

School of Chemistry

Aims and Objectives: Session 2023-2024, Semester 1

Module CH3716: Quantitative Aspects of Medicinal Chemistry

Course Title Pharmacology and Pharmacokinetics

Duration: 5 hours

Lecturers: Professor T. K. Smith

Aims: The aim of this part of the module is to cover some of the quantitative aspects of medicinal chemistry and drug design. Examples of past exam questions will be covered in the tutorial class.

Objectives:

1. Physical aspects of pharmacology, including drug-receptor interactions, receptor occupancy and dose response curves.
2. Derivation and use of the Schild equation.
3. The pharmacokinetic phase of drug action.
4. Discussion of the absorption, distribution, metabolism and elimination (ADME) of drugs.
5. Aspects of drug clearance and bioavailability.
6. Drug metabolism. The action of Phase 1 and Phase 2 enzymes.
7. The concept and design of pro-drugs.