

Online Certificate & Master's Programs:

Career Paths in Pharmacometrics, Drug Discovery & Development, and Outcomes Research



PHARMACOMETRICS

Pharmacometrics is an emerging science defined as the science that quantifies drug, disease and trial information to aid efficient drug development and/or regulatory decisions.



Knowledge & Skills Gained:

Pharmacokinetics and pharmacodynamics, clinical pharmacology, cutting-edge Bayesian dosing concepts, pharmacometrics.



Required Education:

Bachelor's Degree (Chemistry or Life Sciences) and/or Health Professional Student/Graduate.

Job Opportunities

- Clinical Pharmacologist
- Pharmacometrician



Types of Employers

- Clinical practice
- Clinical research organizations
- Pharmaceutical industry
- Regulatory agencies

Academic Programs

- **Certificate**
- 15 hrs
- 100% online



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DRUG DISCOVERY & DEVELOPMENT

Drug discovery and development (DDD) is the process by which new drugs are discovered, developed and approved for clinical use. It also encompasses the knowledge, skills and techniques required for pursuing the process.



Knowledge & Skills Gained:

Understanding of critical aspects of all stages of the DDD process, project management, scientific communications; track selection of medicinal chemistry, formulation science, or pharmacology & toxicology.



Required Education:

Bachelor's Degree (Chemistry or Life Sciences) and/or Health Professional Student/Graduate.

Job Opportunities

- Medicinal Chemist • Scientific Writer
- Pharmaceutical Scientist • Toxicologist
- Project Manager • Pharmacologist



Types of Employers

- Bio-Pharma industry • Clinical pharmacies
- Contract research organizations
- Consulting firms • Medical science liaisons
- Not-for-profit research institutions

Academic Programs

- **Certificate**
- 12 hrs
- 100% online
- **Master of Science**
- 30 hrs
- Capstone project/internship
- 80% online/20% on-site training

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APPLIED HEALTH OUTCOMES RESEARCH

Outcomes research is used to develop patient-centered best practices, practice guidelines, and cost-effective therapeutic and behavioral interventions, improve healthcare system performance, and inform policy.

Job Opportunities

- Clinical Outcomes Manager
- Healthcare Administrators
- Pharmacoeconomist • Practitioners
- Policymakers • Research Analyst



Types of Employers

- Academia • Contract research organizations
- Health insurance • Healthcare systems
- Hospitals • Government organizations
- Pharmaceutical industry • Regulatory agencies
- Non-profit policy research organizations
- Non-profit research institutions



Knowledge & Skills Gained:

Evaluate clinical, observational, economic & policy research; use real-world evidence to inform decision-making; compare effectiveness of treatments/interventions.



Required Education:

Certificate
Health Professional Student/Graduate.

Master of Science
Bachelor's Degree and/or Health Professional Graduate/Student.

Academic Programs

- **Certificate**
- 12 hrs
- Capstone project
- 100% online
- **Master of Science***
- 30 hrs
- Research project
- 100% online

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Questions?
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