

# PHARMACOLOGY (PHAC)

## **PHAC 7042 Cardiovascular Regulation and Drug Action 2 1.5 cr**

The normal homeostatic regulation of the cardiovascular system, its modification by drugs, and the sites and characteristics of drug actions affecting the cardiovascular system.

## **PHAC 7062 Drug Distribution, Metabolism and Excretion A 1.5 cr**

The mechanisms by which the body handles the absorption, distribution and elimination of drugs and the impact this has on biological response.

## **PHAC 7064 Drug Distribution, Metabolism and Excretion B 1.5 cr**

The mechanisms influencing the absorption, distribution and elimination of drugs from the body and their impact on pharmacodynamic and pharmacokinetic properties.

**PR/CR: A minimum grade of C is required unless otherwise indicated.**

Prerequisite: PHAC 7062 or its equivalent.

## **PHAC 7110 Topics in Pharmacology 6 cr**

(Formerly 089.711) Short research projects on various properties and effects of newer drugs. Presentation of oral and written reports by graduate students on research conducted. Open only to graduate students in Pharmacology.

## **PHAC 7136 General Pharmacology 3 cr**

General pharmacological principles including pharmacodynamics of the more important groups of drugs, the factors which control and modify their effects, and the basis for rational selection and administration of drugs in the treatment of common diseases.

**PR/CR: A minimum grade of C is required unless otherwise indicated.**

Prerequisite: permission of department.

## **PHAC 7162 Neuropharmacology 1.5 cr**

A broad sample at the graduate level of the pathophysiology, pharmacological treatments, and current research related to common neurological disorders. These will be didactic lectures followed by discussion of current topics in neuropathology and neuropharmacology.

## **PHAC 7164 Pharmacology Grant Writing Course 1.5 cr**

The objective of this course is to teach students how to formulate, write, and present a professional research grant on the subject of their pharmacology graduate research. Students will be required to write and present a research grant under the close supervision of the course director.

## **PHAC 7180 Recent Advances in Pharmacology 3 cr**

Lectures given by staff, followed by group discussions on current research, new developments in drugs and re-evaluation of currently employed drugs, their mechanism of action, etc. Three hours per week both terms. Open only to graduate students in Pharmacology.

## **PHAC 7190 Pharmacokinetics of Drug Disposition 3 cr**

Lectures and problem-solving sessions directed at appropriate modelling of the disposition of drugs in the body.

## **PHAC 7212 Clinical Trial A 1.5 cr**

Evaluate the essential elements of clinical trials as the basis for determining the potential value of interventions advocated for the treatment of diseases in humans. Topics include designing a study question, types of clinical trial designs, methods for randomization, sample size calculations, and ethics. The format will include assigned readings, lectures, discussion and assignment preparation.

## **PHAC 7214 Clinical Trial B 1.5 cr**

Evaluate the essential elements of clinical trials as the basis for determining the potential value of interventions advocated for the treatment of diseases in humans. Topics include recruitment, baseline assessment, reporting morbidity and mortality, data collection, and survival analysis. While it is suggested that PHAC 7212 is taken before PHAC 7214 since there is a natural progression of information, it is not required that both courses are taken.

## **PHAC 7222 Molecular Pharmacology 2 3 cr**

Lectures, seminars and selected readings on the mechanism of action of therapeutic and recreational drugs. This course covers 6 major themes: G-protein coupled receptors; Ion channels; Transporters; Lipid signaling; Tyrosine kinase receptors and tyrosine kinase-associated receptors.

## **PHAC 7230 Fundamental in Pharmacology for Health Care I 3 cr**

This course will build on foundational knowledge of human physiology and examine basic pharmacokinetic (drug metabolism) and pharmacodynamic (drug action) principles of specific drug classes related to the autonomic nervous system, cardiovascular system (edema, hypertension, arrhythmia, angina, blood clotting, heart failure, hyperlipidemia), diabetes, thyroid, inflammation and pain. Remaining major drug classes will be covered in PHAC 7240. Students may take one or both courses. Taking both courses must be done in the same academic year (Sept to April) or with permission from the Department Head. Course delivery will involve lectures followed by clinical case-based tutorials.

## **PHAC 7240 Fundamentals in Pharmacology for Health Care II 3 cr**

This course will build on foundational knowledge of human physiology and examine basic pharmacokinetic (drug metabolism) and pharmacodynamic (drug action) principles of specific drug classes related to the central nervous system (depression, psychosis, anxiety, epilepsy, movement disorders (e.g. Parkinson's)), infection (bacterial, viral, fungal), cancer, asthma, allergy, osteoporosis, gastrointestinal system, reproduction and special topics (pregnancy, geriatrics, drugs of abuse). Remaining major drug classes will be covered in PHAC 7230. Students may take one or both courses. Taking both courses must be done in the same academic year (Sept to April) or with permission from the Department Head. Course delivery will involve lectures followed by clinical case-based tutorials.