



**BIO405 Clinical Pharmacology
Fall 2013**

Course Description

This course will provide an overview of the effects of drugs specifically employed to affect the nervous system, as seen in the treatment of mental disorders, behavioural disorders, and other conditions such as Parkinson's, Huntington's and Alzheimer's diseases. Neuro-pharmacologic agents will be discussed as they relate to the biochemistry and physiology of neurotransmitters.

Number of Credits: 3

Class Schedules

September 5 – December 5
Tuesdays/Thursdays 8:15 am – 9:30 am
Room: A2212

Instructor Information

E-mail: catta@ambrose.edu or callie.atta@gmail.com
Office location: Will set up meetings as needed. Please email me to request a meeting, or speak with me after class.

Textbooks

Drugs & Behavior: Introduction to Behavioral Pharmacology (7th Edition). By William A. McKim Ph.D., and Stephanie Hancock Ph.D. Pearson Publishing.

Attendance

As this is a senior undergraduate course, you are responsible for your own attendance. Examinations will rely more on lecture material than textbook material, so please plan on attending each lecture. There is no penalty for missing a lecture, although missed quizzes/exams cannot be taken at a later date without a Doctor's note or extraordinary circumstances.

Course Outline

This course is an introductory course on clinical pharmacology. We will cover the basics of pharmacology, drug classes, and medication options for clinical disorders (in relation to DSM-5 criteria). This course will also provide students with a "toolkit" to understand the inter-relationships between abnormal psychology, the brain, behaviour, the person, the family, and the community.

Expected Learning Outcomes

Students will be able to articulate the neural basis of behavioural disorders and the mechanisms of drug effects on brain and behaviour.

Course Requirements

Assignments must be formatted according to American Psychological Association (APA) 6th edition. For instructions visit: <http://owl.english.purdue.edu/owl/resource/560/01/>

*Website includes information on: In-text citations; Headings; Reference page; Cover page

Please ensure your assignments include a cover page with the course name, the instructor's name, the student's name, along with your student ID number.

Assignments and Exams

1. Research Paper due October 24th

Worth 20%

5-6 pages

Cite a minimum of 12 peer-reviewed articles

You will be marked on clarity of thought, breadth, depth, organization/grammar, and APA formatting

You are welcome to choose your own topic, or choose from the list below, but please confirm it with your professor first :

1. What is the neural basis of drug withdrawal?
2. How is anxiety studied in the rat?
3. How is depression studied in the rat?
4. Why are dose-response curves useful in pharmacology research? What can you learn from them?
5. Should medications be used in the treatment of drug and/or alcohol addiction?
6. Describe the variety of cell types in the nervous system, and how they might respond differently to drugs.
7. How can imaging technology be used to visualize medication effects? (e.g., MRI)

2. Research Paper due December 5th

Worth 25%

10-12 pages

Cite a minimum of 20 peer-reviewed articles

You will be marked on clarity of thought, breadth, depth, organization/grammar, and APA formatting

Select one of the behavioural disorders or diseases we have covered in class, and discuss the following according to the research literature:

- the neural basis of the symptoms (behaviour) and/or;
- how the disease is studied by pharmacologists and/or;
- which medications are used to treat the disease, which ones are most effective, and why

3. Cumulative Final Exam

Worth 40%

40 Multiple Choice Questions

10 Short Answer Questions

2 Diagram Questions

1 Long Answer Question

4. Three Quizzes (listed below)

Worth 15% (5% each)

Will cover the material covered in the classes since the previous quiz.

5 Multiple Choice Questions

5 Short Answer Questions

Schedule of Course Topics

Course Week	Topic	Readings	Quiz
1	Basic Principles of Pharmacology	Chp 1	
2	Research Methods in Clinical and Behavioural Neuroscience	Chp 2	
3	Tolerance, Withdrawal, Sensitization, Conditioning	Chp 3	Quiz 1
4	Neurotransmission (Timeline along weeks 4 and 5 is flexible)	Chp 4	
5	Organization of the Central Nervous System, Muscles, and Body Organs		Quiz 2
6	Drug Dependence and Addiction; Side Effects	Chp 5	
7	Anxiety Disorders	Chp 7	
8	Depressive Disorders	Chp 14	
9	Schizophrenia	Chp 13	Quiz 3
10	Movement Disorders	Huntington's disease; Parkinson's disease **Literature reviews will be provided for readings	
11	Neurocognitive Disorders	Alzheimer's disease; Dementia; Lewy Body Disease **Literature reviews will be provided for readings	
12	Recreational Use of Alcohol; Hallucinogens; Stimulants	Chp 16, 6, 16	
13	The place of clinical neuroscience and pharmacology in Public Health	(Class discussion, review, and looking to the future of clinical pharmacology)	

Important Academic Dates

Date	Note
Sept 26	Spiritual Emphasis Days
Oct 28	Last day to reschedule final exam
Nov 25	Last day to apply for time extension for coursework

Examinations:

Final Examination:

Please note: Students may request revised final exams if they have three exams in one 24-hour period or two exams at the same time. Final exam schedule revision request forms are available at the Registrar's Office and must be handed in by Monday, October 28, 2013 (Fall semester) or Monday, March 3, 2014 (winter semester). If you do not have your request in by this date, all exams within a 24-hour period will have to be written as scheduled. If you have two exams at the same time, you will be given four hours to write both exams.

Graded final examinations will be available for supervised review at the request of the student. Please contact your instructor.

Grading: The available letters for course grades are as follows:

<u>Percentage (%)</u>	<u>Letter Grade</u>	<u>Description</u>
96-100	A+	
90-95	A	Excellent
86-89	A-	
80-85	B+	
76-79	B	Good
70-75	B-	
66-69	C+	
60-65	C	Satisfactory
56-59	C-	
53-55	D+	
50-52	D	Minimal Pass
<50	F	Failure

Because of the nature of the Alpha 4.00 system, there can be no uniform College-wide conversion scale. The relationship between raw scores (e.g. percentages) and the resultant letter grade will depend on the nature of the course and the instructor's assessment of the level of each class, compared to similar classes taught previously.

Please note that final grades will be available on the student portal. Printed grade sheets are no longer mailed out.

An appeal for change of grade on any course work must be made to the course instructor within one week of receiving notification of the grade. An appeal for change of final grade must be submitted to the Office of the Registrar in writing within 30 days of receiving notification of the final grade, providing the basis for appeal. A review fee of \$50.00 must accompany the appeal to review final grades. If the appeal is sustained, the fee will be refunded.

Important Notes/Dates:

The last day to enter a course without permission and /or voluntary withdrawal from a course without financial penalty (**drop**) – Sunday, September 15, 2013 (Fall semester). These courses will not appear on the student's transcript. Courses should be added or dropped on the student portal by the deadline date.

Students may change the designation of any class from credit to **audit**, or drop out of the "audit" up to the "drop" date indicated above. After that date, the original status remains and the student is responsible for related fees.

Withdrawal from courses after the Registration Revision period will not be eligible for tuition refund. The last day to voluntarily withdraw from a course without academic penalty (**withdraw**) – Tuesday,

November 12, 2013 (Fall semester) or Friday, March 21, 2014 (Winter semester). A grade of “W” will appear on the student’s transcript.

Students wishing to withdraw from a course, but who fail to do so by the applicable date, will receive the grade earned in accordance with the course syllabus. A student obliged to withdraw from a course after the Withdrawal Deadline because of health or other reasons may apply to the Registrar for special consideration.

Electronic Etiquette

Students are expected to treat their instructor, guest speakers, and fellow students with respect. It is disruptive to the learning goals of a course or seminar and disrespectful to fellow students and the instructor to engage in electronically-enabled activities unrelated to the class during a class session. Please turn off all cell phones and other electronic devices during class. Laptops should be used for class-related purposes only. Please do not use iPods, MP3 players, or headphones. Do not text, read or send personal emails, go on Facebook or other social networks, search the internet, or play computer games during class. The professor has the right to disallow the student to use a laptop in future lectures and/or to ask a student to withdraw from the session if s/he does not comply with this policy. Repeat offenders will be directed to the Dean. If you are expecting communication due to an emergency, please speak with the professor before the class begins.

Academic Policies

It is the responsibility of all students to become familiar with and adhere to academic policies as stated in the Student Handbook and Academic Calendar. Personal information, that is information about an individual that may be used to identify that individual, may be collected as a requirement as part of taking this class. Any information collected will only be used and disclosed for the purpose for which the collection was intended. For further information contact the Privacy Compliance Officer at privacy@ambrose.edu.

Extensions

Although extensions to coursework in the semester are at the discretion of the instructor, students may not turn in coursework for evaluation after the last day of the scheduled final examination period unless they have received permission for a “Course Extension” from the Registrar’s Office. Requests for course extensions or alternative examination time must be submitted to the Registrar’s Office by Monday, November 25, 2013 (Fall semester) or Monday, March 31, 2014 (Winter semester). Course extensions are only granted for serious issues that arise “due to circumstances beyond the student’s control.”

Academic Integrity

We are committed to fostering personal integrity and will not overlook breaches of integrity such as plagiarism and cheating. Academic dishonesty is taken seriously at Ambrose University College as it undermines our academic standards and affects the integrity of each member of our learning community. Any attempt to obtain credit for academic work through fraudulent, deceptive, or dishonest means is academic dishonesty. Plagiarism involves presenting someone else’s ideas, words, or work as one’s own. Plagiarism is fraud and theft, but plagiarism can also occur by accident when a student fails or forgets to give credit to another person’s ideas or words. Plagiarism and cheating can result in a failing grade for an assignment, for the course, or immediate dismissal from the university college. Students are expected to be familiar with the policies in the current Academic Calendar and the Student Handbook that deal with plagiarism, cheating, and the penalties and procedures for dealing with these matters. All cases of academic dishonesty are reported to the Academic Dean and become part of the student’s permanent record.

Students are strongly advised to retain this syllabus for their records.