



CliMed.Edu

(a constituent unit of CliMed Research Solutions)

CliMed Academy, a constituent unit of
CliMed Research Solutions present

A Four-day short-term skill-development course on

Pharmacogenomics & Personalised Medicine

3 - 9
February 2025
7.00 PM - 8.00 PM
Everyday

About the Course:

This course would cover the integration of genetic information into drug therapy to tailor treatment plans for individual patients. It would explore how genetic variations influence drug metabolism, efficacy, and safety.

Course Objectives:

- Understand the basic principles of pharmacogenomics and personalized medicine.
- Explore how genetic variations affect drug metabolism, efficacy, and safety.
- Learn how pharmacogenomic testing can be used to optimise drug therapy and minimise adverse drug reactions.
- Understand the clinical applications of pharmacogenomics across various disease states.
- Discuss the ethical, legal, and social issues related to pharmacogenomic testing.
- Examine the future of pharmacogenomics in healthcare, including emerging technologies and personalised medicine trends.



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Why this Course:

Core Concepts and Importance in Clinical Practice: Pharmacogenomics focuses on understanding the genetic factors that influence how a patient will respond to specific drugs. Genetic polymorphisms—variations in the DNA sequence among individuals—can significantly impact drug absorption, distribution, metabolism, and excretion (ADME). These variations can make certain drugs either more effective or more toxic in some patients. For instance, polymorphisms in drug-metabolizing enzymes, such as those in the cytochrome P450 (CYP450) family, can result in patients metabolising drugs too quickly or too slowly, which affects drug efficacy and the risk of adverse drug reactions (ADRs). A critical concept in pharmacogenomics is pharmacokinetics (the study of drug movement through the body) and pharmacodynamics (the study of the biochemical and physiological effects of drugs). Variations in genes involved in these processes, such as those governing drug receptors, transport proteins, and enzymes, directly influence how drugs behave within the body, requiring customised treatment approaches.

Future of Pharmacogenomics:

Pharmacogenomics and personalised medicine are reshaping healthcare by providing more effective and safer treatments specific to the genetic makeup of individuals. As genetic testing becomes more accessible, and as our understanding of genomics and drug interactions continues to improve, the integration of pharmacogenomics into clinical practice will expand, making it a cornerstone of future healthcare.

Learning Outcomes:

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

1. Explain the role of genetics in drug metabolism and response.
2. Interpret pharmacogenomic test results and apply them to personalised drug therapy decisions.
3. Evaluate the clinical implications of genetic variations in different therapeutic areas, including oncology, cardiology, psychiatry, and pain management.
4. Integrate pharmacogenomic knowledge into patient care, including the ability to recommend genetic testing, interpret results, and adjust medication regimens accordingly.
5. Understand ethical, legal, and social issues related to pharmacogenomics and personalise care based on these considerations.
6. Identify future trends in pharmacogenomics, including the role of emerging technologies and AI in the development of personalised medicine.

Target Audience:

- Pharmacy Students: B.Pharm, M.Pharm & Pharm.D Ideal for advanced pharmacy students who are interested in clinical pharmacy and personalised medicine.
- Pharmacists and Healthcare Providers: Healthcare professionals looking to enhance their knowledge of pharmacogenomics and its clinical applications.
- Researchers and Scientists: Those pursuing research in genomics, pharmacology, or personalised medicine.
- Assistant Professors, Associate Professors, Ph.D Scholars.

Syllabus:

- Basics of Pharmacogenomics & Gene-drug interactions
- Personalised medicine & Ethical, legal considerations & Emerging Technology Advances.
- Pharmacogenomics in Common Disease States like -
 - **Cancer:** The role of pharmacogenomics in cancer treatment, including targeted therapies (e.g., HER2 in breast cancer, EGFR mutations in lung cancer).
 - **Cardiovascular Diseases:** Personalised drug therapy for cardiovascular diseases such as statin therapy, anti-platelet therapy (e.g., clopidogrel), and anticoagulants.
 - **Mental Health:** Pharmacogenomics in psychotropic drugs (e.g., antidepressants, antipsychotics). How genetic testing can guide medication choice for conditions like depression and schizophrenia.
 - **Pain Management:** How genetic testing can be used to personalise pain management, especially with opioid therapies.
- Clinical implementation & Case Studies

Certification:

The participants will get the certificate after the completion of our course with at least 80% attendance and 70% marks in the final assessment, which is an MCQ-based question paper.



Program description



Last Date to Register:
January 31, 2025



Timings:
7 PM to 8:00 PM Everyday



Course fee:
299/- INR only

Register here



<https://rzp.io/rzp/capgpm>



Instructor and Course Director:

Dr. Neha Suratiya, Pharm.D

Dr. Neha Suratiya is a distinguished healthcare professional with a Doctorate in Pharmacy (Pharm.D) and extensive expertise in clinical and pharmacy practice. Formerly an Assistant Professor at Parul University, she has demonstrated a profound commitment to research and academics.

Dr. Suratiya is the author of the book "Drug-Related Problems and Their Overcomes" and has contributed to the scientific community with 12 publications in esteemed national and international journals. Her active participation in national conferences, webinars, workshops, and panel discussions underscores her dedication to advancing pharmacy education. She served humanity during the COVID-19 crisis at Dhiraj Hospital, earning certification for her contributions. Dr. Suratiya envisions transitioning from the conventional supply-based pharmacy model to a clinical skills-based service approach, aiming to enhance patient care. With her strong foundation in clinical knowledge and academic excellence, she continues to inspire innovation and growth in the pharmacy.