

# SNJB's SHRIMAN SURESHDADA JAIN COLLEGE OF PHARMACY JAIN GURUKUL, NEMINAGAR, AT/P. CHANDWAD,

IQAC
Chandwad
Dist. Nashik
423101

Tal. Chandwad, Dist. Nashik-423 101.

#### 1.4. Feedback System

1.4.1 Institution obtains feedback on the academic performance and ambience of the institution from various stakeholders, such as Students, Teachers, Employers, Alumni etc. and action taken report on the feedback is made available on institutional website

## Action Taken Report Academic Year 2022-23

Sr.	Stake	Observation	Plan	Action Taken
No 1.	Holder Teacher	Few suggestions on curriculum of B. Pharm and M.Pharm	Suggestion regarding the inclusion of some theory topics and practicals in the syllabus of B.Pharm and M.Pharm communicated to Chairman, BOS	Chairman, Board of Studies, Savitribai Phule University, Pune (SPPU) assured to discuss suggestion in next BOS meeting
		Update the name of CPCSEA to CCSEA in pharmacology curriculum of B. Pharm, M. Pharm and PhD.	Request to update CPCSEA to CCSEA in pharmacology curriculum communicated to Chairman, BOS of Pharmacology.	Chairman, Board of Studies, Savitribai Phule University, Pune (SPPU) assured to discuss suggestion in next BOS meeting
2.	Employer	Level of diversity among graduates should be developed	Students are encourage to participate in diversified programs like cultural activity, NSS activity, Sports participation and competitive examination.	Students were actively involved in various diversified programs to build up various skill like leadership, team work, communication, problemsolving, and time management.
		College's courses provide practical and relevant skills and knowledge to effectively address current industry		Pharmaceutics practicals of third and final year B. Pharm students are industry oriented. Syllabus from Novel drug delivery systems and



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SNJB'S SHRIMAN SURESHDADA JAIN
COLLEGE OF PHARMAC: MEMINAGAR
CHANDWAD (NASHE)



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		challenges and demands.		Industrial Pharmacy II effectively address current industry challenges and demands.
		Whether the education and training provided by the college enable graduates to be flexible and continuously learn as the industry advances.	To provide education and training by expert talk session. Students should be promoted for Industrial training.	SNJB Pharmacon
3.	Alumni	The institute's training has contributed to success and performance in professional career.	To actively conduct Student Mentor activity, interaction with alumni students, organize expert talk	2007 80 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
		Competitive examination guidance for students	To organize expert talk, mock test, special lecture by SSDJ faculty	Different activities like expert talk, mock test, special lecture and mentoring by faculty from our college were organized
4.	Parents	Special guidance for students for competitive examination and industry institute interaction should be agreed	To organize expert talk of alumni students and industry expert should be arranged.	Expert session by industry people and alumni students were organized







#### SNJB's SHRIMAN SURESHDADA JAIN

## COLLEGE OF PHARMAC

Approved by PCI, AICTE New Delhi & D.T.E. Mumbai.

Permanently Affiliated to SavItribai Phule Pune University, Pune ( UG & PG )

Awarded as Best Professional College (Rural) by Savitribal Phule Pune University, Pune

Ref No: SSDJCOPh/2023-24/565

To, Dr. N. S. Vyawahare Chairman, Board of studies (BoS) in Pharmacology Faculty of Science and Technology, Savitribai Phule Pune University (SPPU) Pune.

Subject: Request to update the name of CPCSEA to CCSEA in our pharmacology curriculum of B. Pharmacy, M. Pharmacy and Ph.D. Programs.

Reference: Official letter from Department of Animal Husbandry and Dairying, Ministry of Fisheries, Animal Husbandry and Dairying, Government of India. (V-11011/(13)/13/2022/-CPCSEA/DADF, Dated: 06/01/2023)

Dear Sir,

With reference to the above cited subject, the curriculum of B. Pharmacy, M. Pharmacy and Ph.D. in Pharmacology includes "Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA)" as one of the important topic related to structure, function and regulatory guidelines for experiments on animals. The official notification (V-11011/(13)/13/2022/-CPCSEA/DADF) from the Department of Animal Husbandry and Dairying, Ministry of Fisheries, Animal Husbandry and Dairying, Government of India released on 06/01/2023 would be defined as "Committee for the Control and Supervision of Experiments on Animals (CCSEA)". Being a member of BoS in Pharmacology, we are herewith informing you to make necessary changes in the syllabi of SPPU.

The syllabi of Pharmacology in which "CPCSEA" is included are as follows:

Sr. No	Subject with Subject code	Year
1	Experimental Pharmacology (BP810ET)	B. Pharm
2	Pharmacology I (BP408P)	B. Pharm
3	Pharmacological and Toxicological Screening Methods - I (MPL 103T)	M.Pharm
4	Research Methodology and Biostatistics (MRM 301T)	M.Pharm
5	Advanced Pharmacology I	Ph.D. Course work

CHANDWAD DIST. NASHIK

PIN-423101

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Attached herewith, find the copy of Govt. of India notification for your kind perusal.

Thanking you

B. Upaganlawar

Member, Faculty of science and Technology

PRINCIPAL Dr. C. D. Upasani JB's SHRIMAN SURESHDADA JA Professor and Principal LEGE OF PHARMACY, NEMINAC

Member BoS in Pharmacology, SPHANDWAD (NASHIK)

PRINCIPAL SNJB's SHRIMAN SURESHDADA COLLEGE OF PHARMACY, NEMINAGA

CHANDWAD (NASHIK) Neminagar, Chandwad - 423 10 Dist. Nashik (M.S.) India T: 02556 - 252529, 253179

E: principalcop@snjb.org W : www.snjb.org/pharmacy

SPPH PUDE ACADEMIC SECTION Savitriba Phule Pune University

copy to: Academic section

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Ref No: SSDJCOPh/2023-24/565

Date: 14-12-2023

To, Dr. S. V. Amrutkar Chairman, Board of studies (BoS) in Pharmaceutical Chemistry Faculty of Science and Technology, Savitribai Phule Pune University (SPPU) Pune.

Subject: Request to update the name of CPCSEA to CCSEA in our Pharmaceutical Chemistry curriculum of B. Pharmacy, M. Pharmacy and Ph.D. Programs.

Reference: Official letter fromDepartment of Animal Husbandry and Dairying, Ministry of Fisheries, Animal Husbandry and Dairying, Government of India. (V-11011/(13)/13/2022/-CPCSEA/DADF, Dated: 06/01/2023)

Dear Sk.

With reference to the above cited subject, the curriculum of B. Pharmacy, M. Pharmacy and Ph.D. in Pharmaceutical Chemistry includes "Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA)" as one of the important topic related to structure, function and regulatory guidelines for experiments on animals. The official notification (V-11011/(13)/13/2022/-CPCSEA/DADF) from the Department of Animal Husbandry and Dairying, Ministry of Fisheries, Animal Husbandry and Dairying, Government of India released on 06/01/2023 would be defined as "Committee for the Control and Supervision of Experiments on Animals (CCSEA)". Being a member of BoS in Pharmacology, we are herewith informing you to make necessary changes in the syllabi of SPPU.

The syllabi of Pharmaceutical Chemistry in which "CPCSEA" is included are as follows:

Sr. No	Subject with Subject code	Year
1	Quality Control & Quality Assurance (MPA 203T)	M.Pharm
2	Quality Control & Quality Assurance (MQA 103T)	M.Pharm

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Thanking you

Dr. A. B. Upaganlawar

Member, Faculty of science and Technology, SPEC

PRINCIPAL Dr. C. D. UpasagijB's SHRIMAN SURESHDADA JAIN

Professor and Principal LEGE OF PHAR LACY NEMINAGAR Member BoS in Pharmacology, SPPUNDWAD (MASHIK)

PRINCIPAL

SNJB's SHRIMAN SURESHDADA JAIN COLLEGE OF PHARMACY, NEMINAGAR

CHANDWAD (NASHIK)

Neminagar, Chandwad - 423 101. Dist. Nashik (M.S.) India T: 02556 - 252529, 253179

E: principalcop@snjb.org W: www.snjb.org/pharmacy

Copy to: Academic Section, SPPU Pune

Date

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Awarded as Best Professional College (Rural) by Savitribal Phule Pune University, Punehands

Date: 14 12 202

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To, Dr. S B. Bhise Chairman, Board of studies (BoS) in Pharmaceutics Faculty of Science and Technology, Savitribai Phule Pune University (SPPU), Pune.

Subject: Request to update the name of CPCSEA to CCSEA in our Pharmaceutics curriculum of B. Pharmacy, M. Pharmacy and Ph.D. Programs.

Reference: Official letter fromDepartment of Animal Husbandry and Dairying, Ministry of Fisheries, Animal Husbandry and Dairying, Government of India. (V-11011/(13)/13/2022/-CPCSEA/DADF, Dated: 06/01/2023)

Dear Sir.

With reference to the above cited subject, the curriculum of B. Pharmacy, M. Pharmacy and Ph.D. in Pharmaceutics includes "Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA)" as one of the important topic related to structure, function and regulatory guidelines for experiments on animals. The official notification (V-11011/(13)/13/2022/-CPCSEA/DADF) from the Department of Animal Husbandry and Dairying, Ministry of Fisheries, Animal Husbandry and Dairying, Government of India released on 06/01/2023 would be defined as "Committee for the Control and Supervision of Experiments on Animals (CCSEA)". Being a member of BoS in Pharmacology, we are herewith informing you to make necessary changes in the syllabi of SPPU.

The syllabi of Pharmaceutics in which "CPCSEA" is included are as follows:

Sr. No	Subject with Subject code	Year
1	Regulations & Legislations for Drugs and Cosmetics, Medical Devices, Biologicasls & Herbals, and food and Neutraceuticals in India and Intellectual Property Rights (MRA 104T)	
2	Research Methodology and Biostatistics (MRM 301T)	M.Pharm

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PIN-423101

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Attached herewith, find the copy of Govt. of India notification for your kind perusal.

Thanking you

Dr. A. B. Upaganlawar

Member, Faculty of science and Technology, SPPU

COPY to: Academic Section SPPU, pune

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Date

1 8 JAN 2024

Inward No.

PRINCIPAL

Dr. C. D. UpasanijB's SHRIMAN SHRESHDADA JAIN Professor and Rolldipat OF PHARMACAN MEMINAGAR

Member BoS in Pharmacology, SPPU 10 (11.45 HIK)

PRINCIPAL

SNJB's SHRIMAN SURESHDADA JAIN COLLEGE OF PHARMACY, NEMINAGAR

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BP704T

#### NOVEL DRUG DELIVERY SYSTEM (Theory)

Hours

#### Scope:

This subject is designed to impart basic knowledge on the area of novel drug delivery systems.

#### **Objectives:**

Upon completion of the course student shall be able

- 1. To understand various approaches for development of novel drug delivery systems.
- 2. To understand the criteria for selection of drugs and polymers for the development of novel drug delivery systems, their formulation and evaluation.

#### **Course Content:**

#### **UNIT-I**

#### Controlled drug delivery systems:

Introduction, terminology/definitions and rationale, disadvantages, selection of drug candidates. Approaches to design controlled release formulations based on diffusion, dissolution and ion exchange principles. Physicochemical and biological properties of drugs relevant to controlled release formulations

10 Hours

#### Polymers:

Introduction, classification, properties, advantages and application of polymers in formulation of controlled release drug delivery systems.

#### **UNIT-II**

#### Microencapsulation:

Definition, advantages disadvantages, microspheres and /microcapsules, microparticles, methods of microencapsulation, applications

#### Mucosal Drug Delivery system:

Introduction, Principles of bioadhesion / mucoadhesion, concepts, advantages and disadvantages, transmucosal permeability and formulation considerations of buccal delivery systems

10 Hours

#### Implantable Drug Delivery Systems:

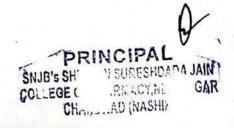
Introduction, advantages and disadvantages, concept of implants and osmotic pump.



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Transdermal Drug Delivery Systems:	
Introduction, Permeation through skin, factors affecting permeation, permeation enhancers, basic components of TDDS, formulation approaches.	
Gastroretentive drug delivery systems:	
Introduction, advantages, disadvantages, approaches for GRDDS – Floating, high density systems, inflatable and gastro adhesive systems and their applications	10 Hours
Nasopulmonary drug delivery system:	
Introduction to Nasal and Pulmonary routes of drug delivery ,Formulation of Inhalers(dry powder and metered dose), nasal sprays,nebulizers.	
UNIT-IV	
Targeted drug Delivery:	
Concepts and approaches advantages and disadvantages, introduction to liposomes, niosomes, nanoparticles, monoclonal antibodies and their applications.	08 Hours
UNIT-V	
Ocular Drug Delivery Systems:	
Introduction, intra ocular barriers and methods to overcome –Preliminary study, ocular formulations and ocuserts	07 Hours
Intrauterine Drug Delivery Systems:	o/ Hours
Introduction, advantages and disadvantages, development of intra uterine devices (IUDs) and applications	
Recommended Books: (Latest Editions)	
<ol> <li>Y W. Chien, Novel Drug Delivery Systems, 2nd edition, revised and expanded, Marcel Dekker, Inc., New York, 1992.</li> </ol>	
<ol> <li>Robinson, J. R., Lee V. H. L, Controlled Drug Delivery Systems, Marcel Dekker, Inc., New York, 1992.</li> </ol>	
3. Encyclopedia of Controlled Delivery. Edith Mathiowitz, Published by	
Wiley Interscience Publication, John Wiley and Sons, Inc, New York.Chichester/Weinheim	





BP702T

#### INDUSTRIAL PHARMACY -II (Theory)

45 Hours

#### Scope:

This course is designed to impart fundamental knowledge on pharmaceutical product development and translation from laboratory to market.

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

- 1. Know the process of pilot plant and scale up of pharmaceutical dosage forms
- 2. Understand the process of technology transfer from lab scale to commercial batch
- 3. Know different Laws and Acts that regulate pharmaceutical industry
- 4. Understand the approval process and regulatory requirements for drug products

#### Course Content:

#### UNIT-I

#### Pilot plant scale up techniques:

General considerations - including significance of personnel requirements, space requirements, raw materials, Pilot plant scale up considerations for solids, liquid orals, semi solids and relevant documentation, SUPAC guidelines, Introduction to platform technology.

10 Hours

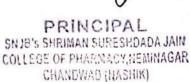
#### UNIT-II

#### Technology development and transfer:

WHO guidelines for Technology Transfer (TT): Terminology, Technology transfer protocol, Quality risk management, Transfer from R & D to production (Process, packaging and cleaning), Granularity of TT Process (API, excipients, finished products, packaging materials) Documentation, Premises and equipments, qualification and validation, quality control, analytical method transfer, Approved regulatory bodies and agencies, Commercialization-practical aspects and problems (cases tudies), TTagencies in India - APCTD, NRDC, TIFAC, BCIL, TBSE / SIDBI; TT related documentation - confidentiality agreement, licensing, MoU's, legal issues

10 Hours



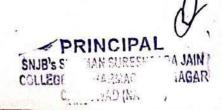






UNIT-III		
Regulatory affairs: Introduction, Historical overview of Regulatory Affairs, Regulatory authorities, Role of Regulatory affairs department, Responsibility of Regulatory Affairs Professionals		
Regulatory requirements for drug approval:		
Drug Development Teams, Non-Clinical Drug Development, Pharmacology,		
Drug MetabolismandToxicology,GeneralconsiderationsofInvestigationalNewDrug(IN	Hours	
D)		
Application, Investigator's Brochure (IB) and New Drug Application (NDA), Clinical research / BE studies, Clinical Research Protocols, Biostatistics in Pharmaceutical		
Product Development, Data Presentation for FDA Submissions, Management of Clinical Studies.		
UNIT-IV		
Indian Regulatory Requirements:		
Central Drug Standard Control Organization (CDSCO) and State Licensing Authority: Organization, Responsibilities, Certificate of Pharmaceutical	07	
Product (COPP), Regulatory requirements and approval procedures for New	Hours	
Drugs.		
UNIT-V Quality management systems:  Quality management & Certifications: Concept of Quality, Total Quality Management, Quality by Design (QbD), Six Sigma concept, Out of Specifications (OOS), Change control, Introduction to ISO 9000 series of quality systems standards, ISO 14000, NABL, GLP	08 Hours	
Recommended Books: (Latest Editions)		
<ol> <li>Regulatory Affairs from Wikipedia, the free encyclopedia modified on 7<sup>th</sup>April available at http,//en.wikipedia.org/wiki/Regulatory_Affairs.</li> </ol>		
<ol> <li>International Regulatory Affairs Updates, 2005.available athttp://www.iraup.com/about.php</li> </ol>	4	
<ol> <li>Douglas J Pisano and David S. Mantus. Text book of FDA Regulatory Affairsa Guide for Prescription Drugs, Medical Devices, and Biologics' Second Edition.</li> </ol>		
<ol> <li>Regulatory Affairs brought by learning plus,inc. available at http://www.cgmp.com/ra.htm.</li> </ol>		







#### 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 Definition, 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-byM.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) 124

### BP 506 P. Industrial Pharmacyl (Practical)

4 Hours/week

- 1. Preformulation studies on paracetamol/asparin/or any other drug
- 2. Preparation and evaluation of Paracetamol tablets
- 3. Preparation and evaluation of Aspirin tablets
- 4. Coating of tablets- film coating of tables/granules
- 5. Preparation and evaluation of Tetracycline capsules

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CHANDWAD (MASHIK)



- 6. Preparation of Calcium Gluconate injection
- 7. Preparation of Ascorbic Acid injection
- 8. Qulaity control test of (as per IP) marketed tablets and capsules
- 9. Preparation of Eye drops/ and Eye ointments
- 10. Preparation of Creams (cold / vanishing cream)
- 11. Evaluation of Glass containers (as per IP)

#### Recommended Books: (Latest Editions)

- 1. Pharmaceutical dosage forms Tablets, volume 1 -3 by H.A. Liberman, Leon Lachman &J.B.Schwartz
- 2. Pharmaceutical dosage form Parenteral medication vol- 1&2 by Liberman & Lachman
- 3. Pharmaceutical dosage form disperse system VOL-1 by Liberman & Lachman
- 4. Modern Pharmaceutics by Gilbert S. Banker & C.T. Rhodes, 3rd Edition
- 5. Remington: The Science and Practice of Pharmacy, 20th edition Pharmaceutical Science (RPS)
- 6. Theory and Practice of Industrial Pharmacy by Liberman & Lachman
- 7. Pharmaceutics- The science of dosage form design by M.E.Aulton, Churchill livingstone, Latest edition
- 8. Introduction to Pharmaceutical Dosage Forms by H. C.Ansel, Lea &Febiger,Philadelphia, 5thedition, 2005
- 9. Drug stability Principles and practice by Cartensen & C.J. Rhodes, 3rd Edition, Marcel Dekker Series, Vol 107.

#### BP 507 P. PHARMACOLOGY-II (Practical)

4Hrs/Week

#### Sr. No Experiment

- 1. Introduction to in-vitro pharmacology and physiological salt solutions.
- 2. Effect of drugs on isolated frog heart.
- 3. Effect of drugs on blood pressure and heart rate of dog.
- 4. Study of diuretic activity of drugs using rats/mice.
- 5. DRC of acetylcholine using frog rectus abdominis muscle.
- 6. Effect of physostigmine and atropine on DRC of acetylcholine using frog rectus



