being

Curriculum

Type of course :Theory		Contact Hours: 3Hrs/week
Course Outcomes mapped to Human Values: After the completion of course, learner will be able to:		
CO2	Apply skills learnt to confidently stand in a group discussion	
CO4	Appreciate and imbibe the importance of ethics, human values, honesty and integrity	
Modules: Communication Skills and Ethics		
Life Skills– Goal-setting; Self-esteem and Self-Confidence; Problem Solving; Decision Making; Time Management; Stress Management; Positive Thinking; Assertiveness; Teamwork; Interpersonal Relationships; Coping with Life Stresses; Suicidal Tendencies; Peer Pressure; Substance Abuse and Addiction.		
Basic Listening Skills: Introduction, Self-Awareness, Active Listening, Becoming an Active Listener, Listening in Difficult Situations		
Effective and Ethical Communication at work: Flow of communication in organizations, Communication Skills & Success at work, How to overcome typical barriers of Communication and ethical response to office gossip		
Introduction to Ethics and Human Values: Definition – Good Behaviour, Conduct and Character; Importance, Respects for Elders, Use and Relevance in Present-day Society, Individual and Society – Desirable Basic Human Characters - Honesty, Truthfulness, Respect, Punctuality, Responsibility, Courtesy, Discipline, Kindness, courage, Character, Forgiveness, Friendship, Compassion, Consideration, Contentedness, Simplicity, Empathy, Avoiding Greed; Family responsibilities, The 3 Cs of ethics – clarity, courage and creativity,		
Professional Ethics: Need and Importance – Goals, Dignity of Labour dimensions of ethics; ethics in private and public relationships, Ethical Values in Different Professions – Management, Business, Teaching, Civil Services, Politics, Medicine, Policing, Judiciary.		
Ethical Practice in Pharmaceutical Industry: Safety norms, quality norms, clinical trials, packaging, labelling, pricing, distribution, disposal of past-expiry products, advertising, use of medical channels for promotional activities, IPR, Role of R&D, profitability and its linkage to R&D		
Ethics in Media and Technology– Impact on Youth; Cyber Ethics and Etiquette; Mobile Phones, Social Networking; Correct and Judicious Use		
Leadership and Ethics: What is Ethical Leadership? Principles & commandments of ethical leadership, Characteristics of Ethical leader, Ethical decision making		
Group Projects/ Field Work: Students could go on a local field trip and submit an account in about 5 pages. Students can be divided into groups of 5 and one written account can be submitted per group. Different groups can undertake different projects so that the logistics are manageable and there is also sharing of experiences/ideas. Students are advised to prepare a list of questions before hand so that they are more focused. Some suggestions of locations include: Government hospital or dispensary , old age home Pension Office, Local wholesale market, Industry, Cancer care centre, Orphanage, Homes for mentally challenged, etc		

2.2. Universal Human Values (UHV)- UHV 2: Understanding Harmony

Universal Human Values		
Course Code: PH	Third Year B. Pharm	Semester: V
Type of course :Theory	Contact Hours: 3Hrs/week	



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Universal Human Values

Course Outcomes mapped to Human Values: After the completion of course, learner will be able to:

CO1	To develop understanding of the concepts of Universal Human Values
CO2	To recognize the relevance of Universal Human Values
CO3	To develop understanding of value systems that are shared by our culture
CO4	To critically analyze current issues related to values
CO5	To develop a sense of personal self in harmony with society and nature through integration of Universal Human Values.
CO6	Appreciate and imbibe the importance of ethics, human values, honesty and integrity

Entire syllabus of this course revolves around **Human Values, Physical, Mental, Emotional and Spiritual well-being**. The Universal Human Values Certificate Course is integrated with Revised 2019 B. Pharm. The Certificate course is introduced at SEMESTER V level. It is mandatory for the students to complete certificate course.

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Sr. No.	Detailed content	Hrs.
II		
	a. Concept of harmony in Nature: - Meaning of harmony in nature - Disharmony with Nature – causes - Implications of disharmony with nature	2
	b. Maintaining harmony with nature: - Harmony through mutual fulfilment of the four orders in nature - Harmony through symbiotic relationship with nature - Achieving competence in maintaining harmony with nature in professional life.	3
	c. Tutorials and Practicum Activities - Students can write an account of different ways of integrating three Rs(Reduce, Reuse and Recycle) in their day-to-day life - Students review of books/movies dealing with harmony with nature. - Activities like Poster competition/slogan competition/street play/activities using social media on the theme of maintaining harmony with nature may be organized. - Students can work on apps, slogans to Protect Nature, methods to reduce industrial waste, application of green chemistry as per the needs of the pharmaceutical industry - Suggest Plan to reduce Hospital waste/ Pharmaceutical Industrial waste/ Reduce Plastic waste/ E Waste Management - Students can work on the Project of Energy Conservation	2
	MODULE 3	15
Unit I	Holistic Perspective of Harmony at all levels of Existence and current issues due to disharmony Harmony with Self	8
	a. Existence at all levels: - Existence as Units in space - Existence as coexistence - Application of harmony through coexistence through integration of Universal Human Values	3
	b. Holistic perception of harmony in existence: - Development of harmony in the existential sense - Current issues leading to disharmony at all levels - Application of Universal Human Values for resolution of current issues.	3
	c. Tutorials and Practicum Activities: - Students gather information about CSR activities carried out by various organizations - Students write a reflective account of how they can be socially relevant as in their professions. - Students may participate in a two-day residential camp and engage in community service activities. - Students can gather information on the CSR activities planned by pharmaceutical industries, evaluate its social outcome	2



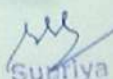
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Sr. No.	Detailed content	Hrs.
Unit II	Practicum Project– Community Engagement Students carry out a community engagement project to benefit the local community through initiatives which can be undertaken face to face or online. They write a reflective report of how the understanding of universal human values has been integrated in their work during the community engagement. <i>Students can work on Community Pharmacy Projects such as Training to Senior citizens, Health awareness programs such as Diabetes Camp, Blood Donation Camp, TB awareness program, Health for all, Mental Health for all age groups etc.</i>	7
	TOTAL	45

2.3. Pharmaceutical Management

Pharmaceutical Management- (Elective) CBCS		
Course Code: BPH_E_608_T	Third Year B. Pharm.	Semester: VI
Type of course: Theory	Contact Hours: 4 Hrs/week	
Course Outcomes mapped to Human Values: After the completion of course, learner will be able to:		
CO3	Outline the basic principles of management	
Module: Industrial Psychology a) Human Relation b) Stress & its Management c) Present Life, Pharmaceutical Industry, Its Impact on Employees & health measures		



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Human Values, Physical, Mental, Emotional and Spiritual well being

Supporting Activities

2.4. VESLARC Agreement

भारतीय गैर न्यायिक
एक सौ रुपये
Rs. 100
ONE HUNDRED RUPEES
भारत INDIA
INDIA NON JUDICIAL
MAHARASHTRA © 2020 © YW 836148

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Vivekanand Education Society's College of Pharmacy
 Information Contact: Dr. Supriya S. Shidhaye
 Position: Principal
 Address: Dr. Supriya Shidhaye
 Phone No: 822 41141/4497
 E-Mail: veslarc@ves.ac.in, veslarc@gmail.com

7. Force Majeure
 Neither party shall be liable to the other for failure or delay in the performance of any of its obligations under this MOU, for the time and to the extent such failure or delay is caused due to acts of God, natural disaster, fire, theft, epidemic, or outbreak, epidemic or quarantine measures, serious accidents, war, intervention or war, strikes, legal remedy or labour matters, or any other cause beyond the control of the party's reasonable control, provided that sufficient notice of such occurrence of force majeure is communicated to the other party.

8. Signatures
 Signature: Dr. B. L. Bhoirane
 Signature: Dr. Supriya Shidhaye
 Signature: Mrs. Poo Mahalinge
 Date: 19.02.2021
 Date: 19.02.2021
 Date: 19.02.2021

2.5. Induction Program

Student Induction Programme (SIP)			
Day 2, 20/8/2019, Tuesday			
Session	Time	Activity	Activity In charge
1.	9:00 to 10:00 am	Yoga Session	Mrs. Harsha Kathpalia
2.	10:00 to 10:30am	Formation of groups and address by counselling committee in charge	Mrs. Ashwini Wani
3.	10:30 to 12:30am	VESLARC session	Mrs. Chaitali Surve
4.	12:30 to 1:00 pm	Lunch break	
5.	1:00 to 2:00 pm	VESLARC session	Mrs. Chaitali Surve
6.	2:00pm to 2:30 pm	Exam Orientation	Mr. Ojaskumar Agarwal
7.	2:30pm to 3:00 pm	Introduction to Student Council	Dr. Sandip Zine
8.	3:00pm to 3:30 pm	Anti-ragging and Internal Complaint committee orientation	Dr. Rajashree Hirlekar
9.	3:30 to 4:30 pm	Student Council Activity	Student Council



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Feedback about Induction Programme

F.Y. B. Pharm. A. Y. 2019-20

1. Has induction programme served your expectations? Yes/ No

2. Rate the overall conduction of programme

Very good ☐ Good ☐ Satisfactory ☐

3. What did you like about this programme?

The way it was presented was amazing, we have learned so many things which we could not imagine. The programme has made me more collaborative, open up, oriented and lastly a self-respectful person.

4. Anything additional you want to know through induction programme

5. Rate the following sessions (Tick mark the appropriate column)

1- Excellent 2- Good 3- Average

Sr. No.	Sessions	1	2	3
1.	Yoga Session	☒		
2.	Orientation programme		☒	
3.	VESLARC session	☒		
4.	Exam Orientation	☒		
5.	Introduction to Student Council	☒		
6.	Anti-ragging and Internal Complaint committee orientation	☒		
7.	Student Council Activity		☒	
8.	Lecture by Alumni	☒		
9.	Human Value Session	☒		
10.	Introduction to PHO/Rotaract/IPA		☒	
11.	Women development and Student grievance redressal cell orientation	☒		

6. Any suggestions regarding induction programme?

7. Suggest any topics for Guest's lecture or workshop to be conducted by college.

Yoga session and veslarc and alumni

Name of the student:

Shreelal Arvind Kanofiya



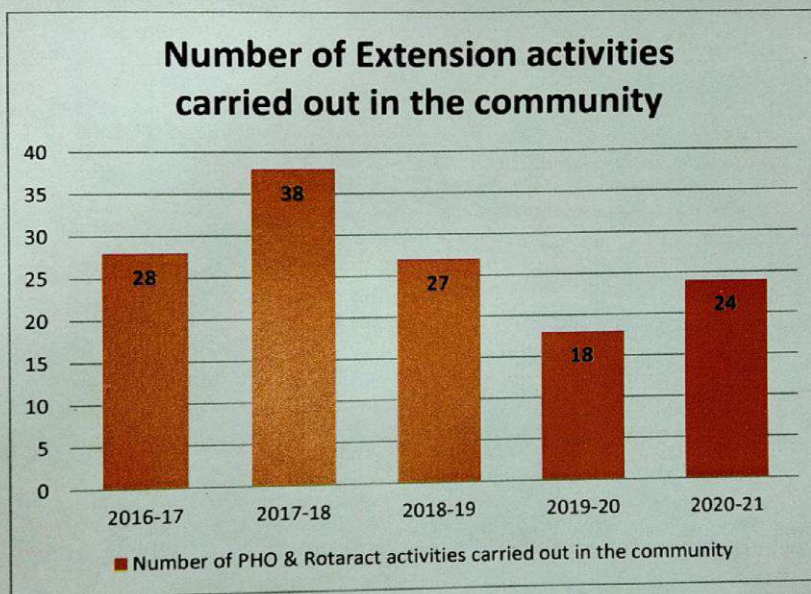
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2.6. PHO: Summary from and 2.7. Rotaract: Summary from

The activities conducted by the Public Health Office (PHO) and Rotaract play a crucial role in spreading awareness about healthcare in the society. Through the execution of these activities, the students develop empathy, human values and overall human ethics. This brings about a better emotional & spiritual well-being among the students.



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2.8. Anti-corruption Drive

7. Vigilance Awareness Week 2019 (With UNION BANK OF INDIA)

Date: 10th October, 2019

Venue: Seminar Hall, VES College of Pharmacy

Organizing team/committee: Student Council

Number of Students Participated: 28

Winners: Poster Making: 1st: Sarvesh Desai
2nd: Aparna Andhe
3rd: Gauravi Parab

Slogan Writing: 1st: Shruti Kulkarni

2nd: Vrushti Trivedi

3rd: Hitesh Lad

Elocution: 1st: Hiren Mange

2nd: Anupama Nair

3rd: Shrejal Kanojiya

Activity Report along with Photograph:

The Student Council in association with Union Bank of India organised the Anti-Corruption Campaign to mark the Vigilance Awareness Week 2019. A variety of competitions were conducted, including Poster making competition and Slogan writing on the topic of Anti-Corruption and an elocution competition on the topic of Integrity-the way of life. The winners were awarded with trophies and certificates.



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STUDENT COUNCIL REPORT ACADEMIC YEAR: 2019-20



Professional Ethics:

A. Curriculum:

3.1. Communication Skills and Ethics



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Professional Ethics

Curriculum

Communication Skills and Ethics		
Course Code: BPH_C_105_T	First Year B. Pharm	Semester: I
Type of course :Theory	Contact Hours: 3Hrs/week	
Course Outcomes mapped to Professional Ethics:: After the completion of course, learner will be able to:		PO Mapped
CO1	List and identify verbs and the passive voice	6,8
CO2	Apply skills learnt to confidently stand in a group discussion	5,8
CO3	Apply skills learnt to communicate effectively – technically/businesswise	4,5,8,9,11
CO4	Appreciate and imbibe the importance of ethics, human values, honesty and integrity	5,6,7,8,9,11
Modules related to Professional Ethics:		
Unit VI:	Effective and Ethical Communication at work: Flow of communication in organizations, Communication Skills & Success at work, How to overcome typical barriers of Communication and ethical response to office gossip	
Unit VIII	Professional Ethics: Need and Importance – Goals, Dignity of Labour dimensions of ethics; ethics in private and public relationships, Ethical Values in Different Professions – Management, Business, Teaching, Civil Services, Politics, Medicine, Policing, Judiciary.	
Unit IX	Ethical Practice in Pharmaceutical Industry: Safety norms, quality norms, clinical trials, packaging, labelling, pricing, distribution, disposal of past-expiry products, advertising, use of medical channels for promotional activities, IPR, Role of R&D, profitability and its linkage to R&D	
Unit X:	Ethics in Media and Technology– Impact on Youth; Cyber Ethics and Etiquette; Mobile Phones, Social Networking; Correct and Judicious Use	
Unit XI	Leadership and Ethics: What is Ethical Leadership? Principles & commandments of ethical leadership, Characteristics of Ethical leader, Ethical decision making	
Unit XII	Group Projects/ Field Work: Students could go on a local field trip and submit an account in about 5 pages. Students can be divided into groups of 5 and one written account can be submitted per group. Different groups can undertake different projects so that the logistics are manageable and there is also sharing of experiences/ideas. Students are advised to prepare a list of questions before hand so that they are more focused. Some suggestions of locations include: Government hospital or dispensary , old age home, Pension Office, Local wholesale market, Industry, Cancer care centre, Orphanage, Homes for mentally challenged, etc	

3.2. Communication skills

Course: Communication Skills (Revised 2019)		
Course Code: BP105T	First Year B. Pharm	Semester: I
Type of course: Theory	Contact Hours: 2 Hours/week	Total Contact Hours: 30



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Course Outcomes mapped to Professional Ethics: After the completion of course, learner will be able to:		PO Mapped
CO1	Understand the behavioral needs for a pharmacist to function effectively in the areas of pharmaceutical operation	1, 6,8
Modules mapped to Professional Ethics:		
1.1 Communication Skills: Introduction, Definition, The Importance of Communication, The Communication Process- Source, Message, Encoding, Channel, Decoding, Receiver, Feedback, Context.		
1.2 Barriers to communication: Physiological Barriers, Physical Barriers, Cultural Barriers, Language Barriers, Gender Barriers, Interpersonal Barriers, Psychological Barriers, Emotional barriers.		
1.3 Perspectives in Communication: Introduction, Visual Perception, Language, Other factors affecting our perspective - Past Experiences, Prejudices, Feelings, Environment.		
Group Discussion: Introduction, Communication skills in group discussion, Do's and Dont's of group discussion		

3.3. Pharmaceutical Jurisprudence

Pharmaceutical Jurisprudence		
Course Code: BPH_C_705_T	Final Year B. Pharm.	Semester: VII
Type of course: Theory	Contact Hours: 3 Hrs/week	
Course Outcomes mapped to Professional Ethics: After the completion of course, learner will be able to:		
CO1	Interpret Pharmaceutical Legislation	
CO2	Understand pricing of drugs & pharmaceuticals	
CO3	Summarize offences & penalties concerned with laws for drugs and pharmaceuticals	
CO4	Gain an insight into Drug Regulatory Affairs	
The entire course covers regulatory aspect of Pharmaceutical Industry and has objective to impart knowledge on important legislations related to the Pharmacy profession.		

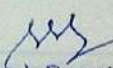
Course: Pharmaceutical Jurisprudence (Revised 2019)		
Course Code: BP505T	Third Year B. Pharm	Semester: V
Type of course: Theory	Contact Hours: 3 Hours/week (3L + 1T)	Total Contact Hours: 45
Course Outcomes mapped to Professional Ethics:		
After the completion of course, learner will be able to:		PO Mapped
CO1	The Pharmaceutical legislations and their implications in the development and marketing of pharmaceuticals	1,2,3,4,5,6,7,8,9,10,11



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CO2	Various Indian pharmaceutical Acts and Laws.	1,2,3,4,5,6,7,8,9,10,11
CO3	The regulatory authorities and agencies governing the manufacture and sale of pharmaceuticals.	1,2,3,4,5,6,7,8,9,10,11
CO4	The code of ethics during the pharmaceutical practice	1,2,5,6,7,8,9,10,11
Topics covered:		
Unit I:	Drugs and Cosmetics Act, 1940 and its rules 1945	Hours: 10
1.1 Objectives, Definitions, Legal definitions of schedules to the act and rules 1.2 Import of drugs – Classes of drugs and cosmetics prohibited from import, Import under license or permit. Offences and penalties. 1.3 Manufacture of drugs – Prohibition of manufacture and sale of certain drugs 1.4 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:	Drugs and Cosmetics Act, 1940 and its rules 1945.	Hours: 10
2.1 Detailed study of Schedule G, H, M, N, P, T,U, V, X, Y, Part XII B, Sch F & DMR (OA) 2.2 Sale of Drugs – Wholesale, Retail sale and Restricted license. Offences and penalties 2.3 Labeling & Packing of drugs- General labeling requirements and specimen labels for drugs and cosmetics, List of permitted colors. Offences and penalties. 2.4 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, Medicinal and Toilet Preparation Act – 1955, Narcotic Drugs and Psychotropic substances Act-1985 and Rules	Hours: 10
3.1 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 Penalties 3.2 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 3.3 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:		Hours: 8




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4.1 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

4.2 Prevention of Cruelty to animals Act-1960: Objectives, Definitions, Institutional Animal Ethics Committee, 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

4.3 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: **Hours: 07**

5.1 Pharmaceutical Legislations – A brief review, Introduction, Study of drugs Enquiry committee, Health survey and development committee, Hathi committee and Mudaliar committee

5.2 Code of Pharmaceutical ethics Definition, Pharmacist in relation to his job, trade, medical profession and his profession, Pharmacist's oath

5.3 Medical Termination of pregnancy act

5.4 Right to information Act

5.5 Introduction to Intellectual Property Rights (IPR)

3.4. Pharmaceutical Management

Pharmaceutical Management- -- (Elective)		
Course Code: BPH_E_608_T	Third Year B. Pharm.	Semester: VI
Course Outcomes mapped to Professional Ethics: After the completion of course, learner will be able to:		PO Mapped
CO3	Outline the basic principles of management	1, 5,6,8
CO4	Discuss the importance of management in quality control & government regulation.	1, 5,6,8
TOPIC TO COVER:		
Unit III:	Management a) Management Thoughts b) Management Function c) Organization d) Motivation e) Leadership f) Conflicts & Measures to Solve it.	Hours:4
Unit IX:	Industrial Psychology a) Human Relation b) Stress & its management c) Present Life, Pharmaceutical Industry, Its Impact on Employees & health measures	Hours:3

3.5 Pharmaceutical Regulatory Science

Course: Pharmaceutical Regulatory Science (Revised 2019) - ELECTIVE		
Course Code: BP804ET	Final Year B. Pharm	Semester: VIII
Course Outcomes mapped to Professional Ethics: After the completion of course, learner will be able to:		PO Mapped



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CO1	Know about the process of drug discovery and development	1,6,7,10
CO2	Know the important regulatory concepts, documentation requirements, regulatory registration procedures, regulatory authorities and agencies governing the manufacture and sale of pharmaceuticals globally.	1,4,6,7,9,11
CO3	Describe the clinical trials requirements for approvals for conducting clinical trials and discuss the role of pharmacovigilance and the process of monitoring in clinical trials.	1,2,3,4,5,6,7,8,9,10,11
CO4	To correlate the theoretical knowledge with professional and practical need of pharmaceutical industry.	1,2,3,4,5,6,7,8,10,11
Topics covered:		
Unit I:	New Drug Discovery and development	Hours: 10
- Stages of drug discovery, Drug development process - Pre-clinical studies, non-clinical activities, clinical studies - Innovator and generics, Concept of generics, Generic drug product development		
Unit II:		Hours: 10
2.1 Regulatory Approval Process Approval processes and timelines involved in Investigational New Drug (IND), New Drug Application (NDA), Abbreviated New Drug Application (ANDA) in US. Changes to an approved NDA / ANDA.		
2.2 Regulatory authorities and agencies Overview of regulatory authorities of United States, European Union, Australia, Japan, Canada (Organization structure and types of applications)		
Unit III:	Registration of Indian drug product in overseas market	Hours: 10
Procedure for export of pharmaceutical products, Technical documentation, Drug Master Files (DMF), Common Technical Document (CTD), electronic Common Technical Document (eCTD), ASEAN Common Technical Document (ACTD) research		
Unit IV:	Clinical trials	Hours: 8
- Developing clinical trial protocols, Institutional Review Board /Independent Ethics committee - formation and working procedures, Informed consent process and procedures, GCP obligations of Investigators, sponsors & Monitors, - Managing and monitoring clinical trials, Pharmacovigilance - safety monitoring in clinical trials		
Unit V:	Regulatory Concepts	Hours: 7
- Basic terminologies, guidance, guidelines, regulations, laws and acts. - Orange book, Federal Register, Code of Federal Regulatory, Purple book		

3.6. Hospital Pharmacy and Drug Store Management

Hospital Pharmacy and Drug Store Management



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Course Code: BPH_C_204_T		First Year B. Pharm	Semester: II
Type of course :Theory		Contact Hours: 4 Hrs/week	
Course Outcomes mapped to Professional Ethics: After the completion of course, learner will be able to:			PO Mapped
CO1	Appreciate the difference in the functions, layout, legal requirements, organization, drug procurement, storage and dispensing of medicines in a retail versus hospital pharmacy setting.	1, 2, 3, 6, 8,	
CO2	Appreciate the importance of documentation in the functioning of a pharmacy	1, 2	
CO3	Understand the importance of a hospital level formulation and compounding of parenterals	1,2,3	
CO4	Understand the importance and functioning of the hospital sterile supply services department	1,2	
CO5	Appreciate the dangers/detection/reporting of fraudulent pharmacy practices	1,7, 8	
CO6	Appreciate the concept of Rational Drug Therapy	1,3	
Topics covered :			
Unit I:	1.1 Hospitals: Definition, Organization Structure, Classification, Functions 1.2 Hospital Pharmacy: Definition, Organization structure, Location, Layout and staff requirements and responsibilities and functions of hospital pharmacists. 1.3 Budget of Hospital Pharmacy: Preparation and Implementation	Hours: 6	
Unit II:	2.1 Drug Distribution Systems in Hospitals: Dispensing of drugs to inpatients, types of drug distribution systems, charging policy and labeling, Dispensing of drugs to ambulatory patients, and Dispensing of Controlled Substances including Hospital Control Procedures	Hours: 4	
Unit III:	Pharmacy and Therapeutics Committee (PTC): Objective, composition, Functions, Role of PTC in Drug Safety, Adverse Drug Reaction Monitoring and Emergency Drug Lists.	Hours: 3	
Unit IV:	4.1 Hospital formulary: Definition, Advantages and Disadvantages, contents of hospital formulary, Differentiation of hospital formulary and Drug list, Preparation and revision, and addition and deletion of drug from hospital formulary 4.2 Medication errors and ASHP Guidelines to prevent errors, Infection control in hospitals (Self Study).	Hours: 5	
Unit V:	5.1 Drug Utilization Review(Self Study) 5.2 Safe Use of Medications in Hospitals(Self Study)	Hours: 6	
	5.3 Handling of radiopharmaceuticals in hospitals		



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Unit VI:	Central Sterile Supply Services 6.1 Introduction to sterilization, basic techniques used for sterilization of hospital supplies 6.2 Advantages, Plan, Location, Layout 6.3 Sterilization of surgical dressings – methods of packing, loading and prevention of wetting of dressings. Sterilization of rubber gloves, syringes, needles, catheters, tubing, surgical instruments, mattresses, utensils and bedpans and other accessories Manufacturing and Bulk compounding of large volume parenterals, Total Parenteral Nutrition and Intravenous additives	Hours: 8
Unit VIII:	Setting Up and management of a Drug Store Legal Aspects and Registrations Selection of site, Space layout, Location Analysis and Layout design and staff Materials- Coding, stocking, maintenance of various registers, Use of Computers: Business and health care soft wares Sales promotion and window display	Hours: 8
Unit:X	Risk management, Insurance policies and Frauds in retail practice	Hours: 1

3.7. Regulatory Affairs

Course: Regulatory Affairs (CBCS Revised 2019)			
Course Code: MPH104T	First Year M. Pharm	Semester: I	
Type of course: Theory	Contact Hours: 4 Hours/week	Total Contact Hours: 60	
Course Outcomes mapped to Professional Ethics: After the completion of course, learner will be able to:		PO Mapped	PSO mapped
CO1	Understand the concepts of innovator and generic drugs, drug development process and the Regulatory guidance and guidelines for filing and approval process.	1,2,4,6,7,9,11	1, 2
CO2	Develop and submit the dossiers in CTD/ eCTD formats and the post approval regulatory requirements for actives and drug products	1,2,3,4,7,8,10	1,2
CO3	Understand the requirements in the clinical trials settings and pharmacovigilance activities	1,2,3,4,5,6,7,8,9,10,11	1,2,3
CO4	To correlate the theoretical knowledge with professional and practical need of pharmaceutical industry.	1,2,3,4,5,6,7,8,10,11	3
Topics covered:			

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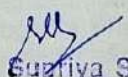
Unit I:	Documentation in pharmaceutical industry and regulatory requirement for product approval	Hours: 24
a. Documentation in Pharmaceutical industry: Master formula record, DMF (Drug Master File), distribution records. Generic drugs product development Introduction , Hatch- Waxman act and amendments, CFR (CODE OF FEDERAL REGULATION) ,drug product performance, in-vitro, ANDA regulatory approval process, NDA approval process, BE and drug product assessment, in –vivo, scale up process approval changes, post marketing surveillance, outsourcing BA and BE to CRO. b. Regulatory requirement for product approval: API, biologics, novel, therapies obtaining NDA, ANDA for generic drugs ways and means of US registration for foreign drugs		
Unit II:	CMC, post approval regulatory affairs	Hours: 12
Regulation for combination products and medical devices.CTD and ECTD format, industry and FDA liaison. ICH - Guidelines of ICH-Q, S E, M. Regulatory requirements of EU, MHRA, TGA and ROW countries		
Unit III:	Non clinical drug development	Hours: 12
Non clinical drug development: Global submission of IND, NDA, ANDA. Investigation of medicinal products dossier, dossier (IMPD) and investigator brochure (IB).		
Unit IV:	Clinical trials	Hours: 12
Developing clinical trial protocols. Institutional review board/ independent ethics committee Formulation and working procedures informed Consent process and procedures. HIPAA- new, requirement to clinical study process, pharmacovigilance safety monitoring in clinical trials.Clinical trials: Developing clinical trial protocols. Institutional review board/ independent ethics committee Formulation and working procedures informed Consent process and procedures. HIPAA- new, requirement to clinical study process, pharmacovigilance safety monitoring in clinical trials		

3.8. Biostatistics and Research Methodology

Course: Biostatistics & Research Methodology (CBCS)			
Course Code: MPH_C_201_T	First Year M. Pharm	Semester: II	
Course Outcomes mapped to Professional Ethics: After the completion of course, learner will be able to:		PO Mapped	PSO mapped
CO1	Students will be able to explain basic research methodologies like objectives study design, review of literature, randomization, types of studies	1,2,6,7,8,9,10,11	1,2,3
CO3	Students will be able to explain the basic concepts of medical research including informed consent, , concepts like	1,2,3,6,7,8,9,10,11	1,2,3

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autonomy, beneficence and non-maleficence, as well as about the declaration of Helsinki and other guidelines like ICH GCP, Nuremberg code which govern ethical conduct of clinical trials		
Topics mapped with Research Methodology:		
Research Methodology		
Unit 7: Objectives and purpose of Research		Hours: 2
Types of research – Educational, clinical, experimental, basic, applied and patent-oriented research		
Unit 8: Literature survey		Hours: 2
Use of library, books and journals, eJournals, retrieving patents and seeking reprints		
Unit 9: Methods and tools used in research		Hours: 6
- Qualitative and quantitative studies - Simple data organization, descriptive data analysis - Limitations and sources of errors - Inquiries in form of questionnaire, opinionnaire or by interview - Statistical analysis of data including variance, standard deviation, standard error, mean, student's t test and annova, correlation of data and its interpretation, computer data analysis		
Unit 10: Scientific writing and reporting		Hours:3
- Different types of research papers - Title and author names - Abstract and key words - Methodology		
Unit 11: Scientific Presentation		Hours:3
- Importance, types and different skills - Content, format of model, introduction and ending - Skills for oral presentation and types of visual aids - Questionnaire		
Unit 12: Patents and Trade marks		Hours:4
- The Indian patent system - Present status of intellectual property rights (IPR) - Product patents and process patent - Requirements and preparation of patent proposal - Registration of patent in foreign countries		



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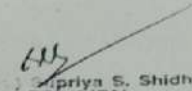
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Professional Ethics: Supporting Activities

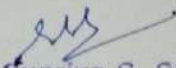
3.9. World Pharmacist Day Celebration:



if knowledge is the light, then you are this
guiding star that gives us this light.
thanks to you, we abandoned ignorance
and got ready to explore this wonderful
world full of knowledge and amazing
mysteries!
Thank you for being our friend like our
parents. We are lucky to have a wonderful
loving kind honest and caring teacher
like you
Happy teachers day!!


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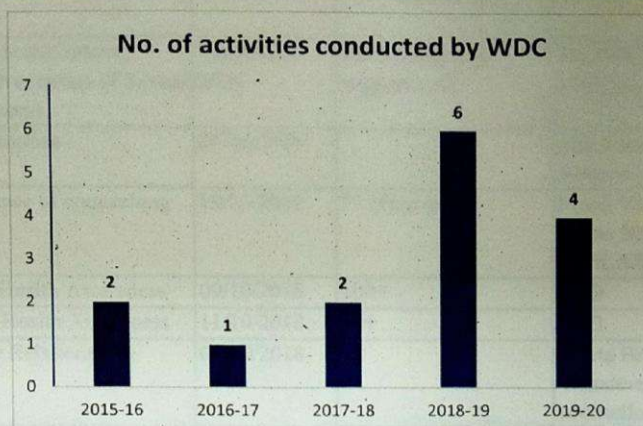

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Gender Equality

Women Development Cell

Gender Equality:

5.1. Summary of the activities conducted by WDC:



5.2. Details of the activities conducted by WDC from 2016-17 to 2020-21:

Year	Title of the Gender sensitization Programme	Duration (From – To)	Number of participants / Target Audience	Name of Speaker
2020-21	POSH (Prevention of sexual harassment)	18/03/2021		Mrs. Kinjal Pandya
	"Understanding and addressing sexual harassment in campus"	16/03/2021	FY & SY	VESLARC
	Assertiveness and confident body language	27/10/2020	Final Year & Third Year	Mrs Piya Mukherji
	Gender Sensitization	13/07/2020	Final Year & Third Year	Mrs Piya Mukherji
	Gender Sensitization	11/08/2020	Second Year	Mrs Piya Mukherji
	POSH (Prevention of sexual harassment)	13/08/2020	Third Year & Final Year	Mrs Piya Mukherji
2019-20	Gender sensitization activity by VESLARC.	21 st January 2020	85 girls and boys.	Mrs Piya Mukherji & Ms. Preeti Vasudevan
	Menstrual hygiene awareness campaign	05/01/2020	100	PHO

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Year	Title of the Gender sensitization Programme	Duration (From – To)	Number of participants / Target Audience	Name of Speaker
	Gender Sensitization , PoSH (Prevention of Sexual Harassment)	7 th March 2020	46 teaching and support staff	Dr. Piya Mukherjee, Director, VESLARC
2018-19	Sex Education	27/09/2018		Mrs Niyati N Shah, Sexuality Educator
2018-19	Importance of counselling	19/03/2019	77 (First year)	Preeti Vasudevan and Meeta BrahmBhatt, VESLARC
2018-19	Sexual Health Awareness	09/10/2018	100+	PHO
2018-19	Mental Health Awareness	11/10/2018	40+	PHO
2018-19	Healthy Relationships	04/09/2018	12	Meeta BrahmBhatt, Preeti Vasudevan : VESLARC counsellor
2018-19	Menstrual Hygiene	9th January 2019	50+	PHO
2017-18	Gender Sensitization Workshop	28th November, 2017	22	Mrs RamalaxmiAnand
2017-18	Gender Sensitization	10 March 2018	50	Dr. Ramalakshmi Anand



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