

# VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH Sangareddy-Narsapur Rd, Narsapur, Telangana-502313 Approved by PCI, AICTE and Affiliated to JNTUH

Email: viper@viper.ac.in Website: viper.ac.in
Phone: 08458-222002

#### CIRCULAR

Date: 7/09/23

This is to inform you that our college is offering the following certificate courses for B.Pharm final-year and M.Pharm students for the Academic Year 2023-24. Interested candidates are requested to submit their names to the coordinator.

S.No	Year	Name of the course	Duration	Dates
01	IV-I & PG	Medical Coding	14 days	18.09.23 to 30.09.23
02	IV-II & PG	Pharmacovigilance	14 days	20.03.24 to 03.03.24
03	IN-11 & PG	Artificial Intelligence in Pharmaceutical Research	14 days	22.0124 +0 06.02.24
04	111-1 & 111-11	Pharmacoutisal Chemical Engineering: Introductory Bridge Program	3 months	16. 11.23 to 02.02.24
05	-   &    -	Inter-Disciplinary Course in Biomedical Engineering	3 months	16. 11. 23 to 62. 02. 24

Coordinator - IQAC

Principal



# VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH Sangareddy-Narsapur Rd, Narsapur, Telangana-502313 Approved by PCI, AICTE and Affiliated to JNTUH Email: <a href="mailto:viper@viper.ac.in">viper@viper.ac.in</a> Website: <a href="mailto:viper.ac.in">viper.ac.in</a>

Phone: 08458-222002

#### **CIRCULAR**

MC/2023-24/ CIR-1

Date: 07 09/23

Subject: Curriculum Design Meeting for "Medical Coding" Certification Course

Date:

Time: 02:00 P.M.

Location: Principal's Office

To: Dr. Rajendraprasad, Dean R&D

Dr. Vanitha, HOD Department of Pharmaceutics

Dr. K. Ramanjaneyulu, Head, TPO

Dr. S.Dinesh Mohan, Associate Professor, Dept of Pharmaceutics & TPO

Mr.G.Suryam, Assistant Professor, Dept of Pharmaceutics & Certified medical coder

**Subject:** You are cordially invited to collaboratively design the curriculum for the upcoming Certification Course in "Medical Coding" for Academic Year 2023-2024.

#### Meeting Objectives:

- Frame the clear learning curriculum and engaging modules.
- Determine effective teaching methodologies and assessment strategies.
- Identify necessary resources, including faculty expertise, software, and lab facilities.
- Establish a realistic timeline for curriculum development and course delivery.
- Selection of coordinator for the program
- Timings for the course

Please come prepared with any initial thoughts or suggestions you may have regarding the curriculum design

We look forward to your active participation in this important endeavor.

Br. A.Ramesh



#### Vishny Institute of Pharmaceutical Education and Research

Sangareddy-Narsapur Rd, Narsapur, Tuljaraopet, Telangana-502313
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Phone:08458-222002

#### **CURRICULUM DESIGN**

**Day 1:** Introduction to Medical Coding and its Importance, Overview of the Healthcare System, Medical Terminology Review (anatomy, physiology, common medical terms)

Day 2: Introduction to ICD-10-CM: Structure and Conventions, Coding Guidelines, Practice with basic diagnoses

Day 3: ICD-10-CM: External Cause Codes, Injury Coding, Coding for Pregnancy and Childbirth

**Day 4:** Introduction to CPT® Coding: Structure and Conventions, Evaluation and Management (E/M) Coding, Practice with basic E/M codes

Day 5: CPT® Coding: Surgery Coding, Anesthesia Coding, Radiology Coding

**Day 6:** ICD-10-CM: Coding for Chronic Conditions (e.g., diabetes, hypertension), Coding for Mental Health Disorders

Day 7: CPT® Coding: Pathology and Laboratory Coding, Medicine Coding, Coding for Special Procedures

**Day 8:** Coding Compliance: Regulatory Guidelines (e.g., HIPAA, Medicare), Fraud and Abuse Prevention, Ethical Considerations

Day 9: Coding for Outpatient Settings: Physician Offices, Ambulatory Surgery Centers, Clinics

Day 10: Coding for Inpatient Settings: Hospitals, Skilled Nursing Facilities

Day 11: Comprehensive Coding Scenarios: Inpatient and Outpatient cases, Focus on accuracy and efficiency

Day 12: Mock Coding Exams: Simulate real-world coding exams, Provide feedback and identify areas for improvement

Day 13: Career Exploration: Job search strategies, Resume and cover letter writing, Interview preparation

Day 14: Review and Q&A: Address student questions and concerns, Final exam preparation Assessment:

- Regular quizzes and assignments
- Mock coding exams
- · Final comprehensive exam

Dr. A.Ramesh Principal

# VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH Sangareddy-Narsapur Rd, Narsapur, Telangana-502313

# MEDICAL CODING

#### WHAT IS MEDICAL CODING

Medical coding is the process of converting healthcare information into standardized alphanumeric codes. This involves translating diagnoses, procedures, services, and equipment mentioned in medical records (like doctor's notes, lab results, etc.) into codes from recognized systems like ICD-10 and CPT®.

Medical coding professionals play a crucial role in the medical billing process. They accurately assign codes to patient information, ensuring that insurance claims are submitted correctly and efficiently. This involves carefully reviewing medical documentation, selecting the appropriate codes, and preparing the claim for submission to insurance companies.

#### **ROLE OF MEDICAL CODERS**

- Get medical records from the Doctor's EHR/PMS System via a secure connection/cloud
- Check/Validate Correctness of information
- Review the records and assign CPT/ICD information
- Audit of the coded charts by our QA Team
- 5. Send Completion report to Doctor

# MEDICAL CODER CAN CHOOSE TO BECOME

- 1. Out Patient coder
- 2. Pro-fee coder
- 3. Surgery Coder
- 4. Inpatient DRG coder
- 5. HCC coder
- 6. Coding Auditor

#### **OPPORTUNITIES IN INDIA**

- In India certified medical coders fresher's salary ranges between 3-5 Lakhs per year.
- Hybrid and Work from home options available
- Can reach Manager & Senior Manager levels within 6-8 years time in Corporate sectors
- Certified IP coder's salary with 2 years of experience ranges upto Rs. 75,000 -1 Lakhs per month

#### **GLOBAL OPPORTUNITIES**

On-site work opportunities for Certified medical coders in US, UAE, KSA and Australia.

Certified medical coders can earn of up to 1.5 Lakhs per month in Middle East Countries

#### ELIGIBILITY CRITERIA

Graduates (B.Pharmacy, M.Pharmacy)
Penultimate students
Contact details
Dr.K.Ramanjaneyulu +91 9494 60 4750

Mr.G.Suryam +91912171 1908







### This certificate is awarded to

## MIRAJDAR VAISHNAVI

from Vishnu Institute of Pharmaceutical Education and Research, Medak for attending a 14-day training on Medical Coding and Billing conducted by Telangana Academy for Skill and Knowledge (TASK).



Shrikant Sinha
Chief Executive Officer



## This certificate is awarded to

## **CHANDRIKA**

from Vishnu Institute of Pharmaceutical Education and Research, Medak for attending a 14-day training on Medical Coding and Billing conducted by Telangana Academy for Skill and Knowledge (TASK).

Shrikant Sinha Chief Executive Officer



### This certificate is awarded to

## **RUPIKA REDDY**

from Vishnu Institute of Pharmaceutical Education and Research, Medak fo attending a 14-day training on Medical Coding and Billing conducted by Telangan: Academy for Skill and Knowledge (TASK).



Shrikant Sinha
Chief Executive Officer





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Phone: 08458-222002

Date 3/24/24

#### REPORT

Name of the program: Medical Coding

**Duration:** Two week

Resource person/Organization: Medesun healthcare solutions

Vishnu Institute of Pharmaceutical Education & Research, Narsapur, organized one month certificate course on "Medical Coding" from 13/06/24 to 02/07/2024. This program was instrumental in equipping participants with essential skills. A total of 15 students participated, and upon completion, they were able to understand the objectives and learning outcomes outlined below.

#### **Objectives**

- Accurately apply ICD-10-CM, CPT, and HCPCS codes for precise documentation of patient diagnoses, procedures, and services.
- Accurately apply ICD-10-CM, CPT, and HCPCS codes for precise documentation of patient diagnoses, procedures, and services.
- Minimize errors, reduce claim denials, and enhance reimbursement efficiency through effective medical coding.
- Cultivate clear and concise communication to facilitate collaboration among healthcare stakeholders, improving overall patient care

#### Outcome

#### Students will be able to

- Demonstrate the ability to assign precise ICD-10-CM, CPT, and HIPAA codes for comprehensive and accurate representation of medical procedures and diagnoses.
- Understand the financial implications of coding accuracy, contributing to the optimization of revenue cycles by minimizing claim denials and maximizing reimbursement for healthcare services.
- Develop communication skills to convey complex coding information clearly, fostering collaboration with healthcare teams and improving overall patient care outcomes.

All the students found the training to be highly beneficial and provided positive feedback. In conclusion, the Coordinator, Mr. G. Suryam, expressed gratitude to the resource person and congratulated all the participants for contributing to the success of the program.

Coordinator

Principal



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> **Attendance** MC

Regd No	Name of the student	49	19/9	20/9	2/9	23/9	24/4	34	24/9	27/9	28/9	30/9	01/10	03/10	04
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PV/2023-24/ CIR-3

Date: 1/03/24

#### CIRCULAR

Subject: Curriculum Design Meeting for Pharmacovigilance Certification Program

Date:

Time: 01:00 P.M.

Location: Principal's Office

To: Dr. VVS Rajendraprasad, Dean R&D

Dr. K Vanitha, HOD Department of Pharmaceutics

Dr. SVVNSM Lakshmi HOD Department of Pharmacognosy
Dr.S.Dinesh Mohan, Associate Professor Dept of Pharmaceutics
Dr. D.Santhosha Associate Professor, Dept of Pharmacognosy

Dr. P.Rajasekar, HOD, Dept of Pharmacology

**Subject:** You are cordially invited to discuss the Certification Course in "Pharmacovigilance" for Academic Year 2023-2024.

#### **Meeting Objectives:**

- > Frame the clear learning curriculum and engaging modules.
- Determine effective teaching methodologies and assessment strategies.
- > Identify necessary resources, including faculty expertise, software, and lab facilities.
- Establish a realistic timeline for curriculum development and course delivery.
- Selection of coordinator for the program
- Timings for the course

Please come prepared with any initial thoughts or suggestions you may have regarding the curriculum design.

We look forward to your active participation in this important endeavor.

Dr. A.Ramesh

Principal

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# VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH Sangareddy-Narsapur Rd, Narsapur, Telangana-502313

# Advance Your Career in Pharmacovigilance

#### Course Overview:

This comprehensive certificate course provides a strong foundation in the principles and practices of pharmacovigilance. You'll gain in-depth knowledge of drug safety regulations, risk management, data analysis, and reporting procedures.

#### **Key Learning Objectives:**

- Understand the principles of pharmacovigilance and its importance in drug development and safety.
- Learn about global regulatory requirements for pharmacovigilance.
- Develop skills in data collection, analysis, and interpretation of adverse drug reactions (ADRs).
- Master the process of case processing, signal detection, and risk assessment.
- Gain practical experience in writing safety reports and communicating safety information.
- Explore career opportunities in the field of pharmacovigilance.

#### Course Benefits:

- Gain valuable industry-recognized credentials.
- Enhance your career prospects in the pharmaceutical industry.
- Develop in-demand skills in data analysis and risk assessment.
- Learn from experienced industry professionals.
- Network with other professionals in the field.

#### Career Opportunities:

- Drug safety Associate/Specialist
- Medical Reviewer
- > Content writer Pharmacovigilance
- PV Service Associate

#### **Major Recruiters**

- > Parexel
- Novartis
- > IQVIA
- Accenture
- > Biocon

Safety Assured in every dose





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#### Curriculum design

Day 1-2: Introduction to Pharmacovigilance Definition and scope of pharmacovigilance, History and evolution of pharmacovigilance, Importance of pharmacovigilance in drug safety, Types of adverse drug reactions (ADRs), Causality assessment of ADRs (e.g., Naranjo algorithm)

Day 3-4: Regulatory Framework International Conference on Harmonisation (ICH) guidelines, Good Pharmacovigilance Practices (GVP), Regulatory requirements for pharmacovigilance systems, Role of regulatory authorities (e.g., FDA, EMA)

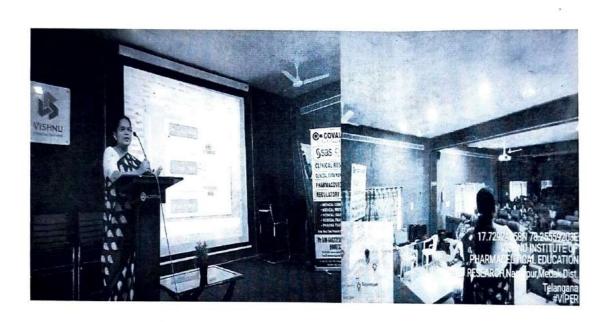
Day 5-6: Adverse Drug Reaction Reporting Spontaneous reporting systems, Case report forms (CRFs), Data entry and validation, Serious adverse event reporting, Reporting timelines and procedures

Day 7-8: Literature Reviews and Signal Detection Conducting literature searches (PubMed, Embase), Data extraction and analysis, Signal detection methodologies, Data mining techniques

Day 9-10: Risk Management Risk management plans (RMPs), Pharmacovigilance agreements, Risk minimization strategies, Post-marketing surveillance studies

Day 11-12: Data Management and Analysis Data cleaning and validation, Statistical analysis of ADR data, Data visualization and reporting, Use of pharmacovigilance databases

Day 13-14: Communication and Case Studies Communicating pharmacovigilance information, Writing safety reports, Presentation skills, Case studies in pharmacovigilance







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**Attendance** 

Regd No	Name of the					PY								,	
	student	20/03	21/03	22/03	200	26/03	220	28/63	20/93	0/104	20/04	03/04	04/64	96/66	809
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# CERTIFICATE OF EXCELLENCE

### IN

# **PHARMACOVIGILANCE**

This Certificate is Awarded to

KATTA YASHWANTH SAI RAJ

Has successfully completed the two-week certificate course on 'Pharmacovigilance' at Vishnu Institute of Pharmaceutical Education and Research, Narsapur, Hyderabad.

ARyish





Managing Director



### CERTIFICATE OF EXCELLENCE

IN

#### **PHARMACOVIGILANCE**

This Certificate is Awarded to

RUDRARAJU AISHWARYA

Has successfully completed the two-week certificate course on 'Pharmacovigilance' at Vishnu Institute of Pharmaceutical Education and Research, Narsapur, Hyderabad.

ARgish



Managing Director



## CERTIFICATE OF EXCELLENCE

IN

#### **PHARMACOVIGILANCE**

This Certificate is Awarded to

VINJAMURI BHAVYA SRI

Has successfully completed the two-week certificate course on 'Pharmacovigilance' at Vishnu Institute of Pharmaceutical Education and Research, Narsapur, Hyderabad.

Argist





Managing Director



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Email: viper@viper.ac.in Website: viper.ac.in Phone: 08458-222002

Date: 06/04/23

#### REPORT

Name of the program: Pharmacovigilance

**Duration:** Two week

Resource person/ Organization:

Vishnu Institute of Pharmaceutical Education & Research, Narsapur, organized one month certificate course on "Pharmacovigilance" from . This program was instrumental in equipping participants with essential skills. A total of 15 students participated, and upon completion, they were able to understand the objectives and learning outcomes outlined below.

#### **Objectives**

- Understand the fundamentals of Pharmacovigilance
- Grasp the Regulatory Framework of Pharmacovigilance
- Master Adverse Drug Reaction Reporting
- Develop Literature Review and Signal Detection Skills
- Gain Expertise in Risk Management
- Master Data Management and Analysis Techniques

#### Outcome

Students will be able to

- Demonstrate a foundational understanding of pharmacovigilance principles and practices.
- Ability to identify, assess, and report adverse drug reactions.
- Competence in conducting literature reviews and signal detection activities.
- Understanding of regulatory requirements and best practices in pharmacovigilance.
- Ability to contribute to the development and implementation of risk management plans.

All the students found the training to be highly beneficial and provided positive feedback. In conclusion, the Coordinator, Dr.S.Dinesh Mohan, expressed gratitude to the resource person and congratulated all the participants for contributing to the success of the program

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Viahna Institute of a



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Phone: 08458-222002

AI/2023-24/ CIR-2

Date: 0/01/24

#### CIRCULAR

Subject: Curriculum Design Meeting for Artificial Intelligence in Pharmaceutical Research

**Certification Program** 

Date:

Time: 01:00 P.M.

Location: Principal's Office

To: Dr. Rajendraprasad, Dean R&D

Dr. Vanitha, HOD Department of Pharmaceutics

Dr. SVVNSM Lakshmi HOD Department of Pharmacognosy

Dr. C.Soujanya, HOD, Dept of Pharmaceutical Regulatory Affairs

Mrs. P.Bhavani, Associate Professor, Dept of Pharmaceutics

**Subject:** You are cordially invited to collaboratively design the curriculum for the upcoming Certification Course in "Artificial Intelligence in Pharmaceutical Research" for Academic Year 2023-2024.

#### **Meeting Objectives:**

- Frame the clear learning curriculum and engaging modules.
- > Determine effective teaching methodologies and assessment strategies.
- Identify necessary resources, including faculty expertise, software, and lab facilities.
- > Establish a realistic timeline for curriculum development and course delivery.
- > Selection of coordinator for the program
- > Timings for the course

Please come prepared with any initial thoughts or suggestions you may have regarding the curriculum design.

We look forward to your active participation in this important endeavor.

Dr. A.Ramesh

Principal

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## Artificial Intelligence in Pharmaceutical Research



## Course overview

Embark on a transformative exploration of Applications of Artificial Intelligence in Drug Discovery and Development.' This course unveils the potent synergy between cutting-edge Al methodologies-machine learning, deep learning, and natural language processing—and traditional drug development. Dive into hands-on experiences across crucial stages, from target identification to clinical trials. Uncover real-world success stories, equipping yourself to critically assess Al's impact on drug discovery, navigate ethical considerations, and shape the future of pharmaceutical innovation. Elevate your skills and insights in this dynamic frontier of healthcare advancement.

# who can attend?

All final year and M.Pharmacy students

# Course Learning Objectives

- Develop a solid understanding of fundamental AI concepts, including machine learning algorithms, deep learning techniques, and their application in drug discovery.
- Gain hands-on experience in using Al tools for various stages of drug development, from target identification to clinical trial optimization.
- Learn to critically evaluate the impact of Al on drug discovery processes, including its effectiveness, challenges, and ethical considerations.

# What will you learn?

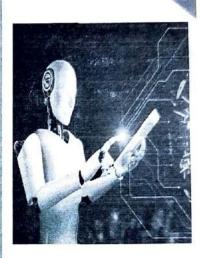
- Fundamentals of Al in Drug Discovery
- Al Tools for Target Identification
- Optimizing Lead Compounds with Al
- Application of AI in Clinical Trials
   Critical Evaluation and Ethical

# Area of job Opportunities

Al in Healthcare

Considerations

- E-commerce and Retail
- Finance and Banking
- Cybersecurity
- Entertainment and Gaming



# Resource person

- · Dr. Niladri Dey Shekar
- HOD-Artificial Intelligence and Data Science
- . Dr. Suraiit Das
- Associate Professor-Artificial Intelligence and Data Science





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#### Curriculum design

**Module 1:** Introduction to Artificial Intelligence, Overview of Al concepts and types, Machine learning basics, Deep learning introduction

Module 2: Fundamentals of Drug Discovery, Overview of drug discovery process, Drug targets and biomarkers, High-throughput screening

**Module 3:** Role of Al in Drug Discovery, Applications of Al in drug discovery, Case studies of successful Al-driven drug discoveries, Challenges and opportunities

**Module 4:**Machine Learning in Drug Discovery, Supervised and unsupervised learning in drug discovery, Feature selection and engineering, Predictive modelling in drug development

**Module 5**:Deep Learning Applications, Deep learning architectures (neural networks, CNNs, RNNs), Deep learning for image analysis in drug discovery, Generative models for molecular design

**Module 6:**Natural Language Processing (NLP) in Drug Development, Text mining and literature review in drug discovery, Drug repurposing using NLP, Extracting insights from scientific literature

**Module 7**:Ethical and Regulatory Considerations, Ethical implications of Al in drug development, Regulatory challenges and guidelines, Future trends and outlook

Coordinator

Principal

Vistana to titute of a

#### Certificate



# Vishnu Institute of Pharmaceutical Education & Research



VISHNU

Norsepur, Medek, Telengena NAAC, NBA Accredited, NIRF Ranking 2023-75

Certificate of Participation

IPA, Narsapur

This is to certify that Mr/MS. SAL PRANAVI Bearing Roll No:[2010], pursuing B.Pharmacy/M.Pharmacy, has satisfactorily completed two week certificate course titled "Artificial Intelligence in Pharmaceutical Research" from 13th June to 2ndJuly 2024

Mr. G..Surgem

Dr.A.Romesh Principal VIPER.



## Vishnu Institute of Pharmaceutical Education & Research



VISHNU

Narsaper, Medak, Telangana NARC, MBA Accredited, NIRF Ranking 2023-75

IPA. Narna

### Certificate of Participation

This is to certify that Mr/MS. G. LATAA Bearing Roll No: [20] DHIROZO. pursuing B.Pharmacy/M.Pharmacy, has satisfactorily completed two week certificate course titled "Artificial Intelligence in Pharmaceutical Research"from 13th June to 2ndjuly 2024

Mr. G..Suryon Course coordinator

Dr.A.Ramesh Principal VIPER.



## VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH Sangareddy-Narsapur Rd, Narsapur, Telangana-502313

Approved by PCI, AICTE and Affiliated to JNTUH
Email: viper@viper.ac.in
Phone: 08458-222002

#### **Attendance**

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Email: viper@viper.ac.in Website: viper.ac.in Phone: 08458-222002

#### REPORT

Date: 07/02/24

Name of the program: Artificial Intelligence in Pharmaceutical Research

**Duration:** Two week

Resource person: Dr. Niladri Dey Shekar/ Mr. Surajit Das

Vishnu Institute of Pharmaceutical Education & Research, Narsapur, organized a two week certificate course on "Artificial Intelligence in Pharmaceutical Research," led by Dr. Niladri Dey Shekar and Mr. Surajit Das. A total of 15 students participated in the program. Upon completion, students gained an understanding of the objectives and learning outcomes outlined below.

#### **Objectives**

- Develop Proficiency in Al Tools for Drug Discovery
- Analyze and Interpret Al-Generated Insights
- Design and Execute Al-Driven Drug Discovery Projects

#### Outcome

Students will be able to

- Understand the Fundamentals of Al in Drug Discovery
- Evaluate the Impact of AI on Drug Development Processes
- Apply Al Tools in Drug Discovery Projects

All the students found the training to be highly beneficial and provided positive feedback. In conclusion, the Coordinator, Mr. G.Suryam, expressed gratitude to the resource persons and congratulated all the participants for contributing to the success of the program.

Cohrdingtor

Principal



#### VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH Sangareddy-Narsapur Rd, Narsapur, Telangana-502313 Approved by PCI, AICTE and Affiliated to JNTUH

Email: viper@viper.ac.in Website: viper.ac.in
Phone: 08458-222002

PE/2023-24/ CIR-4

Date: 09/11/23

#### CIRCULAR

**Subject:** Curriculum Planning Meeting for Add-on Program: Introductory Bridge Course in Pharmaceutical Chemical Engineering"

Date:

Time: 02:00 P.M.

Location: Principal's Office

To: Dr. Rajendraprasad, Dean R&D

Dr. Vanitha, HOD Department of Pharmaceutics

Dr. SVVNSM Lakshmi HOD Department of Pharmacognosy

Dr. Ramanjaneyulu, Associate Professor, Dept of Pharmaceutical Chemistry and Analysis

Mrs. P.Durga Bhavani, Associate Professor, Dept of Pharmaceutics

**Subject:** You are cordially invited to collaboratively design the curriculum for the upcoming Certification Course in "Introductory Bridge Course in Pharmaceutical Chemical Engineering " for Academic Year 2023-2024.

#### Meeting Objectives:

- > Frame the clear learning curriculum and engaging modules.
- Determine effective teaching methodologies and assessment strategies.
- > Identify necessary resources, including faculty expertise, software, and lab facilities.
- Establish a realistic timeline for curriculum development and course delivery.
- Selection of coordinator for the program
- > Timings for the course

Please come prepared with any initial thoughts or suggestions you may have regarding the curriculum design.

We look forward to your active participation in this important endeavor.

Principal PRINCIPAL PRINCIPAL

# B.V.RAJU INSTITUTE OF TECHNOLOGY Department of Chemical Engineering

### Certificate course on chemical engineering for B Pharma students

#### Syllabus

### III/II semester, B Pharma

#### Course 1

Heat exchangers: enthalpy balance, overall heat transfer coefficient, double pipe heat exchanger, shell and tube heat exchanger, plate heat exchanger, selection of heat exchangers, design of 1:1 shell and tube heat exchanger, design of evaporator

#### Course 2

Mass transfer: Principles of distillation, absorption, extraction, crystallization, adsorption, humidificationand drying, design of plate column for distillation

#### Course 3

Air compressors and blowers: Types of compressors and blowers, selection of compressors

### IV/I semester, B Pharma

#### Course 4

Reaction engineering:

Rate of reaction, homogeneous and heterogeneous reaction, ideal and non-ideal reactors, design equations and application, catalysis, types of catalysts

#### Course 5

Process design: flow sheet development, P and ID development, material balance, material of construction, design temperature, design pressure, process data sheets.

#### Course 6

Process control: Transfer functions of first order and second order systems, interacting and non interacting systems, open and closed loop systems, different types of controllers

#### Laboratory work:

- Determine the overall heat transfer coefficient for 1:2 shell and tube heat exchanger
- 2. Drying characteristics in a tray drier
- 3. Isothermal batch reactor
- 4. Performance of a packed bed reactor for a given system.
- 5. Response of P, PI, PD, PID & ON/OFF controllers in control trainer
- 6. Interacting and non interacting system

# B.V. Raju Institute of Technology Department of Chemical Engineering

# Certificate Course on Chemical Engineering for B.Pharma Students

AY: 2023-24

# III B.Pharma II-Semester Time Table

Name of the Faculty	Syllabus
Dr. Appala Naidu U.	Reaction Engineering: Rate of reactions,
	Homogeneous and heterogeneous reactions, Ideal and
7729084777	non-ideal reactors, Catalysts, Types of catalysts.
Dr. Anup Ashok	Heat Exchangers: Enthalpy balance, Overall heat
	transfer coefficient, Double pipe heat exchanger, Shell
9581525014	and tube exchangers, Plate heat exchangers, Selection
	of heat exchangers, Design 1:1 STHE, Design of
* :	evaporator.
Dr. AV Raghavendar	Mass Transfer: Principles of distillation, Absorption,
Rao	Extraction, Crystallization, Adsorption, Humidification,
	Drying, Design of plate column for distillation.
9618487824	
Mr. K.S.N.V. Prasad	Air Compressors and Blowers: Types of compressors
	and blowers, Selection of compressors.
9885108611	
Dr. T. Srinivas	Process Design: Flow sheet development P and ID
	development, Material Balance, Material of
9441002170	constructions, Design temperature, Design pressure,
	Process data sheets.
Dr. T. Vijay Kumar	Process Control: Transfers of first order and second
	order systems, Interacting and non-interacting systems,
9441769508	Open loop and closed loop systems, Different types of
	controllers.
	Laboratory work:
	Determine the overall heat transfer coefficient for
	1:2 shell and tube heat exchanger
<ol> <li>Mrs. Karuna</li> </ol>	2. Drying characteristics in tray drier



#### VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH Sangareddy-Narsapur Rd, Narsapur, Telangana-502313 Approved by PCI, AICTE and Affiliated to JNTUH Email: viper@viper.ac.in Website: viper.ac.in Phone: 08458-222002

#### Attendance

#### Introductory Bridge Course in Pharmaceutical Chemical Engineering

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#### Vishnu Institute of Pharmaceutical Education and Research

Sangareddy-Narsapur Rd, Narsapur, Tuljaraopet, Telangana-502313 Approved by PCI, AICTE & Affiliated to JNTUH E.Mail:viper@viper.ac.in, Website: viper.ac.in Phone:08458-222002

Date: 02/02/24

#### REPORT

Name of the program: Introductory Bridge Course in Pharmaceutical Chemical Engineering Duration:

#### Resource person/ Organization:

Vishnu Institute of Pharmaceutical Education & Research, Narsapur, organized one month certificate course on "Introductory Bridge Course in Pharmaceutical Chemical Engineering" Introductory Bridge Course in Pharmaceutical Chemical Engineering. This program was instrumental in equipping participants with essential skills. A total of 100 students participated, and upon completion, they were able to understand the objectives and learning outcomes outlined below.

#### **Objectives**

- · Understand the role of chemical engineering in the pharmaceutical industry
- · Apply fundamental principles of chemical engineering
- Demonstrate knowledge of key unit operations
- Analyze and design basic pharmaceutical process flow diagrams (PFDs)
- · Recognize the importance of regulatory and quality aspects

#### Outcome

Students will be able to

- Bridge the knowledge gap between core chemical engineering principles and their practical applications in pharmaceutical manufacturing processes.
- Develop process optimization skills by analyzing unit operations, such as mixing, drying, and crystallization, for improved efficiency and product quality.
- Adopt emerging technologies like continuous manufacturing and process analytical tools to innovate and modernize pharmaceutical engineering practices.

All the students found the training to be highly beneficial and provided positive feedback. In conclusion, the Coordinator, Mrs.P. Durga Bhavani, expressed gratitude to the resource person and congratulated all the participants for contributing to the success of the program.

Coordinator

Beincipal

a transmission account







# VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH Sangareddy-Narsapur Rd, Narsapur, Telangana-502313 Approved by PCI, AICTE and Affiliated to JNTUH

Email: viper@viper.ac.in Website: viper.ac.in Phone: 08458-222002

PE/2023-24/ CIR-5

Date: 09/11/23

#### CIRCULAR

Subject: Curriculum Planning Meeting for Add-on Program: "Inter-Disciplinary Course in Biomedical

Engineering"

Date:

Time: 03:00 P.M.

Location: Principal's Office

To: Dr. Rajendraprasad, Dean R&D

Dr. Vanitha, HOD Department of Pharmaceutics

Dr. SVVNSM Lakshmi HOD Department of Pharmacognosy

Dr. Ramanjaneyulu, Associate Professor, Dept of Pharmaceutical Chemistry and Analysis

Mrs. P.Bhavani, Associate Professor, Dept of Pharmaceutics

**Subject:** You are cordially invited to collaboratively design the curriculum for the upcoming Certification Course in "Inter-Disciplinary Course in Biomedical Engineering" for Academic Year 2023-2024.

#### **Meeting Objectives:**

- Frame the clear learning curriculum and engaging modules.
- Determine effective teaching methodologies and assessment strategies.
- Identify necessary resources, including faculty expertise, software, and lab facilities.
- Establish a realistic timeline for curriculum development and course delivery.
- Selection of coordinator for the program
- Timings for the course

Please come prepared with any initial thoughts or suggestions you may have regarding the curriculum design.

We look forward to your active participation in this important endeavor.

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#### Biomedical Engineering bridge course III YEAR B.PHARMACY /I Semester

Course duration: 40hours Course Starts from February

Objectives: To make the student to understand

- 1. The cell and its structure, Bio signals and bio potential electrodes
- 2. The basics of ECG and interpretation of ECG
- 3. The know the need of Cardiac Pacemakers and Defibrillators
- 4. The instrumentation concerned with measuring various parameters.

#### Unit-I:

Cell and its structure and composition, Resting Potential, Generation and Propagation of Action Potential, Conduction through nerve to neuro-muscular junction.

Bio signals and their characteristics. Bio-potential Electrodes-External, Internal, and Microelectrodes. Electrodes used for pH,pO2,pCO2.

Static and dynamic characteristics of medical instruments, Components of Medical Instrumentation System.

#### Unit-II:

Electromechanical activity of heart, Einthoven triangle, Standard 12-lead configurations, Interpretation of ECG waveform. Electrocardiograph (ECG), Specification of ECG machine. Blood pressure Measurement: Indirect –Auscultatory, Oscillometric, Ultrasonic

#### Unit-III:

Cardiac Pacemakers: Need for a Pacemaker, Types-Asynchronous, Synchronous (demand), External and implantable. Asynchronous pacemakers: Working principle, block diagram. Synchronous/Demand Pacemaker: Working principles. Modes of triggering-ventricular triggered (QRS triggered) and atrioventricular synchronized pacemaker (P wave triggered), Programmable pacemaker. Defibrillators: Need for Defibrillators, D.C. Defibrillator, Cardioverter.

#### Unit-IV:

EEG-Block diagram & circuits, electrode placement, Evoked potentials and their measurement. EMG-Block diagram & circuits, electrode placement, Nerve conduction velocity determination, EMG stimulators.

#### Unit-V:

X-Ray generation, block diagram of X-ray machine, working principle and block diagram of Computed Tomography (CT), Ultrasound-working principle and operation of A, B & M mode scanner, Doppler effect and color Doppler. MRI: Principle and block diagram

Outcomes: At the end of the course the student will

- 1. Identify different bio potentials
- Differentiate various electrodes.
- Describe the operating principles of different medical equipment.
- 4. Analyze various physiological parameters
- Gain knowledge on usage of instruments in hospitals





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#### Attendance

#### Inter-Disciplinary Course in Biomedical Engineering

Regd No	Name of the					9			Studen	ts Sign	ature	- 01=	cs w	ISE			
ū	student	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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19DH1R0032	Satya Prasad Goud	8	8-	8-	du	de	d	gh	oh	de	4	8h	86	de	gh	8h	Sh
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# VISHNU INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH Sangareddy-Narsanur Rd, Narsanur Telangang-502313

Sangareddy-Narsapur Rd, Narsapur, Telangana-502313 Approved by PCI, AICTE and Affiliated to JNTUH

Email: viper@viper.ac.in Website: viper.ac.in Phone: 08458-222002

Date:02/02/24

#### REPORT

Name of the program:

**Duration:** 

Resource person/ Organization:

Vishnu Institute of Pharmaceutical Education & Research, Narsapur, organized one month certificate course on "Inter-Disciplinary Course in Biomedical Engineering 16/11/23 to 02/02/24 This program was instrumental in equipping participants with essential skills. A total of 100 students participated, and upon completion, they were able to understand the objectives and learning outcomes outlined below.

#### **Objectives**

- To provide a foundational understanding of biomedical engineering concepts applied to pharmacy.
- To explore the integration of engineering principles in the development, manufacturing, and delivery of pharmaceutical products.
- To enhance the ability to work on interdisciplinary projects in healthcare, pharmaceuticals, and biomedical technology.

#### Outcome

By the end of the course, students will be able to

- Understand the integration of biomedical engineering with pharmacy.
- · Be equipped to apply engineering principles to pharmaceutical challenges.
- Develop interdisciplinary solutions for healthcare using innovative technologies.

All the students found the training to be highly beneficial and provided positive feedback. In conclusion, the Coordinator, Mrs.P.Bhavani, expressed gratitude to the resource person and congratulated all the participants for contributing to the success of the program.

Coordinator

Principal