Pharmacology Program Syllabus

Dates: July 21 to August 13, 2015
Location: University of British Columbia, Vancouver, Canada
Room Location: School of Population and Public Health, Room B108 (**SPPH B108**)
Director: Dr. Andrew Horne (andrew.horne@ubc.ca)

Course 1 – Pharmacology of Everyday Life:

Students will gain insight into how drugs produce both desired and adverse effects through exploration of their underlying mechanisms of action on the body. Through historical and present-day analysis of selected prescription, over-the-counter, and social drugs, students will gain an understanding and appreciation of pharmacology directly applicable to their everyday lives. Course objectives will be met through a combination of lectures and small group discussion/tutorial sessions designed to introduce students to the challenges of pharmacology in science and everyday life.

Course 2 – Systems Pharmacology:

Students will explore the basic science and clinical applications of drugs in different physiological systems of the body. Lectures and small group sessions will allow students to learn drug mechanisms and effects throughout the body from both the basic science and clinical perspectives. Among the many topics discussed in this course, students will gain a detailed appreciation of the important drugs and drug classes of the cardiovascular, respiratory, gastrointestinal, and reproductive systems, as well as the fields of neuropharmacology and autonomic pharmacology.

At the end of this 2-course pharmacology package, students will have:

- *An understanding of basic qualitative and quantitative concepts of pharmacology, and how they may vary throughout a population.*
- *An appreciation of the role of drugs in history and present everyday life, in both a social (e.g. alcohol, caffeine) and self-medicating (over-the-counter) context.*
- *An understanding of the mechanisms by which antibiotics and chemotherapeutic drugs selectively target bacterial cells or rapidly dividing cells within the body.*
- *A basic understanding of the pharmacology of the autonomic nervous system, some of the more prominent physiological systems of the body (cardiovascular, nervous, gastrointestinal), and how they all connect together to modulate physiological function.*
- *Insight into the pharmacological mechanisms of analgesia and anesthesia.*
- *Understanding of the principles of therapeutics and clinical pharmacology*

Course Information

- This is a team-taught course, meaning that you will have exposure to many different instructors, professors and graduate students within our Department who are fluent in their topics of instruction. Lecture format, style, and the nature of interactive activities will vary from class to class.
- Each lecturer is responsible for content related to his or her section, including exam questions. If you have any questions of the course specific to a certain lecture (learning objectives, content clarification, etc.), it is recommended that you follow up with that specific instructor.
- For general questions about the course and non-content related issues (assignment questions, missed classes, etc.) contact the course director as listed above.

Course Resources

There is no textbook for this course; class notes and handouts form the scope of material that you are responsible for learning. Lecture notes will be uploaded to Connect (http://elearning.ubc.ca/connect/) in advance of class, and should be printed or downloaded to your laptop or electronic device, as is your preference, prior to class.

Assessment:

Each course will be evaluated based on the following allocation:

- Class attendance and participation 5%
- Reflection Journal 10%
- Student Research Assignment 20%
- In-class Assignments (4 per course) 20%
- Weekly Midterm Exams (3 per course) 45%

Percentage (%)	Letter Grade
90-100	A+
85-89	A
80-84	A-
76-79	B+
72-75	B
68-71	B-
64-67	C+
60-63	C
55-59	C-
50-54	D
0-49	F (Fail)

Brief explanations of some of these components are shown below; full details will be provided on the first day of class. This breakdown of marks will apply to all students; no exceptions will be made on an individual basis, out of fairness to all other students in the class.

Your final grade for each course will be calculated from the assignments and examinations as detailed above; based on this final percentage, you will be assigned a letter grade based on the UBC grading system, shown to the right.

Reflection Journal

Each class will have 1-2 associated questions that should be answered in your own time and included in a brief reflective journal to be submitted in the final week.

Student Research Assignment

Specific details of this assignment vary for each course, and will be discussed on the first day of class.

Pharmacology of Everyday Life – Student Presentation
Systems Pharmacology – Disease Treatment Profile

In-Class Assignments

Each course will have selected sessions where a small activity associated with that day's material will be completed and evaluated; these are highlighted in grey in your syllabus. Specific details for each activity will be provided in classes where these exercises will be conducted.

Weekly Exams

The beginning of Week 2 (**July 28**), Week 3 (**August 4**) and Week 4 (**August 10**) will each have a 60-minute examination of the previous week's material. Questions will be in multiple-choice and short answer formats. Students will be expected to write their quizzes independently, without consulting classmates; any evidence of academic dishonesty may result in confiscation of the exam and an assigned grade of 0.

Final Presentation

The final presentation for Pharmacology of Everyday Life (see above, under "Student Research Assignment") will take place **Thursday August 13** in the Instructional Resources Centre (also called Woodward), Room 5 (**IRC 5**). Further details will be provided in class.

The research assignment for Systems Pharmacology, as well as reflection journals for both classes, will also be due on August 13 (the date of the Final Presentation), at the beginning of the class.

Vancouver Summer Program 2015 – Pharmacology Syllabus/Schedule

		Monday	Tuesday	Wednesday	Thursday	Friday
		July 20	**July 21**	**July 22**	**July 23**	**July 24**
Week 1	**POEL**	*Program Event: Orientation*	Introduction (POEL/ SP) Dr. Andrew Horne Pharmacodynamics Dr. Jennifer Shabbits	***9:30 start*** Pharmacokinetics Dr. Jennifer Shabbits	Social Drugs: Caffeine and Ethanol Dr. Andrew Horne	***9:30 start*** Anticancer Pharmacology Dr. Jennifer Shabbits
	SP		Autonomic Nervous System Pharmacology 1 Dr. Catherine Pang	Autonomic Nervous System Pharmacology 2 Dr. Catherine Pang	Antihypertensive Pharmacology Dr. Catherine Pang	Cardiovascular Pharmacology Dr. Catherine Pang
		July 27	**July 28**	**July 29**	**July 30**	**July 31**
Week 2	**POEL**	*Program Event: Intercultural Communication Class*	***Midterm # 1 (60 min)*** Herbal Pharmacology Dr. Andrew Horne	Antibiotics & Bacterial Resistance Dr. Andrew Horne	Antiviral and Antifungal Drugs Pouria Jalily Hasani	Performance Enhancing Drugs Dr. Andrew Horne
	SP		***Midterm #1 (60 min)*** Gastrointestinal Pharmacology Dr. Andrew Horne	Respiratory Pharmacology Alice Wang	Reproductive Pharmacology Victoria Baronas	Case-Based Learning Session Jason Cui
		August 3	**August 4**	**August 5**	**August 6**	**August 7**
Week 3	**POEL**	*BC Day (Provincial Holiday)*	***Midterm #2 (60 min)*** Principles of Drug Abuse Dr. Andrew Horne	Drugs of Abuse Victoria Baronas	Analgesia Pharmacology Tim Fung	*Free Study*
	SP		***Midterm #2 (60 min)*** CNS Pharmacology 1 Dr. Joanne Leung	CNS Pharmacology 2 Dr. Joanne Leung	Anesthesia Pharmacology Dr. Joanne Leung	*Program Event: Sports Day*
		August 10	**August 11**	**August 12**	**August 13**	
Week 4	**POEL**	***Midterm #3 (60 min)*** Pharmacogenomics in Clinical Practice Dr. Ricardo Rivera	Principles of Pediatric Pharmacology Dr. Saeid Golbidi Principles of Geriatric Pharmacology Dr. Roger Wong	*Free Study*	***Student Presentations IRC, Room 5*** ***Journals Due Writing Assignment Due***	
	SP	**Midterm #3 (60 min)** Drug Interactions and Their Clinical Importance Dr. Joanne Leung	Interpretation and Assessment of Clinical Research Dr. Cleo Leung	*Free Study*		

Course Guide:

- **POEL – Pharmacology of Everyday Life**
  - 9:00 am – 12:00 pm, SPPH B108, *unless otherwise stated above*
- **SP – Systems Pharmacology**
  - 1:30 pm – 4:30 pm, SPPH B108, *unless otherwise stated above*