CHEM 2550 – Pharmacology for Health Sciences

Lecture / Tutorial: Fridays 830 – 1130
Location: CB 121

Description: This course provides a general introduction to various aspects of pharmacology including pharmacokinetics, pharmacodynamics and an overview of selected classes of drugs and their prototype drugs. The relationship between the actions of drugs and their corresponding receptor systems will be a focus of the course. Medications will be discussed within the context of the pathophysiology associated with selected organ systems including cardiovascular, respiratory, nervous, endocrine, gastrointestinal and reproductive as well as drugs related to inflammation, infection and chemotherapy.

Learning Outcomes:

Upon completion of this course, the student will have reliably demonstrated the ability to:

1. explain the principles of pharmacodynamics, pharmacokinetics and drug administration
2. identify and describe the pharmacologic properties of drugs of a variety of therapeutic and pharmacologic classes
3. predict interactions, contraindications and adverse effects based on the properties of therapeutic and pharmacological classes
4. explain the rationale for selecting drugs for particular pathological conditions
5. describe and research the key elements of drugs used in health care settings

Schedule of Activities & Readings:

Date	Content	Readings
Jan 8	Introduction, drug administration, pharmacokinetics pharmacodynamics, developmental considerations, regulations, routes of administration, rights, errors	Ch. 1, 2, 4 – 8
Jan 15	Neuro I – ANS, substance abuse, seizures	Ch. 12, 13, 15
Jan 22	Neuro II – emotion/mood disorders / anxiety / psychoses degenerative diseases	Ch. 14, 16 – 18
Jan 29	Neuro III – pain, anesthesia (general & local), Neuromuscular	Ch. 19, 20, 45
Feb 5	Test 1 (33%)	
Feb 12	Gastrointestinal	Ch. 36, 37

	Endocrine & Diabetes	Ch. 39, 40
Feb 19	Break Week	
Feb 26	Reproductive – HRT, contraception, androgens, ED Inflammation	Ch. 41, 42 Ch. 31 (p 401 – 409)
Mar 4	immunity / infection / neoplasia	Ch. 30, 32, 35
Mar 11	Test 2 (34%)	
Mar 18	CV I – hyperlipidemia / hypertension / CHF	Ch. 21, 22, 24
Apr 1	CV II – shock / angina / MI / coagulation	Ch. 23, 26, 27
Apr 4 (M)	CV III – dysrhythmias Respiratory	Ch. 25 Ch. 29 + p. 410 – 417
Apr 6 - 20	Final Exam (33%) – to be scheduled during exam period	

Resources:

MP Adams,LN Holland Jr, PM Bostwick & SL King. Pharmacology for Nurses A Pathophysiologic Approach (2010). Canadian Edition. Pearson Canada.
ISBN: 9780131731233 (required)

MyNursingLab (optional)

Lecture Notes & Handouts

Evaluation

Test I – 33% up to and including material discussed on Jan 31
Test II – 34% material discussed on Feb 14 to Mar 7 inclusive
Final Exam – 33% remainder of untested material

The exams are non-cumulative with respect to drug classes but you will be expected to apply principles related to pharmacokinetics and pharmacodynamics throughout the course. We will stick to this plan as closely as possible but we may have to adjust a little bit depending on how the term goes.

Academic Honesty

The policies of academic honesty including plagiarism and cheating will be strictly adhered to in this course. Please see the York University policy on academic honesty at: www.yorku.ca/secretariat/legislation/senate/acadhone.htm

There are also excellent resources available online at York University about what constitutes violations of the academic honesty policy: www.yorku.ca/academicintegrity/students.htm

You can also work though a tutorial at: www.yorku.ca/tutorial/academic_integrity

Your School of Nursing Student Handbook has further information about academic honesty. A last suggestion, 'If in doubt – always ask your professor!' It is not worth the risk because students who are found guilty of violations of academic policy may be jeopardizing their whole career – both academic and professional.

Tests & Exams

(1) Students will receive a 0 for a test if they miss a test without contacting faculty or without appropriate documentation of their absence.

(2) Tests will be offered during a specific time period. Students who are late for tests will not be given extra time to complete the test.

(3) Once one student has completed his/her test, and left the room, students who are late beyond this point in time will not be allowed to write the test during the time period subject to (1).

Expectations for success:

- attend class regularly, come to class on time
- do the assigned readings ahead of time if possible, review pathophysiology related to the content each week
- if you do not understand something, ask questions until you are sure you do understand
- **tests** must be written at the time specified, request for adjustments to the schedule must be made to the instructor **BEFORE** the test is to be written with appropriate documentation
- emergencies do happen periodically → contact the instructor **AS SOON AS POSSIBLE** to make alternate arrangements
- **email is the best way to contact me if you require a rapid response**
- **appointments can be booked for Fridays before or after class, or on other days if necessary**

Notes: This can be an overwhelming course so I will try to link the material with your pathophysiology course as best I can. We will focus on drug classes and discuss specific drugs within each class. Drugs can be identified by three different names (chemical, generic and trade); I will use the generic names in lecture and on exam questions, and inform you of any exceptions to that plan. For exams, I will usually identify the drug class to which a drug belongs rather than have you memorize the drug names. Make sure you ask questions if you have them or if I have said something that doesn't make sense to you. I would rather slow down a bit and be sure that you are comfortable with the content than to zip through it.

I hope you find the course valuable and that it provides a good basis for your future studies.

Sean

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