



Course Description

PAS3140 | Genetics | 4.00 Credits

The study of the use of drugs to treat disease, including contraindication and incompatibilities; drug interactions; side effects and their treatment, and dosages and calculations. Prerequisite: PAS1821, 1824, 3038C, 3075

Course Competencies:

Competency 1: The student will compare and contrast the specific pharmacology of the major classes of drugs and identify important distinctions among members of each drug class about the organ systems they affect and the diseases for which they are used therapeutically by:

1. Analyzing the mechanism by which drugs work and applying it to clinical scenarios
2. Listing the various drug classes and disease processes they treat

Competency 2: The student will recognize the risk vs. benefit of therapeutic interventions in clinical practice by:

1. Recognizing the role of molecular genetics and pharmacogenomic principles in pharmacotherapeutics and drug development.
2. Using the medical literature to evaluate drugs in the context of evidence-based medical practice
1. Applying principles of pharmacology to initiate pharmacological treatment interventions based on clinical case scenarios

Competency 3: The student will apply principles of pharmacology to prescribe appropriate pharmacologic treatments during clinical case scenarios by:

1. Calculating the correct dose using pharmacokinetic and pharmacodynamic principles
2. Determining the correct frequency based on the clinical picture
3. Applying critical thinking skills when prescribing multiple medications to patients
4. Examining polypharmacy practices and avoiding drug-drug interactions

Learning Outcomes:

- Use quantitative analytical skills to evaluate and process numerical data
- Solve problems using critical and creative thinking and scientific reasoning
- Demonstrate knowledge of ethical thinking and its application to issues in society