

Integrated Course Template

Goal: Eliminate redundancy and omissions in integrated modules. Establish standards by which important relevant material is taught across all therapeutics modules.

1. Module Specific Drug List
 - a. Updated drug list to ensure drugs used in contemporary clinical practice are covered in Medicinal Chemistry, Pharmacology and Therapeutics lectures.
 - b. Ensure that students have sufficient understanding of basic drug knowledge to be able to understand therapeutic decision making.
2. Medicinal Chemistry
 - a. ACPE: Chemical basis of drug action and behavior in vivo and in vitro, with an emphasis on pharmacophore recognition and the application of physicochemical properties, structure-activity relationships, intermolecular drug-receptor interactions and metabolism to therapeutic decision-making.
 - b. Example Topics: Chemical basis for molecular drug actions, interactions, broad indications and contraindications, side effects and route of administration.
3. Pharmacology
 - a. ACPE: Pharmacodynamics, mechanisms of therapeutic and adverse drug actions and interactions, lifespan-dependent variations in physiology or biochemistry that impact drug action and effectiveness, and application of these principles to therapeutic decision-making.
 - b. Example Topics: mechanism of action, adverse effects, indications, contraindications, and interactions.
4. Therapeutics
 - a. ACPE: Evidence-based clinical decision making, therapeutic treatment planning, and medication therapy management strategy development for patients with specific diseases and conditions that complicate care and/or put patients at high risk for adverse events. Emphasis on patient safety, clinical efficacy, pharmacogenomic and pharmacoeconomic considerations, and treatment of patients across the lifespan.
 - b. Example Topics: Goals of therapy, patient specific drug selection, dosing (normal and special populations), dose modification, monitoring, MTM, treatment plans, cost of therapy related to drug selection, therapeutic decision making (algorithms, evidence-based medicine) and monitoring parameters.
5. Key Concepts: Basic Science and Clinical faculty will develop a list of essential key concepts for each area that students must understand to apply basic drug knowledge to therapeutic decision making.