This course is a comprehensive coverage of chemical signaling in the brain as it relates to behavior. Included are the details of endogenous neurotransmitters, of drugs that impact specific transmitters, and the interpretation of pharmacological data. Clinical syndromes associated with dysfunction in these systems, and their therapy, are discussed. Students should have completed PSB3004 or 3340 or have a strong background in biology/chemistry.

Class schedule and summary or approximate topics

Aug 23 Chapter 2: Review of neurons and the nervous system: genes
Aug 28,30 Chapter 1: Principles of pharmacology
Sept 4,6 Chapter 3: Chemical signaling
Sept 11,13 Chapter 4 Research Methods; first exam 13th
Sept 18,20 Chapter 5: Catecholamines
Sept 25,27 Chapter 6: Acetylcholine and serotonin;
Oct 2,4 Chapter 7: Amino acids; second exam 4th
Oct 9,11 Chapter 8 drug addiction - opioids
Oct 16,18 Chapter 9 alcohol; group presentations 1-3 (18th)
Oct 23,25 Chapter 11: Cocaine & amphetamines; groups 4-6 (25th)
Oct30,Nov1 Chapter 12: Nicotine & caffeine; groups 7-9 (1st)
Nov 6,8 Chapter 13: Cannabinoids; groups 10-12 (8th)
Nov 13,15 Chapter 14: Hallucinogens; groups 13-15 (15th)
Nov 20,X Chapter 15: Neurosteroids; (Thanksgiving 22nd)
Nov 27,29 Chapters 16-17: Clinical applications; third exam 29th
Dec 4,x Wrap-up

Final exam is scheduled for Thursday 13th at 10 am, but class can vote on earlier date.

Attendance:
This is a fast-paced course, so first and foremost you need to keep up with the topics. If you don’t understand something, ask during class or come see me another time. PPT slides for each class will be posted beforehand, and it is strongly advised that you have these in front of you in hard or electronic form during classes for annotation. The slides are not all from the text book, so in order to fully understand them it best that you plan to attend each class. During the second half of the semester, Thursdays will be student presentation days (see below), and attendance will be recorded for those sessions.

Presentations:
Early in the semester, you will be assigned to groups of about 3 students for presentation sessions that occur later in the semester. Each group will be assigned a presentation date by a random draw. Your presentation, using PPT and about 20 minutes long, should be of a recent empirical research paper that you select (with my approval) from a top neuroscience
or neuropharmacology journal. On each student presentation day, three groups will present in the double period. Every member of the class will receive an evaluation form: they will grade your presentation and are encouraged to ask questions in a short Q&A session after your talk.

Grading:
Four in-class examinations (including the final) each will count 20% to your grade (80% total). Each exam (non-cumulative) will be comprised of short essay questions, of which you will be asked to answer about 4 from a choice of about 5 or 6.

The remaining 20% of your grade is based on class participation and presentation. On each of the 6 presentation dates, you will receive a score sheet; you get 1 point per class for filling it in (max total 6 points or % of your grade). The numerical (1-5 scale) scores of your classmates will be averaged to yield an overall score for your presentation (Best possible=5 points). I will additionally give a grade for your presentation (5 points max) that may or may not be the same as the peer score and will (if applicable) discriminate among the strong and weak presenters in each group. That leaves 4 points to be allocated based on class participation, including asking good questions during the peer talks and/or in other lectures.

Accommodations for Students with Disabilities
Students requesting classroom or testing accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide you the necessary documentation and you must then provide this documentation to me when requesting accommodation. I am happy to work with both the student and the Dean of Students Office to come to an arrangement that satisfies the requirements of the course while best accommodating the student’s individual needs.

Academic Honesty and Integrity Statement
When students enroll at the university, they commit themselves to the standard drafted and enacted by students.

Preamble: In adopting this honor code, the students of the University of Florida recognize that academic honesty and integrity are fundamental values of the university community. Students who enroll at the university commit to holding themselves and their peers to the high standard of honor required by the honor code. Any individual who becomes aware of a violation of the honor code is bound by honor to take corrective action. The quality of a University of Florida education is dependent upon community acceptance and enforcement of the honor code.

Honor Code: We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity. On all work submitted for credit by students at the university, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.”

It should be clear that academic dishonesty, such as cheating, is NOT tolerated at the University of Florida. Cheating is defined in the University Handbook, and it is the student’s responsibility to be familiar with its many forms (including plagiarism). The penalties for academic dishonesty may include failure (grade of “E”) of the course, appearance before the Honor Court, and ultimately, expulsion from the University. As a result of completing registration at the University of Florida, every student has agreed to the following statement: “I understand that the University of Florida expects its students to be honest in all their academic work. I agree to adhere to this commitment to academic honesty and understand that my failure to comply with this commitment may result in disciplinary action up to and including expulsion from the University.”