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ADYAPAN

# Adyapan School

## Pharmacovigilance



Duration - 2 months

Industry  
Certification



Skill India Certified

250+  
Partner Companies

# From data to safety Master Pharmacovigilance.

From safety data to regulatory impact — become industry-ready.

This immersive Pharmacovigilance program takes you beyond foundational concepts into real-world drug safety monitoring and reporting. Learn adverse event reporting, signal detection, case processing, and global regulatory frameworks through hands-on case studies and guided workflows. With a strong focus on compliance and industry practices, you'll graduate with the ability to assess drug safety profiles, manage risk, and contribute confidently to patient safety and regulatory decision-making processes.

**8**

MODULES

**30+**

PROGRAM OFFERINGS

**20,000+**

STUDENTS

**250+ PARTNERED COMPANIES**

ABOUT ADYAPAN SCHOOLS

## Where education meets real-world impact

Not just a course — a platform to launch  
your career.

Adyapan Schools was built with a single conviction:  
learning works best when it happens in the real world.  
We partner with top companies, mentors, and industry  
platforms to ensure every student graduates with a  
portfolio of work that speaks louder than a certificate.

Our programs combine rigorous coursework with live  
client projects, giving you the skills and proof-of-work  
that employers actually want.

### MISSION

To equip ambitious learners with  
practitioner-level digital  
marketing skills through mentor-  
led, project-based education that  
bridges the gap between learning  
and earning.



### VISION

To be India's most trusted  
launchpad for the next generation  
of marketing leaders — defined  
not by degrees but by the real  
work.



## Everything you need to grow fast

### PROGRAM HIGHLIGHTS



#### Live Industry Projects

Work on campaigns for real brands alongside your coursework. Build portfolio projects that prove your expertise to employers.



#### 1-on-1 Mentorship

Dedicated mentors from Google, Microsoft, Mastercard and more. Get personalized guidance and industry connections.



#### AI-Powered Marketing

Learn cutting-edge AI tools alongside evergreen fundamentals. Stay ahead of the curve in a rapidly evolving landscape.



#### Dual Certification

Earn both a Course Completion and Internship Certificate – accredited by Skill India Digital Hub and NSDC.



#### Internship Guarantee

Graduate with an internship completion certificate from a live brand project. Concrete, resume-ready proof of work.



#### Industry Network

Join a network of alumni at Amazon, Google, Adobe, Microsoft. Access exclusive hiring events and referral opportunities.

## 8 weeks. 8 modules. Infinite impact.

### WEEK 1

#### Introduction to Pharmacovigilance

- Discussion of curriculum
- Definition and scope of pharmacovigilance
- History and evolution of drug safety
- Role of pharmacovigilance in healthcare
- Key stakeholders: pharmaceutical companies, regulators, healthcare professionals



### WEEK 2

#### Regulatory Guidelines

- Distinguish between genetic, biochemical, and cell-based target validation approaches
- Study gene knockdown/knockout strategies
- Explore proteomics and transcriptomics tools for expression-level validation
- Understand biomarker identification and how validated targets translate into disease endpoints
- Introduction to structure determination techniques
- Retrieve and analyse 3D protein structures using the RCSB Protein Data Bank (PDB)



### WEEK 3

#### Foundations of Computer-Aided Drug Design (CADD)

- Understand the two major CADD branches: Structure-Based Drug Design (SBDD) and Ligand-Based Drug Design (LBDD)
- Set up your computational environment
- Learn protein preparation workflows: adding hydrogens, assigning charges, and removing water molecules
- Introduction to small molecule representation: SMILES, InChI, and SDF formats
- Explore chemical databases
- Understand force fields and their role in molecular modelling



## 8 weeks. 8 modules. Infinite impact.

### WEEK 4

#### Lead Discovery - Molecular Docking & Virtual Screening

- Understand the principles of molecular recognition: shape complementarity, hydrogen bonding, and hydrophobic interactions
- Perform protein active site identification and binding pocket analysis
- Conduct grid-based molecular docking and Glide
- Screen a small compound library against your validated target and interpret docking scores
- Introduction to pharmacophore modelling using LigandScout or Phase
- Filter hits using Lipinski's Rule of Five and lead-like criteria



### WEEK 5

#### Lead Optimisation - SAR and Medicinal Chemistry Principles

- Understand Structure-Activity Relationships (SAR) and how chemical modifications alter potency and selectivity
- Study bioisosteric replacement, scaffold hopping, and fragment growing strategies
- Learn R-group analysis and matched molecular pair (MMP) analysis
- Introduction to Free Energy Perturbation (FEP) concepts for relative binding affinity prediction
- Explore prodrug strategies and how they address bioavailability challenges
- Analyse case studies



### WEEK 6

#### ADMET Prediction & Drug-Like Properties

- Understand ADMET: Absorption, Distribution, Metabolism, Excretion, and Toxicity in drug development
- Use SwissADME, pkCSM, and ADMETlab to predict pharmacokinetic profiles of lead compounds
- Study key parameters
- Introduction to hERG toxicity prediction and cardiotoxicity flagging
- Understand pan-assay interference compounds (PAINS) and how to identify and remove them



## CURRICULUM

# 8 weeks. 8 modules. Infinite impact.

### WEEK 7

#### Molecular Dynamics & Advanced Simulation Techniques

- Understand the theory of Molecular Dynamics (MD) simulations and their role in drug design
- Set up and run short MD simulations
- Analyse MD trajectories
- Introduction to MM-GBSA and MM-PBSA methods for binding free energy estimation
- Explore induced-fit docking and allosteric drug design concepts
- Study ensemble docking to account for protein flexibility and conformational sampling



### WEEK 8

#### Integrated Project & Industry Readiness

- Execute a full end-to-end mini drug design project
- Prepare a lead compound reports
- Introduction to intellectual property in drug discovery: patents, data exclusivity, and freedom to operate
- Understand regulatory pathways: IND filing, pre-clinical requirements, and early-phase clinical trial design
- Explore career tracks: medicinal chemist, computational chemist, pharmacologist, and drug discovery scientist



WHO THIS IS FOR

## This course is perfect for

Students & Career Switchers

Pharmacy, Biotechnology & Medical Chemistry Students

Computational Chemistry Professionals

Healthcare & Pharmaceutical Industry Professionals

Bioinformatics & Molecular Modeling Enthusiasts

Researchers & Lab Professionals

### CERTIFICATIONS



### ALUMNI NETWORK

## Our alumni work at world-class companies

Amazon

Adobe

Google

Autodesk

Microsoft

Deloitte

## Your career switch is one click away.

Ready to begin? Apply at [adyapanschool.com](https://adyapanschool.com) or email us at [support@adyapan.com](mailto:support@adyapan.com)

Apply Now