

## **HMSV-2160** INTRODUCTION TO PHARMACOLOGY 3 CREDITS

### **SYLLABUS**

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#### CATALOG DESCRIPTION

Introduces the student to the effects of drugs on behavior. Brain behavior interactions and how drugs affect this interaction will be presented. Also listed as PSYC-2310.

Formerly HMSV-246

Prerequisites: PSYC-1110. ENGL-1110 and (RDNG-099 or RDNG-113) or appropriate English and Reading Accuplacer scores.

Semester Offered: Spring

#### ***COMMON STUDENT LEARNING OUTCOMES***

*Upon successful completion of San Juan College programs and degrees, the student will demonstrate competency in...*

##### **BROAD AND SPECIALIZED LEARNING**

Students will actively and independently acquire, apply, and adapt skills and knowledge with an awareness of global contexts.

##### **CRITICAL THINKING**

Students will think analytically and creatively to explore ideas, make connections, draw conclusions and solve problems.

##### **CULTURAL AND CIVIC ENGAGEMENT**

Students will act purposefully, reflectively, and ethically in diverse and complex environments.

##### **EFFECTIVE COMMUNICATION**

Students will exchange ideas and information with clarity in multiple contexts.

##### **INFORMATION LITERACY**

Students will be able to recognize when information is needed and have the ability to locate, evaluate, and use it effectively.

##### **INTEGRATING TECHNOLOGIES**

Students will demonstrate fluency in the application and use of technologies in multiple contexts.

Student work from this class may be randomly selected and used anonymously for assessment of course, program, and/or institutional learning outcomes. For more information, please refer to the Dean of the appropriate School.

#### **COURSE LEARNING OUTCOMES**

*Upon successful completion of the course, the student will be able to...*

1. Demonstrate an understanding of the anatomy and physiology of the brain.

2. Differentiate between the psychoactive drugs: drugs of abuse and drugs of treatment.
3. Distinguish how the different psychoactive drugs affect the brain and behaviors in humans.
4. Explain the use of animal models of drug abuse and pharmacotherapy and research using animals.

#### SPECIFIC LEARNING OUTCOMES

1. Define psychopharmacology & behavioral pharmacology.
2. Distinguish between pharmacodynamics & pharmacokinetics.
3. Explain the different behavioral methods used to assess animals under the influence of psychoactive drugs.
4. Explain the behavioral methods used to assess humans under the influence of psychoactive drugs.
5. Describe the anatomy of the brain and nervous system including gross and microscopic neuroanatomy.
6. Explain how a neuron functions, including ion exchange
7. (sodium/potassium influx & efflux), action potential, neurotransmitter release, receptor binding, EPSP's, IPSP's, spatial summation, temporal summation and degradation.
8. Discuss the different neurotransmitters and explain their actions at the different receptor sites within the nervous system, and drugs that influence neurotransmitter functions.
9. Explain the circuits or pathways in the brain involved in drug addiction.
10. Describe the general classification of drugs of abuse (i.e. stimulants, depressants and hallucinogens) and some of the specific drugs that fit into these classes, as well as other drugs of abuse not within this general classification of psychoactive drugs.
11. Explain the drugs of treatment for psychological disorders such as:
12. Anxiety, schizophrenia, bipolar depression, clinical depression, etc.