

# CPSE 608 - Biological Basis of Behavior

Spring 2014

Section 001: 341 MCKB on T Th from 4:30 pm - 7:00 pm

## Course Information

### Description

#### Course Goals:

1. To improve familiarity with the relationship between brain structure, neurological function, and behavior.
2. To increase awareness of neuropathology and its effect on behavior.
3. To demonstrate knowledge of the biological mechanisms underlying drug action and metabolism (pharmacokinetics and pharmacodynamics).
4. To gain knowledge about different types of psychotropic agents and what they are used for, including both therapeutic and abused drugs.
5. To increase integration between the knowledge of the biological bases of behavior and the practice of psychological therapies.
6. To promote awareness of psychopharmacological issues.

### Materials

Image	Item	Vendor	Price (new)	Price (used)
	Brain Facts: A Primer on the Brain and Nervous System by Society for Neuroscience Author; (2013-04-29) Available as a free PDF download from <a href="http://www.brainfacts.org">www.brainfacts.org</a>	undefined		
	Other readings, as assigned (1969-12-31)			

### Participation Policy

Students are expected to attend the class sessions as outlined in the syllabus.

Come prepared to participate. Demonstration of familiarity with assigned readings via random quizzes and other learning activities can raise the final grade by 1/2 point (e.g., B to a B+).

## **Learning Outcomes**

### **Basic principles of neuroanatomy and neurophysiology**

1. Discuss basic principles of neuroanatomy and neurophysiology.

### **Psychotropic drugs**

2. Critically discuss the way in which psychotropic drugs are distributed, metabolized, and excreted.

### **Way in which different psychotropic agents modify behavior**

3. Compare and contrast the way in which different psychotropic agents modify behavior by altering neurotransmitter systems.

### **Drug classification**

4. Describe drug classification and which drugs are used to treat different disorders.

### **Psychobiology of drug abuse**

5. Be familiar with the psychobiology of drug abuse, classes of abused drugs, and drug abuse treatment alternatives.

### **Neurologic impairment**

6. Be familiar with various forms of neurologic impairment and accompanying behavioral manifestations.

## **Grading Scale**

<b>Grades</b>	<b>Percent</b>
A	93%
A-	90%
B+	87%

B	83%
B-	80%
C+	77%
C	73%
C-	70%
D+	67%
D	63%
D-	60%
E	0%

### Grading Policy

### WRITING STANDARDS

Students are expected to demonstrate writing skills in describing, analyzing and evaluating ideas and experiences. Written material must follow specific standards regarding citations of authors' work within the text and references at the end of the paper. I will adhere to the following standards when grading written work:

**NOTE:** Letter grades may be assigned for any or all of the following reasons:

**"A" Range: Outstanding achievement, significantly exceeds standards**

- Unique topic or unique treatment of topic, takes risks with content; fresh approach.
- Sophisticated/exceptional use of examples.
- Original and "fluid" organization; all sentences and paragraphs contribute; sophisticated transitions between paragraphs.
- Integration of quotations and citations is sophisticated and highlights the author's argument.
- Confidence in use of Standard English; language reflects a practiced and/or refined understanding of syntax and usage.
- Sentences vary in structure, very few, if any mechanical errors (no serious mechanical errors).

**"B" Range: Commendable achievement, meets or exceeds standards for course.**

- Specific, original focus, content well handled.
- Significance of content is clearly conveyed; good use of examples; sufficient support exists in key areas.
- Has effective shape (organization), effective pacing between sentences or paragraphs.

- Quotations and citations are integrated into argument to enhance the flow of ideas.
- Has competent transitions between all sentences and paragraphs.
- Conveys a strong understanding of standard English; the writer is clear in his/her attempt to articulate main points, but may demonstrate moments of "flat" or unrefined language.
- May have a few minor mechanical errors (misplaced commas, pronoun disagreement, etc.), but no serious mechanical errors (fragments, run-ons, comma splices, etc.)

**"C" Range: Acceptable achievement, meets standards for course**

- Retains overall focus, generally solid command of subject matter
- Subject matter well explored but may show signs of underachievement
- Significance is understood, competent use of examples
- Structure is solid, but an occasional sentence or paragraph may lack focus
- Quotations and citations are integrated into argument
- Transitions between paragraphs occur but may lack originality
- Competent use of language; sentences are solid but may lack development, refinement, style
- Occasional minor mechanical errors may occur, but do not impede clear understanding of material
- No serious mechanical errors (fragments, run-ons, comma-splices, etc.)

**"D" Range: Unsatisfactory achievement; does not meet acceptable standards**

**Note: The "D" grade is a passing grade; work that is not of "passing quality" should receive a grade of "F".**

- Significance of content is unclear
- Ideas lack support, elaboration
- Lacks sufficient examples or relevance of examples may be unclear
- Support materials is not clearly incorporated into argument
- Expression is frequently awkward (problematic sentence structure)
- Mechanical errors may often impede clear understanding of material
- May have recurring serious mechanical errors (fragments, run-ons, comma splices, etc.)

### **Attendance Policy**

Please make every effort to attend class. We will be covering a lot of material.

Much of it will be found in the readings, with class activities designed to facilitate understanding and application of reading materials. If you are absent, please inform me as soon as possible and arrange to have someone share notes and information with you. Excessive absences will be deleterious to your learning and, likely, your grade.

## **Instructor/TA Info**

### **Instructor Information**

**Name:** Marc Steed

**Office Phone:** 801-360-0309

**Email:** dr.steed@gmail.com

### **University Policies**

#### **Honor Code**

In keeping with the principles of the BYU Honor Code, students are expected to be honest in all of their academic work. Academic honesty means, most fundamentally, that any work you present as your own must in fact be your own work and not that of another. Violations of this principle may result in a failing grade in the course and additional disciplinary action by the university. Students are also expected to adhere to the Dress and Grooming Standards. Adherence demonstrates respect for yourself and others and ensures an effective learning and working environment. It is the university's expectation, and my own expectation in class, that each student will abide by all Honor Code standards. Please call the Honor Code Office at 422-2847 if you have questions about those standards.

#### **Sexual Harassment**

Title IX of the Education Amendments of 1972 prohibits sex discrimination against any participant in an educational program or activity that receives federal funds. The act is intended to eliminate sex discrimination in education and pertains to admissions, academic and athletic programs, and university-sponsored activities. Title IX also prohibits sexual harassment of students by university employees, other students, and visitors to campus. If you encounter sexual harassment or gender-based discrimination, please talk to your professor or contact one of the following: the Title IX Coordinator at 801-422-2130; the Honor Code Office at 801-422-2847; the Equal Employment Office at

801-422-5895; or Ethics Point at <http://www.ethicspoint.com>, or 1-888-238-1062 (24-hours).

### **Student Disability**

Brigham Young University is committed to providing a working and learning atmosphere that reasonably accommodates qualified persons with disabilities. If you have any disability which may impair your ability to complete this course successfully, please contact the University Accessibility Center (UAC), 2170 WSC or 422-2767. Reasonable academic accommodations are reviewed for all students who have qualified, documented disabilities. The UAC can also assess students for learning, attention, and emotional concerns. Services are coordinated with the student and instructor by the UAC. If you need assistance or if you feel you have been unlawfully discriminated against on the basis of disability, you may seek resolution through established grievance policy and procedures by contacting the Equal Employment Office at 422-5895, D-285 ASB.

### **Academic Honesty**

The first injunction of the Honor Code is the call to "be honest." Students come to the university not only to improve their minds, gain knowledge, and develop skills that will assist them in their life's work, but also to build character.

"President David O. McKay taught that character is the highest aim of education" (The Aims of a BYU Education, p.6). It is the purpose of the BYU Academic Honesty Policy to assist in fulfilling that aim. BYU students should seek to be totally honest in their dealings with others. They should complete their own work and be evaluated based upon that work. They should avoid academic dishonesty and misconduct in all its forms, including but not limited to plagiarism, fabrication or falsification, cheating, and other academic misconduct.

### **Plagiarism**

Intentional plagiarism is a form of intellectual theft that violates widely recognized principles of academic integrity as well as the Honor Code. Such plagiarism may subject the student to appropriate disciplinary action administered through the university Honor Code Office, in addition to academic

sanctions that may be applied by an instructor. Inadvertent plagiarism, which may not be a violation of the Honor Code, is nevertheless a form of intellectual carelessness that is unacceptable in the academic community. Plagiarism of any kind is completely contrary to the established practices of higher education where all members of the university are expected to acknowledge the original intellectual work of others that is included in their own work. In some cases, plagiarism may also involve violations of copyright law. Intentional Plagiarism- Intentional plagiarism is the deliberate act of representing the words, ideas, or data of another as one's own without providing proper attribution to the author through quotation, reference, or footnote. Inadvertent Plagiarism- Inadvertent plagiarism involves the inappropriate, but non-deliberate, use of another's words, ideas, or data without proper attribution. Inadvertent plagiarism usually results from an ignorant failure to follow established rules for documenting sources or from simply not being sufficiently careful in research and writing. Although not a violation of the Honor Code, inadvertent plagiarism is a form of academic misconduct for which an instructor can impose appropriate academic sanctions. Students who are in doubt as to whether they are providing proper attribution have the responsibility to consult with their instructor and obtain guidance. Examples of plagiarism include: Direct Plagiarism- The verbatim copying of an original source without acknowledging the source. Paraphrased Plagiarism- The paraphrasing, without acknowledgement, of ideas from another that the reader might mistake for the author's own. Plagiarism Mosaic- The borrowing of words, ideas, or data from an original source and blending this original material with one's own without acknowledging the source. Insufficient Acknowledgement- The partial or incomplete attribution of words, ideas, or data from an original source. Plagiarism may occur with respect to unpublished as well as published material. Copying another student's work and submitting it as one's own individual work without proper attribution is a serious form of plagiarism.

### **Respectful Environment**

"Sadly, from time to time, we do hear reports of those who are at best insensitive and at worst insulting in their comments to and about others... We

hear derogatory and sometimes even defamatory comments about those with different political, athletic, or ethnic views or experiences. Such behavior is completely out of place at BYU, and I enlist the aid of all to monitor carefully and, if necessary, correct any such that might occur here, however inadvertent or unintentional. "I worry particularly about demeaning comments made about the career or major choices of women or men either directly or about members of the BYU community generally. We must remember that personal agency is a fundamental principle and that none of us has the right or option to criticize the lawful choices of another." President Cecil O. Samuelson, Annual University Conference, August 24, 2010 "Occasionally, we ... hear reports that our female faculty feel disrespected, especially by students, for choosing to work at BYU, even though each one has been approved by the BYU Board of Trustees. Brothers and sisters, these things ought not to be. Not here. Not at a university that shares a constitution with the School of the Prophets." Vice President John S. Tanner, Annual University Conference, August 24, 2010

## **Assignments**

### **Assignment Description**

#### **AA Meeting**

Due: Tuesday, May 06 at 11:59 pm

See <https://sites.google.com/a/utahvalleyaa.org/aa/meeting-schedule> for details.

#### **Midterm**

Due: Tuesday, May 27 at 5:00 pm

Covering material from the first half of the quarter.

#### **Random Quizzes**

Due: Tuesday, Jun 10 at 11:59 pm

*Quizzes, and other such activities, will randomly occur during the quarter to help me know you are reading and thinking about assigned materials. You, of*



*course, are not expected to be an expert on the subject matter covered by these spontaneous activities; rather the purpose is to allow you to demonstrate that you've read and thought about the material prior to our classroom discussion.*

### **Anatomy Lab**

Due: Thursday, Jun 12 at 8:00 pm

*Attend the BYU Anatomy Lab for a brief didactic experience. Date and Time to be arranged.*

### **Poster Presentation**

Due: Thursday, Jun 12 at 11:59 pm

*You will participate in the Third Annual Brain and Behavior Research Poster Session. Selecting a relevant topic of interest, you will prepare and present to your peers, the University community, and the general public as a mental health professional. Requirements include:*

- *Professional-looking presentation*
- *One-page handout, summarizing your presentation*
- *Inviting at least two people to attend*

*A formal rubric will be provided as the date draws closer.*

### **Final Exam**

Due: Thursday, Jun 19 at 6:50 pm

Show what you know.

### **Schedule**

<b>Date</b>	<b>Column 1</b>	<b>Column 2</b>
<b>T - Apr 29</b>	Introduction; The Neuron: Basic Structure and Function	
<b>Th - May 01</b>		BrainFacts: Brain Basics, The Developing Brain

T - May 06	Neurotransmitters; Vascular Supply; Structures and Pathways	AA Meeting Summary due
Th - May 08	Principles of Psychopharmacology	Presentation topics due
T - May 13	History, Development, and Regulation of Psychotropic Medications	
Th - May 15	Higher Cognitive Functions	
T - May 20	Psychotropic Medications	
Th - May 22	Psychiatric Disorders	
M - May 26	<b>Memorial Day Holiday</b>	
T - May 27	Midterm Exam	
Th - May 29	Neurologic Disorders	
T - Jun 03	Substances of Abuse	
Th - Jun 05	Substance Abuse Treatment	
T - Jun 10	Catch Up Day	
Th - Jun 12	Poster Session	
T - Jun 17	<b>Exam Preparation Day</b>	
Th - Jun 19	Final Exam:341 MCKB5:00pm - 6:50pm	