

“Biological Basis of Psychiatric Disorders”

Psychology M117J, Neurosci M130, MCD Bio M181, Phy Sci M181, Psychiatry M181

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Term: Fall '09 Quarter

Course Description: Underlying brain systems involved in psychiatric symptoms and neurological disorders, including schizophrenia, depression, bipolar disorder, obsessive/compulsive disorder. Provides basic understanding of brain dysfunctions that contribute to disorders and rationales for pharmacological treatments. P/NP or letter grading.

Lecture, three hours. Requisite: course Psych 115 or M117A (or Molecular, Cell, and Developmental Biology M175A or Neuroscience M101A or Physiological Science M180A) or Physiological Science 111A.

Office hours: Professor Cannon: T 11:00-11:55 AM; Franz Hall 5586

Professor Jentsch: W 12:00-1:30 PM; Franz Hall 8441B

TA: M 10:00-11:00; Franz Hall 2567B

Text: No required textbook. Readings include both experimental and review articles that will be posted to the course website by the faculty. You will be required to regularly check the website, download and read the articles that are posted. All readings are required.

Grading: Two written examinations (50% each)

Make-up Exams

In order to be given permission to take a make-up exam you must make the request *prior to the scheduled date of the exam*. Allowable excuses for missing scheduled exams are *documented* family emergencies and personal health problems for which a doctor has advised you to not attend class on the day of the exam. You must see a licensed physician on the day of the exam in order to satisfy these criteria.

If you are in such a situation, contact Drs. Jentsch or Cannon by phone, e-mail, or in person in advance of the exam, and permission to take a make-up exam will be decided on a case-by-case basis after a review of the circumstances. Invariably, a number of students request to take make-ups because assignments/exams in their other courses or job interviews occur around the same time as an exam in the course. These situations do not constitute allowable excuses to miss an exam in this course, as doing so would create an inequity for other students (most of whom are in such situations). If necessary, we

will schedule a make-up for each exam within one week of the scheduled exam date. Within this constraint, the timing of the make-up exam may have limited flexibility.

Needless to say, make-ups are not desirable for anyone concerned, and should be requested only when absolutely necessary. Make-ups are generally more difficult than scheduled exams.

Letter Grades

The exams will be graded on a scale of 0 to 100%, and the two exam scores will be averaged together in calculating final grades for this course. A combination of an absolute scale and a sliding scale (or curve) will be used for determining final grade distributions. Students with an average of 90% or better on their exams will receive at least some sort of an A grade (i.e., A or A-); students with an average in the range of 80-89% will receive at least some sort of a B grade (B+, B, B-); students with an average of 70-79% will receive at least some sort of C grade (C+, C, C-); students with an average of 60-69% will receive at least some sort of D grade; and students with an average of 59 or lower may receive a failing grade. Thus, students are not in competition with one another for a limited number of good grades and should feel free to study together and discuss concepts together.

A curve will be used only if the final grade distribution based on the absolute scale results in fewer A, B, or C grades than is typical in lecture courses in the Department of Psychology. That is, if less than 20% of the students have an average of 90% or better on the exams, the cut-off for an A- will be the average exam score at the 80th percentile of the class distribution, such that the 20% of students with the highest averages will receive some sort of 'A' grade. Likewise, if less than 52% of the students have an average of 80% or better on the exams, the cutoff for a B- will be the average exam score at the 48th percentile of the class distribution such that 52% of all students with the highest averages will earn some sort of A or B grade. Finally, if less than 92% of the students have an average of 70% or better on the exams, the cutoff for a C- will be the average exam score at the 8th percentile of the class distribution, such that the 92% of students with the highest averages will earn some sort of A, B, or C grade.

Content:

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| Week 0 | |
| Sept 24 | Intro; Levels of analysis: From genes to disorders (TC) |
| Week 1 | |
| Sept 29 | Genes, drugs & the brain: Animal models (DJ) |
| Oct 1 | No class |
| Week 2 | |
| Oct 6 | Behavioral genetics; Gene/environment interactions (TC) |
| Oct 8 | Depression/Anxiety: Phenomenology and etiology (TC) |
| Week 3 | |
| Oct 13 | Depression/Anxiety: The monoamine hypothesis (DJ) |
| Oct 15 | Depression/Anxiety: New molecular mechanisms (DJ) |
| Week 4 | |
| Oct 20 | Psychotic Disorders: Phenomenology and etiology (TC) |
| Oct 22 | Psychotic Disorders: Dopaminergic mechanisms (DJ) |

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| Week 5 | |
| Oct 27 | Psychotic Disorders: Novel molecular mechanisms (TC) |
| Oct 29 | Exam 1 |
| Week 6 | |
| Nov 3 | Bipolar Disorder: Phenomenology and Etiology (TC) |
| Nov 5 | Bipolar Disorder: Receptors/signal transduction (DJ) |
| Week 7 | |
| Nov 10 | Addiction: Characteristics and basic biology (DJ) |
| Nov 12 | Addiction: Behavior genetics and treatment (TC) |
| Week 8 | |
| Nov 17 | Attention Deficit Hyperactivity Disorder (DJ) |
| Nov 19 | Psychopathy and other Axis II disorders (TC) |
| Week 9 | |
| Nov 24 | Autism (DJ) |
| Nov 26 | Thanksgiving Holiday |
| Week 10 | |
| Dec 1 | Tourette Syndrome/Obsessive Compulsive Disorder (DJ) |
| Dec 3 | Social and legal implications of biological psychiatry (TC) |
| Final exam | |