

Neurochemistry - Chemistry 109

Course Syllabus

Fall 2008

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I. **TEXTS** - (1) Julien, R. M., *A Primer of Drug Action*, Worth Publishers (2005).

II. **EXAMS** - During the course there will be two "hour" exams. The dates of the exams are Friday, October 17th and Friday, November 21st. Each exam will stress, but not be limited to, the subject matter encountered in the lectures and reading assignments since the preceding exam. A final two-hour comprehensive exam, which will emphasize the material since the last exam but will include material from the entire semester, will be given as per the Registrar's Final Exam Schedule for Period 3 classes. The exact nature of each exam will be discussed a week before the exam.

III. **READING ASSIGNMENTS** - Each week you will be assigned reading from the text and sometimes from the scientific literature. In the exams you will be held accountable for all reading assignments.

IV. **WEB PAPER** - An HTML Web Project will be due by the end of the semester. The project must cover a current area of neurochemical research. The exact nature of the project will be discussed in more detail before October Break.

V. **FINAL GRADE DETERMINATION** - The final grade will be determined by the following weighting of the scores of the hour exams, final exam and web project:

Two hour exams 50%

Final Exam 35%

Web Project 15%

VI. **LECTURE MATERIAL** - Below is a tentative synopsis of the lecture material:

Chemistry Basics

Fundamentals of Chemistry

Introduction to acid-base chemistry and equilibria

Introduction to Organic Chemistry

Introduction to Biochemistry

Fundamentals of Neurochemistry

Pharmacokinetics (Chapter -1)

Pharmacodynamics (Chapter -2)

Neurotransmitters & Synaptic Transmission (Chapter -3)

Sedative-Hypnotic Drugs

Ethyl alcohol and Inhalants (Chapter -4)

CNS Depressants (Barbiturates, Anesthetics and Antiepileptics (Chapter -5)

Anxiolytics (Chapter -6)

Psychostimulants

Cocaine & Amphetamines (Chapter -7)

Caffeine & Nicotine (Chapter -8)

Opiates, Opioids, and Nonopioid Analgesics

Opioid Analgesics (Chapter -9)

Non-narcotic, Anti-inflammatory Analgesics (Chapter -10)

Drugs Used to Treat Psychological Disorders

Depression (Chapter -15)

Bipolar Disorder (Chapter -16)

Schizophrenia (Chapter -17)

Parkinsonism (Chapter -18)

Integration of Drugs and Psychological Therapy (Chapter -19)

COLLEGE POLICIES:

A. ACADEMIC HONESTY:

I call to your attention the College policy on Academic Honesty, see the 2008-2009 Course of Study.

B. STUDENTS WITH DISABILITIES:

If you have a physical, psychological, medical or learning disability that may impact your ability to carry out assigned course work, I would urge that you contact the Office of Disability Services at 5453. The Coordinator of Disability Services, Erin Salva (salvae@kenyon.edu), will review your concerns and determine, with you, what accommodations are appropriate. **ONLY** the Coordinator of Disability Services can make accommodations, but please feel free to discuss your concerns in private with me. All information and documentation of disability is confidential.

C. ATHLETICS and EXTRA-CURRICULAR ACTIVITIES:

If your participation in athletics or extra-curricular activities conflicts with a class, scheduled exam time or project due date, please let me know as soon as possible, but at least 2 weeks in advance. Typically, you will be expected to complete your work *before* (not after) the deadline for the rest of the class, so please plan accordingly.