

SYLLABUS, FALL 2019

DRUGS AND HUMAN BEHAVIOR (830:360:01)

Alexander W. Kusnecov, Ph.D., Professor of Psychology

Room [AB 2125](#) - Academic Building, College Avenue Campus

Mon and Thurs, 11:30AM – 12:50PM

Course Synopsis

The consumption of chemical substances has long preoccupied humans due to curiosity, as well as the natural craving for pleasure, happiness, unique experiences, and in some cases, relief from pain. *The downside of this preoccupation is addiction and dependence.* The presence in human culture of *psychoactive* drugs – mind-altering chemicals – is ubiquitous and entrenched at various levels of social activity. There are many reasons for this, and these can be analyzed from historical, sociological, biomedical and psychological perspectives. We will touch on all these perspectives, taking a *biopsychosocial* approach, that involves knowing about the neurobiological, behavioral and social factors that influence drug use and abuse. Given that any form of dependence and addiction results from a drug's psychoactive properties, it is imperative to understand how the brain is “hijacked” and sometimes irreversibly changed by substance abuse. Therefore, the course will consider how the brain allows us to experience reward and pleasure, and how long-term use of drugs modifies this important aspect of brain function.

PLEASE READ THE REMAINDER OF THIS SYLLABUS VERY CLOSELY

The posting of this syllabus on Sakai is confirmation that you have read this syllabus and understand the course requirements. If you tell me that you were not aware of a particular assignment or exam date, there will be no concessions, as it is all here in this document. Therefore, DO NOT ignore a thorough read and understanding of this syllabus. If there are any changes to the syllabus, it will be updated, and you will be alerted in class and through email to review the changes.

Correspondence

Every single email that you receive must be read in full – whether it is from the instructor (Professor Kusnecov) or the teaching assistant (Keith Perkins). If you do not read them, and they contain critical information, you will penalize yourself (e.g., miss a scheduled or rescheduled quiz or reading assignment). Emails arrive either as an announcement or using the mailtool program in sakai. Most will be via the announcement tool (which are all stored on the course sakai site – so check periodically in case you missed one that came through your email program).

Addresses, Office Hours and Office Directions

Faculty Instructor:

Alexander W. Kusnecov, Ph.D.

Professor and Acting Undergraduate Director

Department of Psychology, Busch Campus

<https://psych.rutgers.edu/people/faculty/125-alexander-kusnecov>

Email: kusnecov@psych.rutgers.edu

Phone: (848) 445 3473

Office Hours: Tuesday morning 11-12

Office Location: Room 233a, Psychology Bldg, Busch Campus

Directions to Professor Kusnecov's office on Busch Campus

Come into the Psychology building from the Allison Road end. Walk up the outside ramp (not steps – if you are going up steps, you're on the opposite side of the building). After you enter, turn RIGHT (not left), after which you go through a single door, then onward through a black double door. You will then find yourself in a long hall (which is the 2nd floor of the bldg.). My office will be a few doors on your right (opposite my office is my lab, Room 232; it has an orange door and yellow 'caution' sign). Note: there is another room 233 at the opposite end of the building in the Graduate School of Applied Psychology (GSAPP). Not me!

Teaching Assistant:

Keith Perkins

Graduate Student in Behavioral & Systems Neuroscience

Dept. Psychology, Busch Campus

Email: kp763@psych.rutgers.edu

Office Hours: Tuesday afternoon 1–2

Office Location: Room 318 (third floor of the Psychology Building on Busch Campus)

How to use office hours

The goal of office hours is *clarification* – not a repeat of a missed lecture or large segments of a lecture. After exams, students concerned about their performance are urged to look at their scantrons. **DO THIS INITIALLY WITH KEITH.** My time is best used to provide you with clarification and additional information you may need to know – but if this relates to the exam, you first need to identify your problem areas. If Keith cannot explain why your answers are off base, he will ask you to see me. It then will be your responsibility to contact me.

Email correspondence is acceptable at any time (but I may not respond promptly – in some cases, it may take 24 hours). Also note that questions which require extended email responses will necessitate a face-to-face meeting – so plan to see Keith or myself if you need detailed responses.

Important health-related information about this course

You will be required to watch documentaries in which people use drugs and suffer because of drugs. If this makes you uncomfortable, you should reassess whether you should take this course. In a class based on drug use and the science underlying the information presented, there is always the risk that some people will experience (i) anxieties and concerns triggered by past and/or current experience, and/or (ii) the emergence of ideas that result in a reassessment of current and/or future use of physician-prescribed medication. Since this course began some years ago I have received a consistent stream of questions and concerns from students, some asking for advice, some wanting clarification, and some simply wanting to talk. This course is not prescriptive (telling you what you should do) nor is it proscriptive (telling you what you should not do - within reason, of course, as I would not want anyone experimenting with dangerous drugs, and this course tells you why). Given that this is academia, you learn about what has been studied and discovered, and what is still to be fully known. It does not mean that you should act on any of this information. As with anything you do in life, exercise commonsense and/or seek the advice of trained health professionals.

Therefore, if you are on prescription medication, for whatever reason, you should not abandon use of your medication without consulting your physician. And if you are experiencing unpleasant feelings because of past drug abuse, or drug abuse by people close to you, the university has counseling centers that can assist with this. In fact, whatever personal health concerns a course triggers, please consult this website: <http://health.rutgers.edu/> which also has this useful link: <http://health.rutgers.edu/do-something-to-help/>

Learning Goals

At least 50% of lecture material focuses on the neurobiological and physiological effects of psychoactive drugs. I assume little background in neuroscience (other than what was covered in Gen Psych 101), and tell you only what you need to know (for a detailed course on Brain and Behavior, take the course Physiological Psychology 830:313). The textbook used in the current course provides a superficial introduction to the nervous system, which will help. My role is to expand on this information as it pertains to explaining why drugs do what they do, and to integrate this with the following learning goals:

- Appreciate human and animal research on how drugs of abuse impact the brain
- Understand why drugs of abuse are *psychoactive* and capable of producing dependence
- Consider the neurobiological and behavioral actions of the main classes of legal and illegal drugs of abuse
- Define *addiction*, *abuse*, *dependence*, and *tolerance* as these terms apply to drug use; introduce principles of pharmacology, such as *pharmacodynamics*, *pharmacokinetics*, *therapeutic index* and dose-response relationships
- Learn about the major categories of psychoactive drugs: the stimulants, depressants, opiates, and hallucinogens; consider the impact of these drugs on brain and behavioral functions
- Discuss the motivational variables that contribute to drug-seeking behavior
- Understand the problems associated with preventing *relapse* to drug-taking behavior by addicted individuals
- Understand the management of *behavioral abnormalities* (eg., schizophrenia, depression, anxiety disorders) through pharmacological approaches, sometimes referred to as clinical psychopharmacology

Textbook (this is required):

Drug Use and Abuse, 8th edition. S.A. Maisto, M. Galizio, G.J. Connors; Cengage Learning Publishers

Note: If you happen to come across the 7th edition, please note that online quizzes will be based on the 8th edition. Therefore, try and get hold of the 8th edition. Rentals of electronic versions are the cheapest approach.

Handouts for the powerpoint lectures will be posted on sakai prior to class.

Useful websites for those with little background in neuroscience:

If you take good notes to supplement my handouts, you should have no problem understanding the basics needed to appreciate drug effects on behavior. For those students that have not taken a neuroscience course or physiological psychology (830:313), and are a little stuck in understanding some of the material, the following links may be helpful. Of course, always speak up and I will repeat anything you don't understand; or come to office hours to get clarification.

- (a) For the neuroscience novice: <http://thebrain.mcgill.ca/> (look at the top for 'brain basics' and follow the link 'from simple to complex' – this will supplement or round out any misunderstanding from my own slides; the link 'pleasure and pain' may also be helpful, but we will go far deeper than what is provided)

- (b) On the science of addiction: <http://www.drugabuse.gov/publications/science-addiction> (this is relatively simple and meant for the public, but useful to get you into the mood).
- (c) An in -depth online neuroscience course is provided here: <https://nba.uth.tmc.edu/neuroscience/> This is exceedingly detailed and contains 90% more information than we need in this course. However, you may find it useful to explore.

GROUND RULES OF CONDUCT (decorum and avoiding my wrath) PLUS Some Other Useful Information:

- (i) **RECORDING.** *Before you decide to record the lecture, ASK ME.* You will need a good reason, since there are slide sets to download, and I tend to repeat ideas and concepts quite a bit.
- (ii) **LAPTOPS ARE ALLOWED ONLY AT THE VERY BACK OF THE LECTURE ROOM.** (*why? See section iii*). *Tablets on which you write are permissible anywhere (but students have told me they eventually reverted to pen and paper).* I am a huge fan of modern technology and they have their uses (I will obviously rely on this in class). I love all my gadgets, but they can be toxic and impede effective behavior. We will focus on drugs, but modern devices pose a similar problem with dependence and abuse (for entertainment and philosophical value watch the Black Mirror series on Netflix). For more brazen reality, read about people falling off cliffs and balconies, or killing people in cars when using their devices. In more mundane situations (like class), people simply veer off to social media sites and are unable to “not look and check” texts, Instagram messages and whatever else. As a student, rest assured that laptops are a disadvantage in my class (again, see section iii). I am a heavy user of the blackboard, draw graphs, and experimental designs. Print off lecture slides, use a pen, bring a notebook. Do it the old way – it put men on the moon, created smartphones, and generally made life better. Technology is useful. Just not always. This is not a class where laptop use is a pass-or-fail issue.
- (iii) This section is how technology is not always a benefit for basic information processing. It is designed to help you (this and other classes). **IT IS WORTH A READ.**

There has been a flurry of concern in academia regarding whether having a laptop in a note-taking class is useful for students (eg., go to these links: <https://www.washingtonpost.com/posteverything/wp/2014/12/30/this-year-im-resolving-to-ban-laptops-from-my-classroom/> and <http://www.newyorker.com/tech/elements/the-case-for-banning-laptops-in-the-classroom>). The expectation of the professor is that a student is using the laptop only to take notes, and not to check email, chat on facebook, surf the internet, watch videos, and so on and so forth. We all know this happens. When I have observed the lectures of my colleagues, I sit at the back, and it’s astounding how many laptop-using students are actually “away” from their lecture slides (eg., on social media, shopping online, texting, emailing, etc.). Sitting in class trying to resist a device (laptop or phone) is as much of a problem as the more serious ‘texting while driving’ problem that kills lives. Learn to do without it when it matters.

NOTE-TAKING WITH LAPTOPS: not proven to be an advantage. Aside from the above links, formal studies have shown that laptop users don’t do as well as those using more traditional approaches (pen and paper). (eg., read this <http://www.scientificamerican.com/article/a-learning-secret-don-t-take-notes-with-a-laptop/>). Also, those sitting near laptop users also fare worse (through unavoidable distraction). Over the years, I have also kept track of students who use laptops

in my classes, and it matches the literature: they don't do nearly as well as hand writers. Moreover, the top students (those who fall in the top 25%) in my classes over the years have been the ones who limit any form of distraction (they did not use laptops, nor kept checking their smartphones – and in the course evaluations, many positive comments were made regarding the benefit of being made to simply listen, write down notes, ask questions – astounding!). The data were objective: they simply did better.

ACTIVE LEARNING and STUDY ADVICE: Film director Woody Allen once said: *80% of success is simply showing up. So come to class.* Experience the physical experience of listening and watching. Handwrite your notes. Then review them as soon as possible; rewrite and organize what you have written (this is where the computer is your friend) – in doing this, you have already had your first study session. Moreover, you have relived the lecture before you have forgotten it (e.g., try remembering lecture 1 by the time you get to lecture 3 or 4; in this course, the information piles up fast, and the topics change quickly – if you don't regularly review and organize your notes, it will be like shoveling snow in a blizzard). If you follow the above advice, you will get to the review material quickly and do an active mental replay, and in doing so, you are effectively preparing yourself for that big crunch time – the day before the scheduled exam.

- (iv) **SILENCE YOUR CELL PHONES! PUT THEM AWAY.** I once had a student texting for 5 minutes right in front of me, the very front row. I stopped talking, stood over her (still texting), and said: “I can't believe you don't realize what you are doing.” She turned bright red, and later realized the folly of her action, and how she must have come across. Needless, she stopped texting in class, and ultimately did well. Moral to the tale: **DON'T TEXT IN CLASS.** Before you sit down, let those important to you know that you are in class respecting the right of the professor to have your undivided attention. *After all he is giving you HIS undivided attention.* If you have to make an important call or get into some vigorous text-messaging exchange, please **STEP OUTSIDE.** I will draw attention to you if I suspect you have “left the room” and immersed yourself in another space and time. At which point, you will not feel terribly smart.
- (v) **DO NOT ENTER INTO EXTENDED CHIT-CHAT** with your neighbors – this is the height of rudeness, disrespects the professor, and **MORE IMPORTANTLY** disturbs the listening rights of your student peers. FYI: In all my time of teaching at Rutgers (since 1998), I have thrown students out of the classroom for talking on only three occasions, after being unresponsive to requests to quiet down. That's a low rate. **BUT IT HAPPENED.**

Do good work, respect those around you, listen to the lecture, take notes, come out ahead. Why else are you here?

Academic Integrity

I have on occasion encountered a situation of academic dishonesty, so you should be aware of the link to the Rutgers academic integrity office: <http://academicintegrity.rutgers.edu/academic-integrity-at-rutgers/>. If you have not already done so, you should explore this, and in particular the ‘Academic Integrity Policy’ link, where you can read the levels of violation and sanctions. If during exams I determine that you are acting in a dishonest manner, you will be asked to leave the exam.

When taking an exam, merely looking at your cell phone or some other instrument or paper that is not the exam, can instantly disqualify you from receiving a grade in that exam. Depending on the situation, further deliberation by the Professor may rule you out of receiving a passing grade altogether for the course (But note: as stated on the academic integrity website, students have the right to appeal decisions made by the Professor). In other cases, if we determine that it *appears* you are violating the rules of proper academic conduct in an exam, you will be warned or asked to move to another seat. Finally, when submitting work through an online mechanism (eg., quizzes and assignments), it is expected that you will do so without the assistance of any other person, and that you are the person submitting the work. This aspect of assessment simply requires an honor code.

Assessment

Exams (70% of total grade): There will be three exams. The exams will be a mixture of written-answer and multiple-choice questions. Exam 1, 20% of total grade; Exam 2, 20% of total grade; Final Exam 30% of your total grade. The Final Exam is not cumulative.

Assignments (30% of total grade: 20% for reading; 10% for documentaries)

The assignments will consist of the following.

- (i) Chapters from the textbook will be assigned for reading and will be tested through online quizzes. The material in these chapters will overlap with lecture content, but not all the material will be given in lecture. Therefore, you have to read the book to answer the quizzes, as well as prepare yourself for exams and to round out your understanding of certain lecture material. The online quizzes will occur each week. Except for Week 2, most of these will become active on WEDNESDAY at 5PM AND AVAILABLE FOR 24 HRS. Of the eleven quizzes based on reading, you will be allowed to drop your lowest two quiz scores (which means you can afford to skip two quizzes or not worry too much if you “forget” to take a quiz).
- (ii) Viewing documentary films and answering online quizzes based on these films. YOU MUST DO ALL QUIZZES FOR THE DOCUMENTARIES. IF YOU SKIP A DOCUMENTARY QUIZ, YOU WILL LOSE CRITICAL POINTS. You will be provided with probe questions in advance to allow you to know what information you need to listen/look for prior to the quiz on each documentary. The video assignments will be taken outside of class (by streaming video content via the library computers or off-campus). Discussion of the videos will be integrated into the basic lecture material, and provide a wider context to the more specific information learned in class. Some of the information in the documentaries may be tested in the exams.

Extra Credit. I will assign some extra reading to be done prior to the Final Exam (exam 3). The percentage value of the extra credit will be determined at the time the Final Exam is administered.

Grading System. There is no “curve” used to finalize grades. Students will need to achieve predetermined cut-off points for grades of A, B+, B, C+, C and D. Cut-off points will be as follows:

A 90-100 B+ 86-89.9 B 78-85.9 C+ 74 -77.9 C 65 -73.9 D 55-64.9 F <55

Makeup Exams

I will need to verify all excuses for missing an exam. Questions will be different on makeup exams, but they will address the same material as the regularly scheduled exam. If the exam is missed for a legitimate and verifiable reason, the student must sit for the makeup within three weekdays of the scheduled date for the missed exam. Written and signed documentation will be required.

IMPORTANT: Assuming you are not “out of commission,” failure to take the makeup within three weekdays of the scheduled exam means that you will forfeit the points that would have been earned in that exam. Contact the TA as to when he can administer the makeup. **A makeup can only be taken with the professor’s permission.**

After seeing the schedule below, if you anticipate a conflict, you can request taking a makeup. The final decision will be made by the Professor. Legitimate reasons for this are: Rutgers athletic obligations (confirmation by your director is required), religious events, and other similar binding events that are going to interfere with taking the scheduled exam. It is up to you to anticipate the conflict. If you do not take the exam, then you will fail to receive any points.

Online Quizzes

Where it is stated that quizzes and other material are posted online, this refers to the Sakai course site. On the left side of the Sakai course site will be a link to Tests and Quizzes.

Dates and times for quizzes are given in the schedule below. You will also be notified by email using the ‘announcements’ tool on Sakai, and I will also remind you in class. If an assigned quiz time changes (e.g., due to technical difficulties at our end or Sakai is down), you will be notified by email and/or during class time.

Once a quiz is posted, you will have 24 hours to start and complete the quiz. Once you start a quiz, you cannot stop, log out and expect to come back to the quiz. You must complete the quiz in the allotted time (which will typically be 40 minutes). Save your answers as you move along. The quizzes are set to ensure that you cannot go back and change an answer.

Reports of technical trouble in taking a quiz or exam (eg., browser not showing the quiz) needs to be reported to the Professor or the TA immediately, and during the period when the quiz or exam is active (e.g., if the quiz is active 5pm on a given date, you have to report problems several hours before the quiz closes.

There are no makeups for quizzes, since you are given advance warning when the quiz is going live. You need to be prepared. Moreover, as stated earlier, you will be allowed to drop your lowest two quiz scores (which basically means you are allowed to skip two quizzes – but if it were me, I’d avoid this option). Of course, if there are medical emergencies or religious obligations, we can discuss alternative arrangements. But please note, if only a portion of the 24 hour period available to take the quiz is affected by your conflict, you will still have to take the quiz.

IMPORTANT: What you must do when you have a technical problem:

1. Firstly, if you suspect a poor connection wherever you live, go to the computer labs and/or terminals in the many libraries we have at Rutgers, NB. Any problems taking a quiz will very likely be addressed by the staff at the library. They are also witnesses to the problem. If you are well away from campus, go to a local library.
2. If you do not see an active quiz or exam displayed, take a screenshot of the browser page, after you have clicked on the 'Tests and Quizzes' link. Email this screenshot to me (see example below). The screenshot should show your ID/NAME in the top right corner, and there should be a time stamp.
3. In the example below, note the two arrows top right and bottom left. These are showing your name (top right) and the time signature (bottom left). When you take the screenshot, you **MUST HAVE** the information pointed out by these arrows **SHOWING SIMULTANEOUSLY** (as in the example below). **If I do not see both pieces of information in the same image, it will not be a legitimate report and I will not consider your problem as legitimate.** If the browser is not showing both pieces of the information, reduce the browser window size [hold down ctrl and press the minus (-) key; or on a mac, hold down the command key and press the minus key].
4. To reveal the time signature, scroll to the bottom of the browser page and click the arrow next to 'Server Time.' This will reveal the current time, and the screenshot should simultaneously show your ID and this time stamp (that top right arrow).
5. Also email the screenshot and a report of your difficulty to sakai@rutgers.edu and make sure you explain the problem. When you email them, make sure to copy me and/or the TA.
6. Ways that we can verify if your problem is real. I have myself listed in the roster as a student (not instructor), so I will see what you will see, and Keith, the TA, will also see what you can see, as he will also be listed as a student, and operating from a completely different location. Sakai shows you what is on a server and once logged in (like everyone else), you will see what other students see. Therefore, if you tell me you don't see a quiz, while the rest of the class, including myself, can see it, then you are either not logged in, or extremely unlucky (which, quite frankly, won't be possible, if you are logged in). We are also able to activate a 'student view' link, to provide an additional perspective.

The screenshot shows the Sakai LMS interface for a course titled 'DRUGS & HUMAN BEHAV B ...'. The user is logged in as 'Alexander'. The main content area displays 'Assessments' with a 'Take an Assessment' section stating 'There are currently no assessments available for you to take.' Below this is a table for 'Submitted Assessments' with columns for Title, Statistics, Recorded Score, Feedback Available, Individual Score, Time, and Submitted. The footer contains site information and a 'Build Info' section. Annotations include a red circle around the user profile 'Alexander' in the top right, a red arrow pointing to the 'LINK' button, and a red circle around the 'Build Info' section with a blue arrow pointing to the 'Server Time'.

| Title | Statistics | Recorded Score | Feedback Available | Individual Score | Time | Submitted |
|-------|------------|----------------|--------------------|------------------|------|-----------|
|-------|------------|----------------|--------------------|------------------|------|-----------|

Office of Instructional and Research Technology sakai@rutgers.edu 848.445.8721 The Sakai Project

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Build Info:
Server Time:
Sun, 27 May 2018 16:27:53 EDT

Browsers. All major browsers will work. Chrome, Firefox, Safari, Explorer – they’re all good. If there are problems with any of these browsers during the course (e.g., when viewing videos), update or reinstall your browsers and make sure any restrictions are removed. However, that should be rare, since all videos will be watched through the library link (eLibrary) that I have provided.

LECTURE SCHEDULE

Please note that this is the intended flow of topics that will be covered each week. The timing for introducing a topic may vary, and some weeks will have overflow material from the prior week. I may even skip certain sections, and if this happens, they will be delegated for extra credit reading. Nonetheless, the information will come thick and fast, and **lecture content will include substantial material that is not in the book** (so attendance is critical if you wish to do well). Chapters you should start reading are indicated at the beginning of each week and will prepare you for certain material in lecture, as well as each upcoming quiz.

Week 1 (Thursday 9/5): Overview of the Course; Factors that motivate drug use

Discuss syllabus and assessment; begin *Factors That Motivate Drug Use*: Personality variables; the psychosocial environment; are we wired to “try stuff”?

Read Chapters 1 and 2 in the textbook. A quiz on these chapters will be given online next Thursday in Week 2. The quiz will be available until Friday 3 pm. (see Week 2 information)

Week 2 (9/9, 9/12): Introduction to the nervous system; Chapter 3 (Drugs and the Nervous System);
Continue *Factors That Motivate Drug Use*; begin Overview of The Nervous System: Neuroanatomy; Neurons and their organization in the brain

Chapter Quiz 1- Thursday (9/12) 3 pm: Quiz on Chapters 1 and 2. Available until 5 pm Friday, 9/13.

Week 3 (9/16, 9/19): Chapter 3 (Drugs and the Nervous System); Chapters 4 (Pharmacology) & 5 (Psychopharmacology)

Continue Overview of The Nervous System: Neuroanatomy; Neurons and their organization in the brain; Psychopharmacology – the study of how neurons communicate with each other chemically and what this means for behavior; cover some basic concepts of pharmacology

Chapter Quiz 2 - Wed (9/18) 5pm: Quiz on Chapter 3. Available 24 hrs.

Week 4 (9/23, 9/26): Chapter 3 (Drugs and the Nervous System); Chapters 4 (Pharmacology) & 5 (Psychopharmacology)

The brain reward system: The concept of pleasure pathways in the brain

Chapter Quiz 3 - Wed (9/25) 5pm: Quiz on Chapter 4. Available 24 hrs.

Week 5 (9/30, 10/3): Chapter 5 (Psychopharmacology)

Finish material introduced in the previous week.

Chapter Quiz 4 - Wed (10/2) 5pm: Quiz on Chapter 5. Available 24 hrs.

Week 6 (10/7, 10/10): Exam 1; Legal Stimulants – Nicotine (chapter 7) and Caffeine (chapter 8)

EXAM 1: Monday 10/7 (this exam will cover all material up to and including Thursday 10/3)

Thursday 10/10: Begin discussion of stimulants. Origin and history of use; neurobiological and behavioral basis for ‘stimulant’ categorization; addictive properties; potential health benefits of caffeine and nicotinic receptors in the brain (cognitive enhancement). Pathology: the long list of damaging health effects of smoking (not the way to enhance cognition!)

Lecture on 10/10 by Keith Perkins (Nicotine)

Chapter Quiz 5 - Thursday (10/10) 3pm: Quiz on Chapter 8. Available 26 hrs until Friday 5pm.

Watch **Frontline documentary:** Meth Epidemic (online quiz next Thursday, Week 7); probe questions will be provided in a folder in resources called ‘Documentary Probe Questions’.

Week 7 (10/14, 10/17) Illegal Stimulants (Chapter 6)

Discuss Cocaine and Amphetamine; neural mechanisms for stimulant effects; addictive properties; immediate and long-term effects on brain plasticity; neuroimaging studies; paradoxical use of stimulants in managing ADHD; legal and medical issues

Chapter Quiz 6 – Mon (10/14) 5pm: Quiz on Chapter 7. Available 24 hrs.

Chapter Quiz 7 - Wed (10/16) 5pm: Quiz on Chapter 6. Available 24 hrs.

Week 8 (10/21, 10/24): Continue Illegal Stimulants: Cocaine, Amphetamine and Methamphetamine (chapter 6)

Documentary Quiz 1 - Monday (10/21) 5 pm: Quiz on Frontline documentary ‘Meth Epidemic.’ Quiz will be available 24 hrs until Tuesday (10/22) 5pm.

Start watching the two Opioid Documentaries (Frontline Documentary ‘Chasing Heroin’; HBO documentary ‘Cape Cod’) – combined, this is well over 3 hours of viewing. Probe questions will be provided.

Week 9 (10/28, 10/31): Illegal Stimulants Continued; Stress and Relapse; Chapter 9 (alcohol)

Discuss the neurobiology of stress and how it contributes to craving and relapse

Chapter Quiz 8 - Wed (10/30) 5pm: Quiz on Chapter 9 (alcohol). Available 24 hrs.

Week 10 (11/4, 11/7) Alcohol (Chapter 9)

Origin; neurobiological effects; behavioral symptoms; basis for dependence; pathology and impact on society and the individual; impact on neurodevelopment

No quizzes this week. Watch Chasing Heroin and Cape Cod documentaries (if you haven’t started).

Week 11 (11/11, 11/14): Exam 2; begin Opiates (chapter 10)

EXAM 2 (Monday 11/11): This will cover all material since Exam 1; specific material prior to Exam 1 will not be assessed

Lecture on Thurs 11/14: Introduce the opioid system and its discovery in the brain; history of opiate use.

Documentary Quiz 2 Thursday (11/14) 3 pm: Based on Chasing Heroin and Cape Cod (HBO doc). Quiz is available 26 hrs until Friday (11/15) 5 pm.

Week 12 (11/18, 11/21)

Opiates (continued): The neurobiology of opioid systems in the brain; a natural mechanism for pain reduction; the clinical uses of opiates. Heroin trafficking and the current opiate addiction epidemic: heroin, fentanyl, prescription opiates. What can cause an overdose and death? – a consideration of conditioned tolerance effects

Chapter Quiz 9 - Wed (11/20) 5pm: Quiz on Chapter 10 (opiates). Available 24 hrs.

Week 13 (11/25, 11/26): Marijuana (chapter 11)

NOTE: Thursday classes are on Tuesday (change in designation due to the Thanksgiving holiday)

Origin and psychoactive ingredient of the cannabis plant (THC); legal and medical issues; cannabis receptors in the brain – does the brain make it's own marijuana? Behavioral effects; role of receptors in cognition and mood regulation; relationship of cannabis effects to the opioid system in the brain. Controversies surrounding the use of cannabis; the limitations of conducting optimal research on cannabis.

Chapter Quiz 10 – Mon (11/25) 5 pm: Quiz on Chapter 11 (marijuana). Available 24 hrs.

Watch *Documentary on ecstasy*. Probe material will be posted. Quiz will be given next week (week 14).

Week 14 (12/2, 12/5) Hallucinogens (Chapter 12); Psychiatric Medications (chapter 13)

Discuss hallucinogens; begin discussion of psychiatric medications

Chapter Quiz 11 - Wed (12/4) 5pm: Quiz on Chapter 12 (Hallucinogens). Available 24 hrs.

Documentary Quiz 3, Thursday (12/5) 3 pm: *Ecstasy documentary*. Available 26 hrs until Friday (12/6) 5 pm.

Week 15 (12/9) Final lecture, Psychiatric Medications (Chapter 13)

Chapter Quiz 12 – Monday (12/9) 5 pm: Quiz on Chapter 13. Available 24 hrs.

FINAL EXAM (30% of grade): Tuesday Dec 17: 8:00 AM - 11:00 AM (location TBD, most likely regular lecture room)

Extra credit: Extra credit questions will be asked in the final exam and based on some papers posted in resources. Probe questions will be provided.

There is also a cumulative portion (covering material from Exams 1 and 2) in the Final. Performance on this is extra credit.