Psychopharmacology: Psychology 223  
Spring 2015

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Office Hours: Monday 12:00-1:30pm, Wednesday 10:30am-12:00pm, or by appointment

Dr. Jom Hammack is teaching section B of this course, and is also available during his office hours to answer questions.  
Jom: Tuesday 8:30-9:30 am, Thursday 2:30-3:30 pm, or by appointment

Please note: This syllabus is subject to change at the discretion of the instructor. I plan to keep these changes, if any, to a minimum; but occasionally adjustments are required.

Psychoactive drugs are substances that alter mood, consciousness, and/or behavior, which they accomplish by modifying existing pathways in the brain. Most commonly, psychoactive drugs alter the processes involved in the synaptic transmission of neurotransmitters. In this course we will examine the major neurotransmitters systems of mammalian brains, discussing the pharmacology of each system, and the role of each in normal and abnormal behavior. My goal is to provide you with a knowledge foundation that will allow you to think critically about topics and research in the field of psychopharmacology.

This course might seem difficult because the field of psychopharmacology is based on fundamental principles spanning many sciences, including chemistry, biology, and biochemistry. I will do my best to try and make this class assessable to everyone; however, please ask questions and/or see me if you feel lost. Feedback is very important to me.

The assigned text is one of the better psychopharmacology texts available, and will be a valuable resource to anyone continuing in the field. Please don’t be intimidated by it. If there is something you don’t understand, I will be happy to go over it with you. I will also be handing out research articles over the course of the semester. Specific instructions for these articles will be given as you receive them.

Please email me with questions, comments, and concerns; however, in emails please hold yourself to the same standards that you would using other forms of communication. **WHEN EMAILING ME PLEASE PUT “[PSYC 223]” IN THE SUBJECT LINE.** I receive a lot of emails, and this will help me keep them organized. I check my email and voicemail daily (unless I tell you otherwise) and will try to reply within a day or two. If I don’t respond within 2 days, you may send me a “gentle reminder” to do so.

I expect that each of us will adhere to the UVM classroom code of conduct as well as UVM standards of academic integrity. Please silence all cell-phones and other electronic devices. Please do not use devices in class that may be disruptive to others.

Lecture attendance is critical for success in this course. We will be discussing original research articles and a great deal of material that is not covered in the textbook. The material is cumulative. Failing to attend lectures will prevent you from participating in the discussion of this material and will lead you to fall behind. Failure to attend lectures can lower your participation grade.

**Required Text:**  

Other Reading: I will also be distributing other reading materials throughout the semester. Discussion or assignments related to these materials will be reflected in your participation grade.

**Grading:**
Participation (discussion, BB assignments): 20%  
3 Mid-semester exams: 20% each  
1 Cumulative Final exam: 20%  

If it is to your benefit (increases your grade), the cumulative final exam can be used to replace either the lowest of your three mid-semester exam grades or your participation grade (if you use the final to replace one of the other grades, your final exam grade will end up counting for count for 40% of your grade).
Furthermore, if your final exam score is a C- or higher, you will not receive less than a C- for your course grade.

Grading Scale:

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<thead>
<tr>
<th>Score Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>93-100</td>
<td>A</td>
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<tr>
<td>90-92</td>
<td>A-</td>
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<tr>
<td>87-89</td>
<td>B+</td>
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<tr>
<td>83-86</td>
<td>B</td>
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<tr>
<td>80-82</td>
<td>B-</td>
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<tr>
<td>77-79</td>
<td>C+</td>
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<tr>
<td>73-76</td>
<td>C</td>
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<tr>
<td>70-72</td>
<td>C-</td>
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<tr>
<td>67-69</td>
<td>D+</td>
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<tr>
<td>63-66</td>
<td>D</td>
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<tr>
<td>60-62</td>
<td>D-</td>
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<tr>
<td>&lt;60</td>
<td>F</td>
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</tbody>
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Exams: Exam will not be strictly multiple choice, and may contain a variety of question types, including “short answer” and “fill in the blank” questions. You will receive some practice with these questions using online and in-class quizzes. If you know that you will be missing an exam due to a religious holiday, you MUST inform me within the first 2 weeks of classes. Missed exams due to medical/psychological/family emergencies must be documented with a letter from the Dean’s Office, and made up within 48 hours of the originally scheduled exam time.

Take-Home Assignments: Throughout the semester you will be asked to complete assignments related to assigned journal articles, media content or topics discussed in class. I will post any required reading or media content as well as the assignments on Blackboard where they will need to be completed by a certain due date. There will be no acceptance of late assignments unless you provide me with a letter from the Dean’s Office due to a medical/psychological/family emergency.

Attendance Expectations: Attendance is mandatory as participation will contribute to your final grade. You are responsible for any material presented that day. Additionally, there will be in class assignments that you might miss if you do not attend and will not be permitted to make-up. If you are going to be absent from class, a letter from the Dean’s Office will excuse you from missed work.

Religious Holidays: According to UVM guidelines, students have the right to practice the religion of their choice. Each semester students should submit in writing to their instructors by the end of the second full week of classes their documented religious holiday schedule for the semester. Faculty must permit students who miss work for the purpose of religious observance to make up this work.

Accommodations for Students with Disabilities: If you have a disability for which you are or may be requesting accommodations, please contact UVM’s ACCESS Office (Accommodation, Consultation, Collaboration & Educational Support Services) by phone (656-7753) or email (access@uvm.edu). That office will guide you through the processes that are required for accommodations to be made.

Academic Honesty & Professionalism:
Students are required to follow UVM’s Code of Academic Integrity. Below are the Standards of Academic Integrity for the University of Vermont. Please see the updated full Code for more description: [http://www.uvm.edu/policies/student/acadintegrity.pdf](http://www.uvm.edu/policies/student/acadintegrity.pdf)

“All academic work (e.g., homework assignments, written and oral reports, use of library materials, creative projects, performances, in-class and take-home exams, extra-credit projects, research, theses and dissertations) must satisfy the following four standards of academic integrity. Multiple students submitting a single assignment for academic credit are responsible for their individual contributions to the final product and for fairly contributing to the whole. Academic work submitted for credit must include original work as outlined by the instructor and course work expectations.

1. Students may not plagiarize.
All ideas, arguments, and phrases, submitted without attribution to other sources must be the creative product of the student. Thus, all text passages taken from the works of other authors (published or unpublished) must be properly cited. The same applies to paraphrased text,
opinions, data, examples, illustrations, and all other creative work. Violations of this standard constitute plagiarism.

2. Students may not fabricate.
All experimental data, observations, interviews, statistical surveys, and other information collected and reported as part of academic work must be authentic. Any alteration, e.g., the removal of statistical outliers, must be clearly documented. Data must not be falsified in any way. Violations of this standard constitute fabrication.

3. Students may not collude.
Students may only provide, seek or accept information about any academic work to or from another student with the authorization of the instructor. Students may only collaborate on academic work within the limits prescribed by their instructors. Violations of this standard constitute collusion.

4. Students may not cheat.
Students must adhere to the guidelines provided by their instructors for completing academic work. Students may not claim as their own work any portion of academic work that was completed by another student. Students may only use materials approved by their instructor when completing an assignment or exam. Students may not present the same (or substantially the same) work for more than one course or within the same course without obtaining approval from the instructor of each course. Students must adhere to all course reserves regulations. Students may not actdishonestly or convey information that the student knows or should know to be false, by actions such as lying, forging or altering any document or record in order to gain an unfair academic advantage. Violations of this standard constitute cheating."

**Plagiarism**
The work you do in this course must be your own. This means that you must be aware when you are building on someone else's ideas—including the ideas of your classmates, your professor, and the authors you read—and explicitly acknowledge that you are doing so. Feel free to build on, react to, criticize, and analyze the ideas of others but, when you do, make it known whose ideas you are working with. If you ever have questions about drawing the line between others' work and your own, ask me and I will give you clear guidance or you may visit UVM's website regarding Academic Integrity at [http://www.uvm.edu/~uvmppg/ppg/student/acadintegrity.pdf](http://www.uvm.edu/~uvmppg/ppg/student/acadintegrity.pdf)

If you find that your paper has unoriginal text that is not properly cited, you should either cite it or remove it. If you do not, you are likely committing plagiarism. Also, if you remove or reword the unoriginal text, but retain the idea expressed by the source, you must give a citation that names the source. Remember, your work should build on the class discussions, reading, lectures, remarks, etc., but the paper you write *must* be your own work.

**Classroom Environment: University of Vermont Classroom Code of Conduct.**
Faculty and students will at all times conduct themselves in a manner that serves to maintain, promote, and enhance the high quality academic environment befitting the University of Vermont. To this end, it is expected that all members of the learning community will adhere to the following guidelines:

1. Faculty and students will attend all regularly scheduled classes, except for those occasions warranting an excused absence under the University Attendance Policy (e.g., religious, athletic, and medical).
2. Students and faculty will arrive prepared for class and on time, and they will remain in class until the class is dismissed.
3. Faculty and students will treat all members of the learning community with respect. Toward this end, they will promote academic discourse and the free exchange of ideas by listening with civil attention to comments made by all individuals.
4. Students and faculty will maintain an appropriate academic climate by refraining from all actions that disrupt the learning environment (e.g., making noise, ostentatiously not paying attention, leaving and reentering the classroom inappropriately).
5. Students and the instructor should turn off cell phones and not use TEXT MESSAGING during class. Surfing the web is not an acceptable behavior in class unless it is an explicit part of the class assignment. Students can bring lap tops to take notes and to open pdf files the instructor assigned for readings. Students must ask permission to the instructor before they utilize their lap tops for any other activity.

Schedule:
Below is the course outline. In parentheses are pages from the textbook that you will be expected to have read by that day (i.e. please have pages 4-21 read by January 23). We will also read from original research articles that I will provide as the semester progresses.

January
12 Introduction to course
14 Neuroscience Review (Review Ch. 2 and 3)
16 Neuroscience Review
19 MLK Day (Holiday)
21 Pharmacokinetics (p. 2-25)
23 Pharmacokinetics
26 Pharmacodynamics (p. 25-38)
28 Pharmacodynamics
30 Pharmacodynamics

February
2 Amino Acid Neurotransmitters: Glutamate (p. 202-217, 442-449)
4 EXAM 1
6 Amino Acid Neurotransmitters: PCP and ketamine
9 Amino Acid Neurotransmitters: GABA (p. 217-224, Ch. 10, p. 531-542)
11 Amino Acid Neurotransmitters: Benzodiazepines and alcohol
13 Catecholamines: Dopamine (143-157)
16 President’s Day (Holiday)
18 Catecholamines: Dopamine
20 Catecholamines: Norepinephrine (p. 158-163)
23 Catecholamines: Norepinephrine
25 Exam 2
27 Catecholamines: Cocaine and Amphetamine (Ch. 12)

March
2-6 Spring Recess
9 Catecholamines: Cocaine and Amphetamine
11 Catecholamines: Cocaine and Amphetamine
13 Acetylcholine (Ch. 7)
16 Acetylcholine
18 Acetylcholine: Nicotine (p. 374 - 393)
20 Acetylcholine: Nicotine
23 Serotonin (Ch. 6)
25 Serotonin
27 Serotonin: LSD and Psilocybin (p. 430-441)
30 Serotonin: LSD and Psilocybin

April
1 Exam 3
3 Affective Disorders: Antidepressants (Ch. 19)
6 Affective Disorders: Antidepressants
8 Affective Disorders: Antidepressants
10 Opiates (Ch. 11)
13 Opiates
15 Opiates
17 Cannabinoids (Ch. 14)
20 Cannabinoids
22 Cannabinoids
24 Theories of addiction (Ch. 9)
27 Theories of addiction
29 Synthetic legal intoxication drugs

May
** FINAL EXAM, TBA