



SRI MANAKULA VINAYAGAR
ENGINEERING COLLEGE
(AN AUTONOMOUS INSTITUTION)

SMVEC PHARMACY COLLEGE

MINUTES OF 5th MEETING OF BOARD OF STUDIES (UG)

Venue: Board Room-II, Admin Block

Date: 23/10/2025

2025-26



SRI MANAKULA VINAYAGAR
ENGINEERING COLLEGE
TAM KHAIDHODGUS TROTHIDHANI

SMVEC PHARMACY COLLEGE

Minutes of 5th Meeting of Board of Studies (UG/DIPLOMA)

The Fifth Meeting of the Board of Studies (BoS) of the Department of Pharmacy was held on **23rd October at 10:30 AM** in Board Room – II, SMVEC Pharmacy College, with the Head of the Department in the Chair.

The following members were present for the BoS meeting

Sl. No.	Name of the Member	Designation
Head of the Department (Chairperson)		
1	Dr. M. Dhanalakshmi, Dean, Department of Pharmacy, Specialization: Pharmaceutical Quality Assurance Years of Experience: 17 years 3 months SMVEC Pharmacy College dhanadlxb@gmail.com Mobile: 9550169191	Chairperson
One expert nominated by the Vice-Chancellor, Pondicherry University from a panel of six recommended by the college principal.		
2	Dr. Nisha Mathew, Director Grade Scientist (Retd.), ICMR-Vector Control Research Centre, Indira Nagar, Gorimedu, Puducherry-605006. nisha.mathew@icmr.gov.in / nishamathew@yahoo.com Mobile: 9444935790	Subject Expert
Two subject experts from outside the Parent University nominated by the Academic Council		
3	Dr. Kailasam Koumaravelou, Dean, Specialization: Pharmacology Years of Experience: 25 Prist School of Pharmacy, Manamainallur, Kancheepuram Dist. koumar@gmail.com Mobile: 9443309034	Subject Expert

4	Dr. V. Vijayan Associate Dean Research Specialization: Pharmaceutics Years of Experience:16 Sri Balaji Vidyapeeth (Deemed to be University) Puducherry . vijayanv@gmail.com Mobile: 9751391078	Subject Expert
One representative from industry/corporate sector/allied area relating to placement.		
5	Dr. E. Anandakirouchenane Controlling Authority cum Licensing Authority, Department of Drug Control, Puducherry. e.anandakirouchenana@py.gov.in Mobile: 9443957680	Member
Experts from outside the Autonomous College, whenever special course of studies is to be formulated.		
6	Dr. N. Kannappan Professor Department of Pharmacy, Annamalai University, Annamalai Nagar 608002 kannappanpharmacy@gmail.com Mobile: 7010924748	Subject Expert
7.	Mr. S. Mathivanan Assistant Professor, SMVEC Pharmacy College, Madagadipet, Puducherry – 605501 drxmathinanotech@gmail.com Mobile: 9344438146	Member
8.	Dr.P.Bhavani Assistant Professor, SMVEC Pharmacy College, Madagadipet, Puducherry – 605501 Bhava.biochemist0221@gmail.com Mobile: 8438310221	Member
9.	Dr.K.Ramprasad Assistant Professor,SMVEC Pharmacy College , Madagadipet,Puducherry -605107 ramrampari23@gmail.com Mobile:7538843986	Member

Special Invitees		
10.	Dr. S. Anbumalar Dean Academics Sri Manakula Vinayagar Engineering College, Madagadipet, Puducherry-605107 Mobile:9443179533	Dean Academics
11.	Dr. Arivalagar. A.A Dean Academics Sri Manakula Vinayagar Engineering College, Madagadipet, Puducherry-605107 Mobile: 78100 75545	Dean Academics

Agenda of the Meeting	
Agenda 1/ BoS /5 /2025 /Pharmacy/UG/Diploma	To confirm the minutes of 4th BOS Meeting held on 06/03/2025
Agenda 2/ BoS /5 /2025 /Pharmacy/ UG/Diploma	To discuss and approve the Curriculum and Syllabi of VII Semester of B. Pharmacy Programme in SMVEC Pharmacy college.
Agenda 3/ BoS /5 /2025 /Pharmacy/ UG/Diploma	To review the Academic Activities for B.Pharmacy & Diploma in Pharmacy Programme from the Academic year 2025.-26 a) Curriculum Activity b) Co-curriculum Activity c)Extra-curriculum Activity
Agenda 4/ BoS /5 /2025 /Pharmacy/ UG/Diploma	To recommend the panel of examiners for Evaluation and the External members for the B. Pharm programme to the Academic Council.
Agenda 5/ BoS /5 /2025 /Pharmacy/ UG/Diploma	To discuss and approve the Syllabus for Certificate Course Artificial Intelligence and 3-D Printing in VI Semester
Agenda 6/ BoS /5/2025/Pharmacy/ UG/Diploma	Any other additional points to be discussed with the permission of Chair.


Dean
SMVEC Pharmacy College
Madagadipet,
Puducherry.

Dr. M. Dhanalakshmi, Chairperson, BoS opened the meeting by welcoming all the members and the meeting thereafter deliberated on agenda items that had been approved by the Members of BoS.

Agenda 1/BoS /5 /2025 /Pharmacy/UG/Diploma

To Confirm the minutes of 4th BOS Meeting held on 06/03/2025.

S.No	Suggestion Made	Action Taken
1.	Ratification for Assessment procedure for Mandatory Non-Credit Courses in SMVEC Pharmacy Regulation (R-2023)	It was resolved to approve the ratification of the assessment procedure for Mandatory Non-Credit Courses for all semesters of the B.Pharm programme under SMVEC Pharmacy Regulations (R-2023).

Agenda 2/BoS / 5 /2025 /Pharmacy/UG/Diploma

To discuss and approve the Curriculum and Syllabi of VII Semester of B. Pharmacy Programme in SMVEC Pharmacy college.

Members of BoS confirmed the syllabi of VII Semester of B. Pharmacy Programme in SMVEC Pharmacy college. **Annexure I**

Agenda 3/BoS /5 /2025/Pharmacy/ UG/Diploma

To review the Academic Activities for B. Pharmacy Programme from the Academic year 2025-26.

- a) Curriculum Activity
- b) Co-curriculum Activity
- c) Extra-curriculum Activity

The Members of the Board of Studies appreciated the academic activities, including curriculum, co-curricular, and extra-curricular activities, conducted for the B.Pharmacy Programme from the academic year 2025–26. **Annexure II**

Agenda 4/BoS /5 /2025/Pharmacy/ UG/Diploma

To recommend the panel of examiners for Evaluation and the External members for the B. Pharm programme to the Academic Council.

Members of BoS confirmed the Panel of examiners for B. Pharm Programme to the Academic Council. The List of Examiners are given in **Annexure III**

Agenda 5/BoS /5 /2025 /Pharmacy/UG/ Diploma

To discuss and approve the syllabus for the Mandatory Non-Credit Course titled Artificial Intelligence and 3-D Printing (Certificate Course) in the VII Semester.


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Members of BoS confirmed the syllabi for Certificate Course Artificial Intelligence and 3-D Printing in VII Semester .**Annexure IV**

Agenda 6/BoS /5 /2025/Pharmacy/ UG/Diploma

Any other additional points to be discussed with the permission of Chair.

The End Semester Examination (ESE) results are submitted and Members of the Board of Studies (BoS) appreciated the efforts made by the Dean and Staff members in the Academic Progress.

The SMVEC pharmacy Dean enclosed the presentation for the upcoming events like National Pharmacy Week Celebration and Online FDP Program.

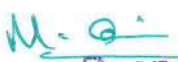
The Dean of Pharmacy, SMVEC, presented the proposal to the Members of the Board of Studies for the change of the institution's name in the Pharmacy Council of India (PCI) records from '**SMVEC Pharmacy College**' to '**SMVEC School of Pharmacy**', from the academic year 2025–26.

The Dean of Pharmacy, SMVEC, presented and enclosed the Pharmacy Council of India (PCI) affiliation details for the Academic Year 2025–2026 for both D. Pharmacy and B. Pharmacy programmes.

The BoS members suggested the following

S.No	Suggestion given by BoS Members	Action taken
1	For all the Mandatory Non-Credit courses subject code to be mentioned (as discussed on 5 th BoS meeting held on 23.10.2025)	Hence, based on the recommendation by BoS members, Subject code has been allotted for the Mandatory Non-Credit Courses. Annexure V for Your approval.
2	For Industrial training, Institute has to allot 4-5 students for one industry.	Conversations made with the MoU signed Industries, and planning for furthermore MoU's with the industries.
3	To conduct soft skill program for students	Steps are taken to conduct soft skill programs for the students

The Fifth BoS Meeting was concluded at 4.00 PM by proposing a Vote of Thanks by **Dr. M. Dhanalakshmi**, Chairperson, Board of Studies, SMVEC Pharmacy College.


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SMVEC Pharmacy College
Madagadipet,
Puducherry.

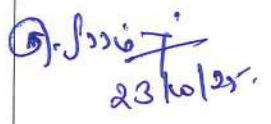


SRI MANAKULA VINAYAGAR
ENGINEERING COLLEGE

SMVEC PHARMACY COLLEGE

The Fifth meeting of BOS approval was concluded at 1.00 PM by Dr.M.Dhanalakshmi, Chairperson, Board of Studies, Department of Pharmacy, Sri Manakula Vinayagar Engineering College.

Sl. No.	Name of the Member with Official Address	Designation	Signature
1.	Dr. M. Dhanalakshmi, Dean, Department of Pharmacy, SMVEC Pharmacy College	Chairperson	M.D. 23/10/2025
2.	Dr. Nisha Mathew, Director Grade Scientist (Retd.), ICMR-Vector Control Research Centre, Indira Nagar, Gorimedu, Puducherry-605006.	Subject Expert	Nisha
3.	Dr. Kailasam Koumaravelou, Dean, Prist School of Pharmacy, Manamainallur, Kancheepuram Dist	Subject Expert	K. K. 23/10/2025
4.	Dr. V.Vijayan Associate Dean Research Sri Balaji Vidyapeeth (Deemed to be University) Puducherry.	Subject Expert	V.V. 23/10/2025
5.	Dr. E. Anandakirouchenane Controlling Authority cum Licensing Authority, Department of Drug Control, Puducherry.	Member	E.A.
6.	Dr. N. Kannappan Professor Department of Pharmacy, Annamalai University, Annamalai Nagar 608002	Subject Expert	N. Kannappan 23/10/2025
7.	Dr. S. Anbumalar Dean Academics Sri Manakula Vinayagar Engineering College, Madagadipet, Puducherry.	Special Invitees	
8.	Dr. Arivalagar. AA Dean Academics Sri Manakula Vinayagar Engineering College, Madagadipet, Puducherry.	Special Invitees	AA Arivalagar

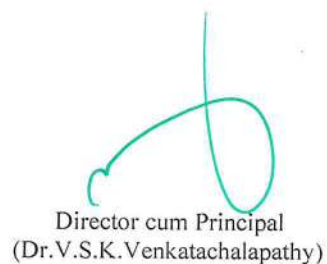
9.	Mr. S. Mathivanan Assistant Professor, SMVEC Pharmacy College, Madagadipet, Puducherry – 605107	Member	 23/10/2025
10.	Dr.P.Bhavani Assistant Professor, SMVEC Pharmacy College, Madagadipet, Puducherry -605107	Member	 23/10/2025
11.	Dr.K.Ramprasad Assistant Professor, SMVEC Pharmacy College, Madagadipet, Puducherry -605107	Member	 23/10/25.



Chairperson /BOS/Pharmacy
(Dr.M.Dhaalakshmi)



Dean Academics
(Dr.A.A.Arivalagar)



Director cum Principal
(Dr.V.S.K.Venkatachalapathy)

Conducting of 5th BOS in SMVEC Pharmacy College -Reg

Dean Pharmacy SMVEC <deanpharmacy@smvec.ac.in>
to: Koutumaravelou

Respected Sir/Madam,

Greetings from the SMVEC Pharmacy College.

We are pleased to inform you that the 5th Meeting of the Board of Studies in the Department of Pharmacy is proposed to be held on Thursday, October 23, 2025, at Sri Manakula Vinayagar Engineering College (Autonomous), Puducherry

We request your kind approval for the same. Kindly confirm your acceptance at your earliest convenience through email.

Thank you for your continued support and cooperation.

With Regards,
Dr. M. Dharmalakshmi
Dean
SMVEC- Pharmacy College
Puducherry

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Puducherry

K **koumaravelou**
to me

Oct 13, 2025, 5:47 PM

Acknowledging and accepting the invitation

Thanks & Regards

Dr.Kallasam Koumaravelou, M.Pharm,Ph.D.
Ph. +91 94433 09034

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SMVEC- Pharmacy College
Puducherry

n **Nisha Mathew**
to me

Mon, Oct 13, 5:03 PM

APPROVED

Sincerely,
Dr Nisha Mathew

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Puducherry.

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Mon, Oct 13, 6:51 PM

Dr. V. Vijayan
to me

Dear madam,

I accept the invitation and I will attend the same.

Regards

Dr. Vijayan, M. Pharm, PhD.,
HIP: +919751391078.

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Tue, Oct 14, 1:57 PM

Kannappan Nagappan
to me

Dr. Dhana Lakshmi

Noted the contents of your email and I will attend the 5th BOS meeting on 23rd Oct 2025.

With regards

Dr. N. KANNAPPAN M. Pharm., Ph.D.
Professor of Pharmacy
Department of Pharmacy
Annamalai University (Tamil Nadu State Govt. University)
Annamalai Nagar Post 608002
Tamil Nadu, India
Cell: +91 9443873647

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Dean Pharmacy SMVEC

Respected Sir/Madam, Greetings from the SMVEC Pharmacy College. We are pleased to inform you that the 5th Meeting of the Board of Studies in th...

Mon, Oct 13, 4:31 PM

★

ANANDAKIROUCHENANEE

Respected Madam,

Tue, Oct 14, 10:55 AM

★

Noted . will attend virtually.

With regards,

Dr.E.Anandakirouchenane,
Drugs Controlling cum Licensing Authority,
Department of Drugs Control,
Government of Puducherry.

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Faculty credentials

NOC university

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----- On Mon, 13 Oct 2025 16:31:11 +0530 <deanpharmacy@smvec.ac.in> wrote ---

Annexure I

Syllabi of VII Semester of B. Pharmacy Programme (as prescribed by PCI) in SMVEC
Pharmacy college.

SEMESTER VII

BP701T. INSTRUMENTAL METHODS OF ANALYSIS (Theory)

45 Hours

Scope: This subject deals with the application of instrumental methods in qualitative and quantitative analysis of drugs. This subject is designed to impart a fundamental knowledge on the principles and instrumentation of spectroscopic and chromatographic technique. This also emphasizes on theoretical and practical knowledge on modern analytical instruments that are used for drug testing.

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

1. Understand the interaction of matter with electromagnetic radiations and its applications in drug analysis
2. Understand the chromatographic separation and analysis of drugs.
3. Perform quantitative & qualitative analysis of drugs using various analytical instruments.

Course Content:

UNIT –I

10 Hours

UV Visible spectroscopy

Electronic transitions, chromophores, auxochromes, spectral shifts, solvent effect on absorption spectra, Beer and Lambert's law, Derivation and deviations.

Instrumentation - Sources of radiation, wavelength selectors, sample cells, detectors- Photo tube, Photomultiplier tube, Photo voltaic cell, Silicon Photodiode.

Applications - Spectrophotometric titrations, Single component and multi component analysis

Fluorimetry

Theory, Concepts of singlet, doublet and triplet electronic states, internal and external conversions, factors affecting fluorescence, quenching, instrumentation and applications

UNIT –II

10 Hours

IR spectroscopy

Introduction, fundamental modes of vibrations in poly atomic molecules, sample handling, factors affecting vibrations

Instrumentation - Sources of radiation, wavelength selectors, detectors - Golay cell, Bolometer, Thermocouple, Thermister, Pyroelectric detector and applications

Flame Photometry-Principle, interferences, instrumentation and applications

Atomic absorption spectroscopy- Principle, interferences, instrumentation and applications

Nepheloturbidometry- Principle, instrumentation and applications

UNIT –III

10 Hours

Introduction to chromatography

Adsorption and partition column chromatography-Methodology, advantages, disadvantages and applications.

Thin layer chromatography- Introduction, Principle, Methodology, R_f values, advantages, disadvantages and applications.

Paper chromatography-Introduction, methodology, development techniques, advantages, disadvantages and applications

Electrophoresis– Introduction, factors affecting electrophoretic mobility, Techniques of paper, gel, capillary electrophoresis, applications

UNIT –IV

08 Hours

Gas chromatography - Introduction, theory, instrumentation, derivatization, temperature programming, advantages, disadvantages and applications

High performance liquid chromatography (HPLC)-Introduction, theory, instrumentation, advantages and applications.

UNIT –V

07 Hours

Ion exchange chromatography- Introduction, classification, ion exchange resins, properties, mechanism of ion exchange process, factors affecting ion exchange, methodology and applications

Gel chromatography- Introduction, theory, instrumentation and applications

Affinity chromatography- Introduction, theory, instrumentation and applications


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BP705P. INSTRUMENTAL METHODS OF ANALYSIS (Practical)

4 Hours/Week

- 1 Determination of absorption maxima and effect of solvents on absorption maxima of organic compounds
- 2 Estimation of dextrose by colorimetry
- 3 Estimation of sulfanilamide by colorimetry
- 4 Simultaneous estimation of ibuprofen and paracetamol by UV spectroscopy
- 5 Assay of paracetamol by UV- Spectrophotometry
- 6 Estimation of quinine sulfate by fluorimetry
- 7 Study of quenching of fluorescence
- 8 Determination of sodium by flame photometry
- 9 Determination of potassium by flame photometry
- 10 Determination of chlorides and sulphates by nephelo turbidometry
- 11 Separation of amino acids by paper chromatography
- 12 Separation of sugars by thin layer chromatography
- 13 Separation of plant pigments by column chromatography
- 14 Demonstration experiment on HPLC
- 15 Demonstration experiment on Gas Chromatography

Recommended Books (Latest Editions)

1. Instrumental Methods of Chemical Analysis by B.K Sharma
2. Organic spectroscopy by Y.R Sharma
3. Text book of Pharmaceutical Analysis by Kenneth A. Connors
4. Vogel's Text book of Quantitative Chemical Analysis by A.I. Vogel
5. Practical Pharmaceutical Chemistry by A.H. Beckett and J.B. Stenlake
6. Organic Chemistry by I. L. Finar
7. Organic spectroscopy by William Kemp
8. Quantitative Analysis of Drugs by D. C. Garrett
9. Quantitative Analysis of Drugs in Pharmaceutical Formulations by P. D. Sethi
10. Spectrophotometric identification of Organic Compounds by Silverstein


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BP 702 T. INDUSTRIAL PHARMACYII (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

10 Hours

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

UNIT-II

10 Hours

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 (case studies), TT agencies in India - APCTD, NRDC, TIFAC, BCIL, TBSE / SIDBI; TT related documentation - confidentiality agreement, licensing, MoUs, legal issues

UNIT-III

10 Hours

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 Metabolism and Toxicology, General considerations of Investigational New Drug (IND) 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.


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UNIT-IV

08 Hours

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

UNIT-V

07 Hours

Indian Regulatory Requirements: Central Drug Standard Control Organization (CDSCO) and State Licensing Authority: Organization, Responsibilities, Certificate of Pharmaceutical Product (COPP), Regulatory requirements and approval procedures for New Drugs.

Recommended Books: (Latest Editions)

1. Regulatory Affairs from Wikipedia, the free encyclopedia modified on 7th April available at http://en.wikipedia.org/wiki/Regulatory_Affairs.
2. International Regulatory Affairs Updates, 2005. available at <http://www.iraup.com/about.php>
3. Douglas J Pisano and David S. Mantus. Text book of FDA Regulatory Affairs A Guide for Prescription Drugs, Medical Devices, and Biologics' Second Edition.
4. Regulatory Affairs brought by learning plus, inc. available at <http://www.cgmp.com/ra.htm>.

M. Q.
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BP 703T. PHARMACY PRACTICE (Theory)

45 Hours

Scope: In the changing scenario of pharmacy practice in India, for successful practice of Hospital Pharmacy, the students are required to learn various skills like drug distribution, drug information, and therapeutic drug monitoring for improved patient care. In community pharmacy, students will be learning various skills such as dispensing of drugs, responding to minor ailments by providing suitable safe medication, patient counselling for improved patient care in the community set up.

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

1. know various drug distribution methods in a hospital
2. appreciate the pharmacy stores management and inventory control
3. monitor drug therapy of patient through medication chart review and clinical review
4. obtain medication history interview and counsel the patients
5. identify drug related problems
6. detect and assess adverse drug reactions
7. interpret selected laboratory results (as monitoring parameters in therapeutics) of specific disease states
8. know pharmaceutical care services
9. do patient counseling in community pharmacy;
10. appreciate the concept of Rational drug therapy.

Unit I:

10 Hours

a) Hospital and its organization

Definition, Classification of hospital- Primary, Secondary and Tertiary hospitals, Classification based on clinical and non- clinical basis, Organization Structure of a Hospital, and Medical staffs involved in the hospital and their functions.

b) Hospital pharmacy and its organization

Definition, functions of hospital pharmacy, Organization structure, Location, Layout and staff requirements, and Responsibilities and functions of hospital pharmacists.

c) Adverse drug reaction

Classifications - Excessive pharmacological effects, secondary pharmacological effects, idiosyncrasy, allergic drug reactions, genetically determined toxicity, toxicity following sudden withdrawal of drugs, Drug interaction- beneficial interactions, adverse interactions, and pharmacokinetic drug interactions, Methods for detecting

drug interactions, spontaneous case reports and record linkage studies, and Adverse drug reaction reporting and management.

d) Community Pharmacy

Organization and structure of retail and wholesale drug store, types and design, Legal requirements for establishment and maintenance of a drug store, Dispensing of proprietary products, maintenance of records of retail and wholesale drug store.

Unit II:

10 Hours

a) Drug distribution system in a hospital

Dispensing of drugs to inpatients, types of drug distribution systems, charging policy and labelling, Dispensing of drugs to ambulatory patients, and Dispensing of controlled drugs.

b) Hospital formulary

Definition, contents of hospital formulary, Differentiation of hospital formulary and Drug list, preparation and revision, and addition and deletion of drug from hospital formulary.

c) Therapeutic drug monitoring

Need for Therapeutic Drug Monitoring, Factors to be considered during the Therapeutic Drug Monitoring, and Indian scenario for Therapeutic Drug Monitoring.

d) Medication adherence

Causes of medication non-adherence, pharmacist role in the medication adherence, and monitoring of patient medication adherence.

e) Patient medication history interview

Need for the patient medication history interview, medication interview forms.

f) Community pharmacy management

Financial, materials, staff, and infrastructure requirements.

Unit III:

10 Hours

a) Pharmacy and therapeutic committee

Organization, functions, Policies of the pharmacy and therapeutic committee in including drugs into formulary, inpatient and outpatient prescription, automatic stop order, and emergency drug list preparation.

b) information services

Drug

M. G.
Dean

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Puducherry.

Drug and Poison information centre, Sources of drug information, Computerised services, and storage and retrieval of information.

c)

Patient

counseling

Definition of patient counseling; steps involved in patient counseling, and Special cases that require the pharmacist

d) Education and training program in the hospital

Role of pharmacist in the education and training program, Internal and external training program, Services to the nursing homes/clinics, Code of ethics for community pharmacy, and Role of pharmacist in the interdepartmental communication and community health education.

e) Prescribed medication order and communication skills

Prescribed medication order- interpretation and legal requirements, and Communication skills- communication with prescribers and patients.

Unit IV

8 Hours

a)

Budget

preparation and implementation

Budget preparation and implementation

b) Clinical Pharmacy

Introduction to Clinical Pharmacy, Concept of clinical pharmacy, functions and responsibilities of clinical pharmacist, Drug therapy monitoring - medication chart review, clinical review, pharmacist intervention, Ward round participation, Medication history and Pharmaceutical care.

Dosing pattern and drug therapy based on Pharmacokinetic & disease pattern.

c) Over the counter (OTC) sales

Introduction and sale of over the counter, and Rational use of common over the counter medications.

Unit V

7 Hours

a) Drug store management and inventory control

Organisation of drug store, types of materials stocked and storage conditions, Purchase and inventory control: principles, purchase procedure, purchase order, procurement and stocking, Economic order quantity, Reorder quantity level, and Methods used for the analysis of the drug expenditure

b) Investigational use of drugs

Description, principles involved, classification, control, identification, role of hospital pharmacist, advisory committee.

c) Interpretation of Clinical Laboratory Tests

Blood chemistry, hematology, and urinalysis

Recommended Books (Latest Edition):

1. Merchant S.H. and Dr. J.S. Quadry. *A textbook of hospital pharmacy*, 4th ed. Ahmadabad: B.S. Shah Prakakshan; 2001.
2. Parthasarathi G, Karin Nyfort-Hansen, Milap C Nahata. *A textbook of Clinical Pharmacy Practice- essential concepts and skills*, 1st ed. Chennai: Orient Longman Private Limited; 2004.
3. William E. Hassan. *Hospital pharmacy*, 5th ed. Philadelphia: Lea & Febiger; 1986.
4. Tipnis Bajaj. *Hospital Pharmacy*, 1st ed. Maharashtra: Career Publications; 2008.
5. Scott LT. *Basic skills in interpreting laboratory data*, 4th ed. American Society of Health System Pharmacists Inc; 2009.
6. Parmar N.S. *Health Education and Community Pharmacy*, 18th ed. India: CBS Publishers & Distributers; 2008.

Journals:

1. Therapeutic drug monitoring. ISSN: 0163-4356
2. Journal of pharmacy practice. ISSN : 0974-8326
3. American journal of health system pharmacy. ISSN: 1535-2900 (online)
4. Pharmacy times (Monthly magazine)

M. Q.
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Puducherry.

BP 704T: NOVEL DRUG DELIVERY SYSTEMS (Theory)

45 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

10 Hours

Controlled drug delivery systems: Introduction, terminology/definitions and rationale, advantages, 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

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

Unit-II

10 Hours

Microencapsulation: Definition, advantages and disadvantages, microspheres /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

Implantable Drug Delivery Systems: Introduction, advantages and disadvantages, concept of implants and osmotic pump

Unit-III

10 Hours

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 gastroadhesive systems and their applications

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

08 Hours


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Targeted drug Delivery: Concepts and approaches advantages and disadvantages, introduction to liposomes, niosomes, nanoparticles, monoclonal antibodies and their applications

Unit-V

07 Hours

Ocular Drug Delivery Systems: Introduction, intra ocular barriers and methods to overcome –Preliminary study, ocular formulations and ocuserts

Intrauterine Drug Delivery Systems: Introduction, advantages and disadvantages, development of intra uterine devices (IUDs) and applications

Recommended Books: (Latest Editions)

1. Y W. Chien, Novel Drug Delivery Systems, 2nd edition, revised and expanded, Marcel Dekker, Inc., New York, 1992.
2. Robinson, J. R., Lee V. H. L, Controlled Drug Delivery Systems, Marcel Dekker, Inc., New York, 1992.
3. Encyclopedia of Controlled Delivery. Edith Mathiowitz, Published by Wiley Interscience Publication, John Wiley and Sons, Inc, New York. Chichester/Weinheim
4. N.K. Jain, Controlled and Novel Drug Delivery, CBS Publishers & Distributors, New Delhi, First edition 1997 (reprint in 2001).
5. S.P. Vyas and R.K. Khar, Controlled Drug Delivery -concepts and advances, Vallabh Prakashan, New Delhi, First edition 2002.

Journals

1. Indian Journal of Pharmaceutical Sciences (IPA)
2. Indian Drugs (IDMA)
3. Journal of Controlled Release (Elsevier Sciences)
4. Drug Development and Industrial Pharmacy (Marcel & Decker)
5. International Journal of Pharmaceutics (Elsevier Sciences)


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Annexure II

**The Academic Activities conducted for B.Pharmacy Programme from the
Academic year 2025-26.**

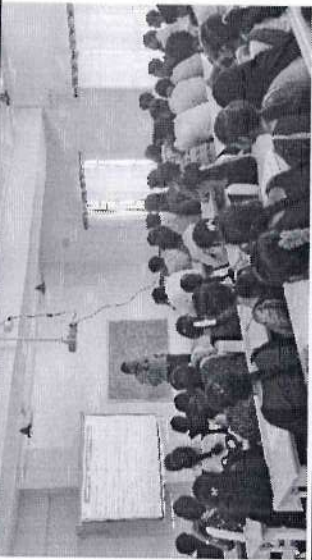
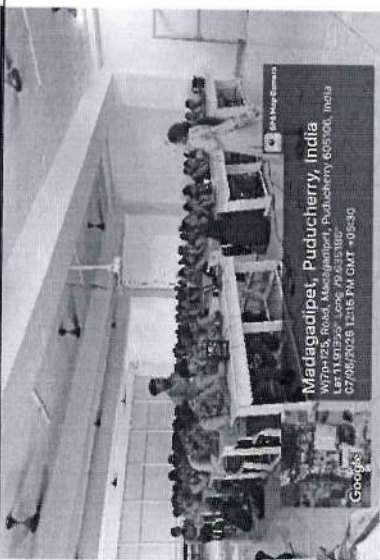


SRI MANAKULA VINAYAGAR
ENGINEERING COLLEGE
TANJAVUR DISTRICT

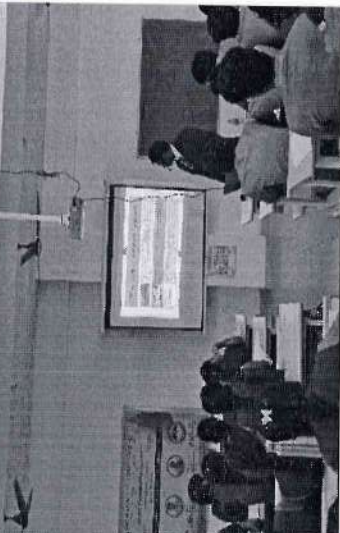
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S.No	Topic	Detail of the speaker	Photo
GUEST LECTURES ORGANISED			
1.	DATE: 06.03.2025 ENTERPRENEURSHIP & STARTUPS IN PHARMA AND PHARMACY PRACTICE:ENCOURAGING INNOVATION, INCUBATION CENTERS AND PHARMACEUTICAL STARTUPS.	Dr. Mariraj Founder, Marche Healthcare, Puducherry Mr. Vishnu Vardhan, chief Executive officer ATAL incubation center Pondicherry-PEC	
2.	DATE: 06.03.2025 SCIENTIFIC RESEARCH AND ETHICS	Dr. R. Priyadharshini Associate professor Department of pharmacology, JIPMER	

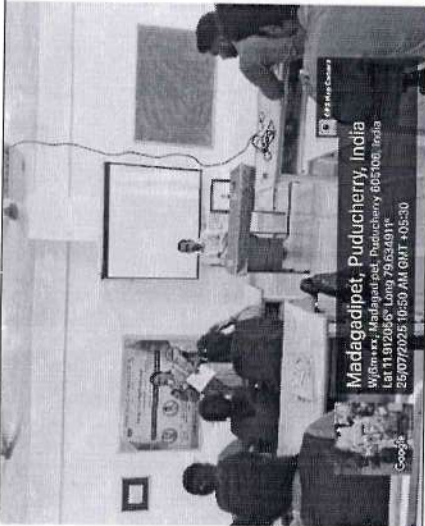
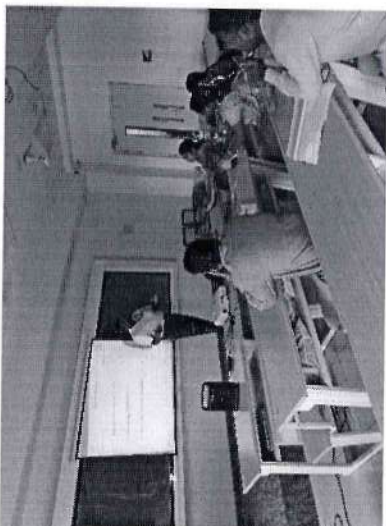
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3.	DATE: 06.03.2025 CONCEPTUALIZATION OF IDEA INTO RESEARCH AND INNOVATION	Dr. V. Vijayan Professor and Dean Research SBVU	 Madagadipet, Puducherry, India WJ7M+rx, Madagadipet, Puducherry 605107, India Lat 11.914629° Long 79.834565° 06/03/2025 12:21 PM GMT +05:30
4.	DATE: 29.03.2025 DRUG DELIVERY AND ROUTE OF DRUG ADMINISTRATION : UNDERSTANDING HOW MEDICINE WORKS	Dr. VENKATESAN PALANIVEL Professor, Department of Pharmacy AU	
5.	DATE: 07.05.2025 NATIONAL PHARMACEUTICAL PRICING AUTHORITY AND REGULATION	Ms. Shabana & Afreen Under the guidance of Dr. E. Anandakirouchanane Licensing cum Drug controlling Authority of Puducherry	 Madagadipet, Puducherry, India WJ7M+rx, Madagadipet, Puducherry 605107, India Lat 11.914629° Long 79.834565° 07/05/2025 12:16 PM GMT +05:30


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6.	DATE: 22.07.2025 BRIDGING ACADEMIA AND INDUSTRY :INNOVATION, COLLABORATION AND IMPACT	Mr. K. CHANDRA SEKAR Senior Manager from CAPLIN POINT, Puducherry	
7.	DATE: 07.05.2025 AN OVERVIEW OF PHARMACEUTICAL INDUSTRY AND CAREER OPPORTUNITIES	Mr. V. SIVA KUMAR Director –Quality Operation Pharmqs GMP Consulting Service, Chennai.	
8.	DATE: 23.07.2025 BRIDGING BETWEEN ACADEMIA AND RESEARCH	Dr.M.S.Ramasamy Head ,R&D Sanjeev Biomedical Research Chennai	

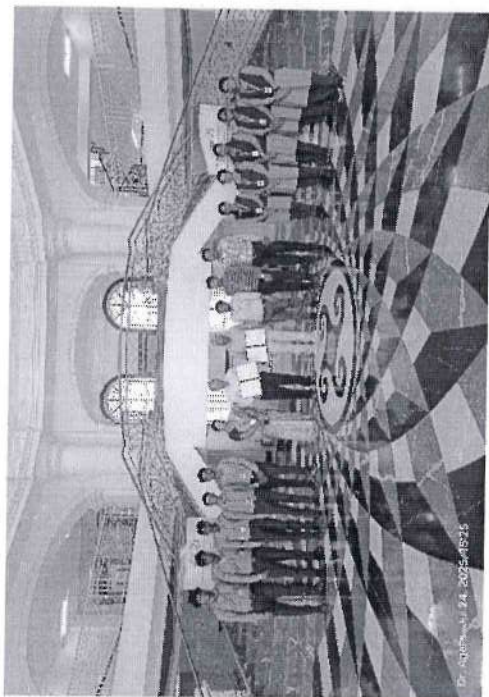

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9.	DATE: 24.07.2025 BUILDING YOUR CAREER WITH RESEARCH – WHY UG STUDENTS SHOULD PUBLISH	Dr.S.Kathirvel Professor and Principal KMCT Institute of Pharmacy Education and Research Kerala.	
10.	DATE: 25.07.2025 OUT COME BASED EDUCATION	Dr. VENKATESAN PALANIVEL Professor, Department of Pharmacy Annamalai University.	


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MEMORANDUM OF UNDERSTANDING (MOU) WITH INDUSTRIES

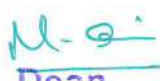
1. SANJEEV BIOMEDICAL
RESEARCH CHENNAI

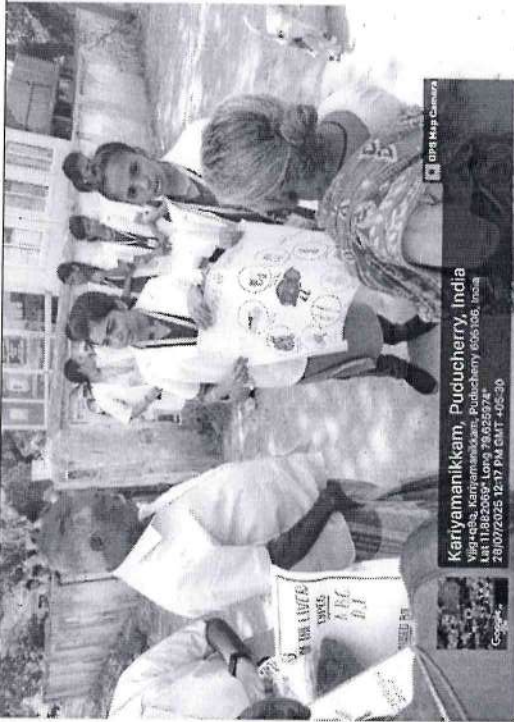


EXTRA – CURRICULUM ACTIVITIES : CONFERENCES, AWARENESS PROGRAM AND SWAYAM COURSE FOR STUDENTS

1. DATE: 15-03-2025
AWARENESS PROGRAM
ON WORLD GLAUCOMA
WEEK 2025




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2.	DATE: 28.07.2025 AWARENESS PROGRAM ON WORLD HEPATITIS DAY	
3.	DATE: 17-23 SEP 2025 5TH NATIONAL PHARMACOVIGILANCE WEEK CELEBRATION	


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DATE: 25.09.2025

World Pharmacist Day

4.

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World Pharmacist Day Celebration 2025

Theme: "THINK HEALTH, THINK PHARMACIST"

Date: 25.09.2025 (Thursday) Time: 10.30 am to 1.00 pm Venue: Conference Hall

Chief Guest
Dr. K. M. SRINIVASAN
Deputy Director General
Central Drug Standard Control Organisation,
South zone, Chennai - 600 007

Guest of Honor
Dr. E. ANANDAKIRICHENANE
Chief Pharmacist
Department of Drug Control,
Puducherry

Shri. M. DHANASEKARAN
Chartered Accountant
Chairman and Managing Director, SMVE Trust

Presidential Address
Dr. K. NARAYANASAMY
Secretary, SMVE Trust

Shri. D. RAJARAJAN
Treasurer, SMVE Trust

Shri. S. VELAYUDHAM
Joint Secretary, SMVE Trust

Welcome Address
Dr. V. S. K. VENKATACHALAPATHY
Director cum Principal, SMVEC

Dr. M. DHANALAKSHMI
Dean, School of Pharmacy
Gratitude Note

Dr. S. JAYAKUMAR
Controller of Examinations

Dr. A. ARIVALAR
Dean, Academics

Dr. K. VELMURUGAN
Dean, Research

Dr. N. S. KALLASAM
Dean, Management

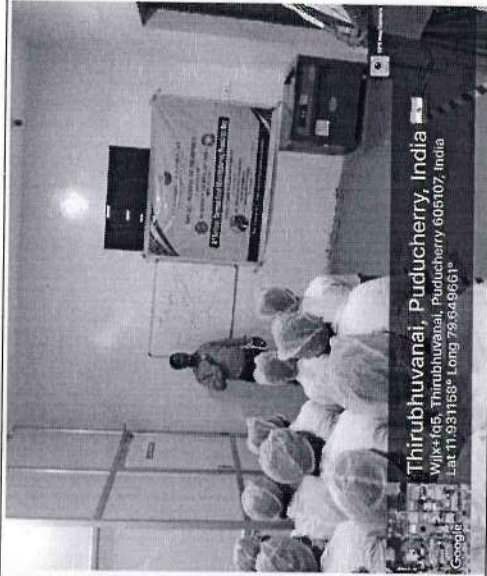
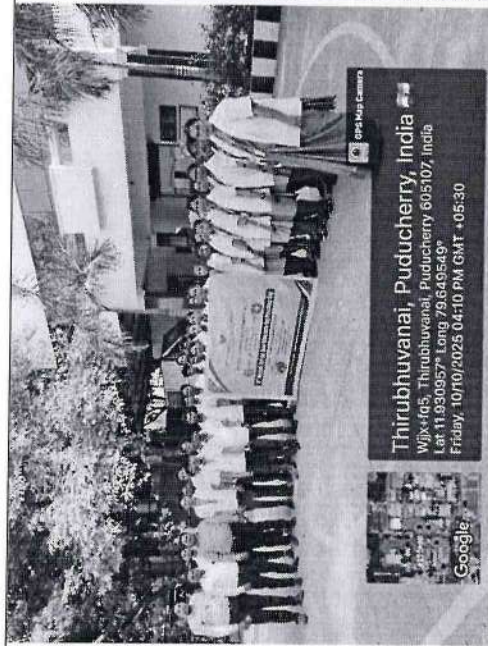
Your esteemed presence is kindly solicited
A Stimulating Place to Learn and Practice Technology

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DATE: 10.10.2025

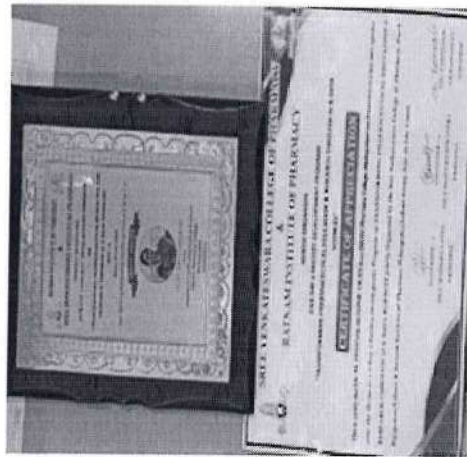
3rd National c GMP Day
Celebration
Industrial Visit in Goodman
Pharmaceutics Ltd,
Thirubuvana

5.



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Puducherry.

Faculty Credentials and Publications:



Publications:

Dr.P.Bhavani

Journal Name: Biomedical and cellular Archives

Impact Factor:0.3

International Journal

Web of Science



M. P.
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Dr.K.Ramprasad

Journal Name: International Journal of Environmental Science

Impact Factor: 2.8

International Journal

Scopus index and Elsevier

Acceptance Notification - IJES

 message

International Journal of Environmental Sciences <ijes.editor@theaspd.com>
To: khannuztaba12@gmail.com

Thu, 21 Aug 2025 at 2:35 pm

Dear Author(s),
Greetings of the day!

We hope this email finds you in great spirits.

We are writing to inform you that your article titled "Design and Optimization of Methotrexate-Loaded Polymeric Nanoparticles for Controlled Drug Delivery in Rheumatoid Arthritis" has been accepted for publication in the upcoming issue of the **International Journal of Environmental Sciences**, ISSN: 2229-7359.

If you have any questions or need additional information, please feel free to contact us at your convenience.

Regards

Editorial Team,
International Journal of Environmental Sciences
Website: <https://www.theaspd.com/ijes.php>
ISSN: 2229-7359




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Annexure III

List of Examiners for B. Pharmacy Programme



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Panel of examiners for B. Pharm Programme

S.No	Name of the Examiner	Specialization	Year of Experience	Designation & Institution Name	Mobile No	Mail ID
1.	Dr.P. Parthiban	Pharmaceutical Chemistry	18	Vice Principal cum Professor, Department of Pharmaceutical Chemistry, Vellalar college of Pharmacy, Erode	7893567723	drparthiban82@gmail.com
2.	Dr.P.Sureshkumar	Pharm. Ceutics	18	Professor, Shanmugha college of Pharmacy, Erode	9704288984	Surae81@gmail.com
3.	Mr. V.Sakthivel	Pharmacognosy	15	Associate Professor, Kamalakshi Pandurangan College of Pharmacy, Tiruvannamalai	9444260251	drsakthi1977@gmail.com
4.	Dr.M.Sumithra	Pharmacology	17	Associate Professor, Department of Pharmacology, SRMIST	9790136139	sumithrm@srmist.edu.in
5.	Dr.M.Jeevitha	Pharmaceutics	16	Professor, Department of Pharmaceutics, SVCP, Pondicherry	7402402475	jeevipharma@gmail.com
6.	Dr.Binoy Varghese cheriyan	Pharmaceutical Chemistry	18	Associate Professor, Department of Pharmaceutical Chemistry, Saveetha college of pharmacy Thandalam, Chennai	9840677122	drbinoycheriyan@gmail.com

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Annexure IV

**The syllabi for Certificate Course Artificial Intelligence and 3-D Printing (CC-002)
in VII Semester B.Pharm.**



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Course Title : Artificial Intelligence and 3D Printing in Pharmacy

Course Code: CC – 002

Duration: 30 Hours

Course Objectives

This course aims to:

1. Introduce students to the fundamental principles of Artificial Intelligence (AI) and 3D Printing technologies.
2. Explain the significance of AI in pharmaceutical sciences including drug discovery, formulation design, clinical studies, and pharmacovigilance.
3. Describe the principles, techniques, and applications of 3D printing in the development of dosage forms, medical devices, and tissue engineering.
4. Discuss the convergence of AI and 3D printing in personalized medicine, process optimization, and smart manufacturing.
5. Familiarize students with ethical, regulatory, and industrial aspects of implementing these technologies in pharmacy.

A. SYLLABUS CONTENT

UNIT I – Introduction to Artificial Intelligence

(6 Hours)

Overview of AI and Its Evolution - Definition and concept of Artificial Intelligence, History and milestones in AI development, Differences between Artificial Intelligence, Machine Learning (ML), and Deep Learning (DL)

Types and Components of AI - Types of AI: Reactive, Limited Memory, Theory of Mind, Self-aware AI, Core components: Data, Algorithm, Model, Training, and Feedback, Knowledge representation, reasoning, and problem-solving

Machine Learning Techniques - Supervised, unsupervised, and reinforcement learning, Neural networks, natural language processing, and expert systems


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AI in Healthcare and Pharmacy - Overview of AI applications in diagnostics, patient monitoring, and treatment planning, Predictive analytics and data-driven decision-making

Ethical and Regulatory Considerations - Data privacy, bias, and ethical use of AI, Regulatory bodies and compliance frameworks (FDA, WHO, CDSCO perspectives)

UNIT II – Applications of AI in Pharmaceutical Sciences (6 Hours)

AI in Drug Discovery and Development - Role in target identification, validation, and molecular modeling, QSAR (Quantitative Structure–Activity Relationship) modeling, Virtual screening and de novo drug design using AI algorithms

AI in Formulation Design and Optimization - Predictive modeling for excipient compatibility and stability studies, AI-based Quality by Design (QbD) approaches in formulation development

AI in Clinical Trials - Patient recruitment and selection using AI algorithms, Data monitoring, adverse event prediction, and protocol adherence, Real-world data analysis and digital biomarkers

AI in Pharmacovigilance and Drug Safety - Signal detection, case processing, and automatic classification of ADRs, Natural language processing in pharmacovigilance databases

AI in Personalized and Precision Medicine - Genomic and proteomic data analysis, AI in designing patient-specific therapeutic strategies, Case studies: AlphaFold (protein folding), AI in COVID-19 drug repurposing

UNIT III – Fundamentals of 3D Printing Technology (6 Hours)

Introduction to 3D Printing (Additive Manufacturing) - Concept, working principle, and process flow, Subtractive vs. Additive Manufacturing

Stages of 3D Printing - Computer-Aided Design (CAD) modeling, File conversion (STL/OBJ), slicing, and layer-by-layer fabrication, Post-processing and quality control

Techniques of 3D Printing - Fused Deposition Modeling (FDM), Stereolithography (SLA), Selective Laser Sintering (SLS), Inkjet printing, Binder Jetting, and Extrusion-based printing

Materials for 3D Printing in Pharmacy - Thermoplastics (PLA, PVA, PVP, HPMC, PCL, etc.), Hydrogels, biopolymers, and composites, Metal and ceramic materials for medical devices

Characterization and Quality Evaluation - Surface morphology, porosity, mechanical strength, and dissolution studies, Challenges in reproducibility and scalability

UNIT IV – 3D Printing Applications in Pharmaceutical Sciences (6 Hours)

Pharmaceutical Dosage Forms - 3D printed tablets, polypills, and orodispersible formulations, Controlled release and multilayer systems, Implants, transdermal patches, and micro-needles



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3D Bioprinting and Tissue Engineering - Principles of bioprinting: bioinks, cells, and scaffold design, Applications in organ regeneration and wound healing

Medical Devices and Prosthetics - Customized prosthetics, dental models, and orthopedic devices, 3D printed diagnostic tools

Regulatory and Quality Aspects - FDA and EMA guidelines for 3D printed pharmaceuticals, Validation, documentation, and approval pathway

Case Studies - *Spritam® (Levetiracetam)* – first FDA-approved 3D printed drug, *Aprecia Pharmaceuticals' ZipDose® technology*, Research examples: printed polypills, personalized implants

UNIT V – Integration of AI and 3D Printing in Pharmacy (6 Hours)

AI-Assisted 3D Printing - Predictive modeling of printing parameters and product quality, Process automation and defect prediction using AI algorithms

Digital Twin and Smart Manufacturing - Concept of digital twins in pharmaceutical manufacturing, Process monitoring, optimization, and real-time control

AI in 3D Printed Drug Design - AI-based customization of dosage form geometry and release kinetics, Generative design algorithms for individualized medicines

Industry 4.0 and Pharmacy 4.0 - Integration of IoT, robotics, and data analytics in pharma production, Role of AI and additive manufacturing in supply chain management

Challenges and Future Trends - Cost, scalability, and regulatory hurdles, Future prospects: biofabrication, nanoprinting, and AI-driven formulation design

Reference Books:

1. Bohr, A. & Memarzadeh, K. *Artificial Intelligence in Healthcare*, Academic Press.
2. Thomas, D.J. & Singh, D. *3D Printing in Medicine and Surgery*, Woodhead Publishing.
3. Yaser Dahri et al. *Pharmaceutical 3D Printing: Principles and Applications*, Springer.
4. Lachman, Lieberman & Kanig. *The Theory and Practice of Industrial Pharmacy*, CBS Publishers.

B. Activities and Workshop

10 Hours

- Panel discussions and speeches on 3D printing;
- Seminars on Artificial Intelligence and 3D printing,
- Role play – “AI chatbot vs Pharmacist – Who answers better?” to demonstrate AI ethics and limitations
- Poster competition – Future of personalized medicines with 3D printing


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Annexure V

Change of course code for Mandatory Non-credit courses for all the semesters (I-VII)



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MANDATORY-NON CREDIT COURSE – COURSE CODE

S.No	Name of the Component	Course to be included in Semester	Duration	Course Code	Suggested changes
1	YOGA AND FIRST AID	I	40 hrs	SD-001	BP113SD
2	CLIMATE CHANGE	II	40 hrs	VAT-001	BP211VA
3	DEEP LEARNING OF PYTHON	III	40 hrs	CC-001	BP309CC
4	BIOETHICS	IV	40 hrs	VAT-002	BP410VA
5	GENDER EQUALITY	V	40 hrs	SD-002	BP509SD
6	GLP/GMP/RA	VI	40 hrs	SD-003	BP610SD
7	ARTIFICIAL INTELLIGENCE AND 3-D MACHINING	VII	40 hrs	CC-002	BP707CC

SD-Skill Development, CC-Certificate Course, VAT-Value added Theory Course


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