



## RBIO301 –Drugs, Brain, and Behavior

### Master Course Syllabus

### Course Overview (QM Standards 1.2)

**Course description:** *Drugs, Brain and Behavior* is an eight-week online, three credit hour course. The class examines neuroscience and pharmacology of the central neural system as a means of determining the effects of various substances on brain function. The course focus is on the biological mechanisms through which psychoactive drugs produce changes in behavior. Provided is an in-depth look at commonly abused drugs such as amphetamine and alcohol and current theories of addiction. In addition, drugs used to treat psychiatric disorders such as schizophrenia and depression, and how the mechanisms of action of these drugs give us insight into the biological basis of mental illness will be examined.

#### Course Goals:

- List and explain basic principles of pharmacology
- Describe principles of the behavioral analysis of drug effects in nonhumans and in humans
- Identify and discuss how we adapt to drugs (tolerance, sensitization, withdrawal) and develop addiction
- Describe behavioral effects of the drugs on the functioning of the nervous system
- Examine, analyze, and discuss mechanisms of actions, side effects, physical and psychological outcomes and potential for addiction
- Examine current trends for illicit use for psychotherapeutic drugs and recreational drugs (including alcohol, tobacco, caffeine, opiates, hallucinogens, marijuana, and anabolic steroids)

### Pre-Requisites (QM Standard 1.6)

There are no course prerequisites for this course other than being an RBA (Regents Bachelor of Arts) student.

### Minimum Technical Requirements and Online Resources (QM Standards 1.5 & 1.7)

In addition to a web browser (preferable Firefox) that is Blackboard compatible, you will need the other WVROCKS supported technologies outlined in the student policies section.

**Online Resources:** This course makes use of many online resources. I have made every effort to make sure the links I have are up-to-date. However, due to the changing nature of the web, you may find that a resource is temporarily unavailable or has been removed. If this should happen, please send me an email and I will find an alternative resource or modify the assignment accordingly.

## **Instructor Information (QM Standards 1.8 & 5.3)**

Individual instructors complete this information.

### **Virtual Office Hours**

I am available in my virtual office by appointment only. Send me an email to set up an appointment.

### **Personal Commitment**

My personal commitments to you as a participant include:

- I will reply to course mail messages within 24 hours;
- I will read all discussion postings and will reply where appropriate within 3 days
- I will acknowledge my receipt of every course mail message immediately upon reading it. If I am unable to respond to the request or concern at the time of initial reply, I will give you an estimated time for my next reply.
- If I am going to be away from the course space for more than a day or two, I will send a message to you indicating the length of my absence.
- I will regularly update information regarding due dates in the course announcements.

## **Optional/Required Course Materials (QM Standard 4.6)**

- William A. McKim 7th edition, *Drugs and Behavior*, Print ISBN-10: 0205242650
- Other materials will be available in the course

## **Grading Policy (QM Standard 3.2)**

### **Evaluation and Grading**

Each module consists of a series of assignments, worksheets, discussions and reviews, each having specific point values designated in the table below. For each assignment you will be given the rubric or grading criteria from which you will be evaluated.

**READING AND WATCH THE VIDEO(S) ASSIGNMENTS:** in addition to reading the book chapter, review and get familiar with all module content provided. Please read carefully as this content is included in quizzes and other assessments.

**EMBEDDED QUESTIONS/ITEMS:** In each of the modules there will be one or more embedded questions or required activities. These are clearly marked. Each will be worth 1-3 points with a course total of 20 points. If an item is required, you must complete that item before you continue in the lessons.

**FORUMS:** These are our class discussions.

### **CHECKS FOR UNDERSTANDING:**

Each week you will have a quiz. Each quiz is 10 points and you may take the quiz up to two times (2). The quiz is based on the readings, videos and other resources you are expected to view for the week. The highest score of your attempts will be recorded automatically.

### **ASSIGNMENTS:**

A full description of each assignment including the instructions and a scoring guide/rubric will be included in the content of each module.

**Grade Determination:**

Students can earn a total of 170 points in the class.

A = 153-170

B = 136-152

C = 119-135

D = 102-118

F= <102

Module	Topic	Tasks	Assignment
1	<b>Introduction to pharmacology:</b> <ul style="list-style-type: none"> <li>• Drug basics</li> <li>• Neuroanatomy</li> <li>• Neurotransmitters</li> <li>• The drug actions</li> </ul>	Read module content Read linked resources Answer embedded questions View videos Post and reply to Forum Complete Assignment 1 Complete Quiz 1	Complete embedded questions (1 point each) Post and Reply to Forum (6 points) Assignment (10 points) Quiz (14 points)
2	<ul style="list-style-type: none"> <li>• Neurobiology of addiction</li> <li>• Tolerance</li> <li>• Dependence</li> <li>• Withdrawal</li> </ul>	Read module content Read linked resources Answer embedded questions View videos Post and reply to Forum Complete Assignment 2 Complete Quiz 2	Complete embedded questions (1 point each) Post and Reply to Forum (6 points) Assignment (10 points) Quiz (14 points)
3	<b>Legal recreational drugs in our society:</b> <ul style="list-style-type: none"> <li>• Alcohol</li> <li>• Nicotine and tobacco</li> <li>• Caffeine</li> </ul>	Read module content Read linked resources Answer embedded questions View videos Post and reply to Forum Complete Assignment 3 Complete Quiz 3	Complete embedded questions (1 point each) Post and Reply to Forum (6 points) Assignment (10 points) Quiz (14 points)

4	<p><b>Legally restricted drugs in our society:</b></p> <ul style="list-style-type: none"> <li>• Cocaine and amphetamines</li> <li>• Opium, morphine and heroin</li> <li>• LSD and other hallucinogens</li> <li>• Marijuana and hashish</li> <li>• Steroids and other drugs in sports</li> </ul>	<p>Read module content</p> <p>Read linked resources</p> <p>Answer embedded questions</p> <p>View videos</p> <p>Post and reply to Forum</p> <p>Complete Assignment 4</p> <p>Complete Quiz 4</p>	<p>Complete embedded questions (1 point each)</p> <p>Post and Reply to Forum (6 points)</p> <p>Assignment (10 points)</p> <p>Quiz (14 points)</p>
5	<p><b>Medicinal drugs:</b></p> <ul style="list-style-type: none"> <li>• Prescription drugs, over the counter drugs, and dietary supplements</li> <li>• Sedative-hypnotic and antianxiety drugs</li> <li>• Drugs for treating schizophrenia and mood disorders</li> <li>• Drugs for treating Alzheimer's and Parkinson's</li> <li>• Future of the drugs</li> </ul>	<p>Read module content</p> <p>Read linked resources</p> <p>Answer embedded questions</p> <p>View videos</p> <p>Post and reply to Forum</p> <p>Complete Assignment 5</p> <p>Complete Quiz 5</p>	<p>Complete embedded questions (1 point each)</p> <p>Post and Reply to Forum (6 points)</p> <p>Assignment (10 points)</p> <p>Quiz (14 points)</p>