

COURSE SYLLABUS

LAST REVIEW	Spring 2021
COURSE TITLE	Pharmacology: Addiction Counseling
COURSE NUMBER	ADCN 0209
DIVISION	Social and Behavioral Sciences & Public Services
DEPARTMENT	Addictions Counseling
CIP CODE	51.1501
CREDIT HOURS	3
CONTACT HOURS/WEEK	Class: 3
PREREQUISITES	None
COURSE PLACEMENT	Students must meet the correct placement measure for this course. Information may be found at: https://www.kckcc.edu/admissions/information/mandatory-evaluation-placement.html

COURSE DESCRIPTION

The purpose of this three credit hours course is to provide an overview of the primary processes involved in addiction pharmacology, which shall include the study of the nature of psychoactive chemicals; the behavioral, psychological, physiological, and social effects of psychoactive substance use; symptoms of intoxication, withdrawal, and toxicity; toxicity screen options, limitations, and legal implications; and the use of pharmacotherapy for treatment of substance use disorder.

PROGRAM LEARNING OUTCOMES

Students will be able to:

1. Define the theories, skills, and attitudes associated with the core functions of a substance use disorder counselor (addiction counselor).
2. Describe the transdisciplinary foundations and competencies required of the addiction counselor.
3. Define professional and ethical behaviors necessary to work with clients, colleagues, the public, as well as other community and healthcare professionals.
4. Define appropriate professional and ethical behavior for substance abuse counselors.
5. Summarize the basic substance use disorder (addiction) counseling skills.
6. Analyze the skills and attitudes needed to be a professional addiction counselor.

General Education Learning Outcome

- Basic Skills for Communication
- Mathematics
- Humanities
- Natural and Physical Sciences
- Social and Behavioral Sciences

Institutional Learning Outcomes

- Communication
- Computation and Financial Literacy
- Critical Reasoning
- Technology and Information Literacy
- Community and Civic Responsibility
- Personal and Interpersonal Skills

TEXTBOOKS

<http://kckccbookstore.com/>

METHODS OF INSTRUCTION

A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:

I. INTRODUCTION TO PSYCHOPHARMACOLOGY

- A. The Drug Experience
- B. Defining Substance Use, Abuse, and Addiction
- C. A Brief History of U.S. Drug Laws
- D. Current U.S. Scheduling System

II. DRUGS AND THE BRAIN

- A. Neurons, Neurotransmitters, and the Synapse
- B. Drugs and other body systems
- C. Examining the Effects of Drugs in the Brain

III. BASIC PRINCIPLES OF PHARMACOLOGY

- A. Absorption and Distribution of Drugs
- B. Routes of Administration
- C. Metabolism and Excretion
- D. Types of Tolerance
- E. Withdrawal
- F. Physical and Psychological Dependence

IV. CAFFEINE

- A. Caffeine as a Stimulant Drug
- B. Sources of Caffeine
- C. Prevalence of Caffeine Use
- D. Acute Effects of Caffeine
- E. Caffeine Use in Pregnant Women and Children
- F. Tolerance and Withdrawal of Caffeine
- G. Pharmacology of Caffeine

V. NICOTINE

- A. Nicotine as a Stimulant Drug
- B. Sources of Nicotine
- C. Prevalence of Nicotine Use
- D. Acute Effects of Nicotine
- E. Chronic Effects of Tobacco Use (NICOTINE cont.)
- F. Tolerance, Dependence and Withdrawal
- G. Pharmacology of Nicotine

VI. COCAINE

- A. Cocaine as a Stimulant Drug
- B. Routes of Administration
- C. Prevalence of Cocaine Use

- D. Acute Effects of Cocaine
- E. Chronic Effects of Cocaine
- F. Tolerance, Dependence and Withdrawal
- G. Pharmacology of Cocaine

VII. AMPHETAMINES

- A. Types of Amphetamines
- B. Routes of Administration
- C. Prevalence of Amphetamine Use
- D. Acute Effects of Amphetamines
- E. Chronic Effects of Amphetamines
- F. Tolerance, Dependence and Withdrawal
- G. Pharmacology of Amphetamines

VIII. ALCOHOL

- A. Alcohol as a Sedative Drug
- B. Types of Alcohol
- C. Routes of Administration
- D. Prevalence of Alcohol Use
- E. Acute Effects of Alcohol
- F. Chronic Effects of Alcohol
- G. Tolerance, Dependence and Withdrawal
- H. Pharmacology of Alcohol

IX. OPIATES

- A. Opiates as Sedative Drugs
- B. Routes of Administration
- C. Prevalence of Opiate Use
- D. Acute Effects of Opiate Use
- E. Chronic Effects of Opiate Use
- F. Tolerance, Dependence and Withdrawal
- G. Pharmacology of Opiates

X. MARIJUANA

- A. Marijuana as a Sedative Drug
- B. Routes of Administration
- C. Prevalence of Marijuana Use
- D. Medical Uses for Marijuana
- E. Legalization of Marijuana
- F. Acute Effects of Marijuana
- G. Chronic Effects of Marijuana
- H. Tolerance, Dependence and Withdrawal
- I. Pharmacology of Marijuana

XI. HALLUCINOGENS

- A. Types of Hallucinogens
- B. Routes of Administration
- C. Prevalence of Hallucinogen Use
- D. Acute Effects of Hallucinogen Use
- E. Chronic Effects of Hallucinogen Use
- F. Tolerance, Dependence and Withdrawal
- G. Pharmacology of Hallucinogens

XII. ANTIPSYCHOTIC DRUGS

- A. Types of Antipsychotic Drugs
- B. Epidemiology of Psychosis
- C. Acute Effects of Antipsychotic Drugs
- D. Chronic Effects of Antipsychotic Drugs
- E. Tolerance and Withdrawal
- F. Pharmacology of Antipsychotic Drugs

XIII. ANTIDEPRESSANT, ANTIANXIETY, AND MOOD-STABILIZING DRUGS

- A. Mood and Anxiety Disorders: Together or Separate
- B. Epidemiology of Mood and Anxiety Disorders
- C. Acute and Chronic Effects of Antidepressants
- D. Tolerance and Withdrawal for Antidepressants
- E. Pharmacology of Antidepressants
- F. Acute and Chronic Effects of Mood Stabilizers
- G. Tolerance and Withdrawal for Mood Stabilizers
- H. Pharmacology of Mood Stabilizers
- I. Acute and Chronic Effects of Antianxiety Drugs
- J. Tolerance and Withdrawal for Antianxiety Drugs
- K. Pharmacology of Antianxiety Drugs

XIV. STEROIDS, SMART DRUGS AND DIETARY SUPPLEMENTS

- A. Enhancing Physical and Mental Performance
- B. Anabolic Steroids
- C. Epidemiology of Steroid Use
- D. Acute and Chronic Effects of Steroid Use
- E. Tolerance and Withdrawal for Steroids
- F. Pharmacology of Steroids
- G. Smart Drugs
- H. Epidemiology of Dementia
- I. Acute and Chronic Effects of Smart Drugs
- J. Tolerance and Withdrawal for Smart Drugs
- K. Pharmacology of Smart Drugs
- L. Dietary Supplements, Fact or Myth

XV. TREATMENT OPTIONS AND REFERRAL SOURCES

- A. Different Drugs, Different Methods of Treatment
- B. Outpatient vs. Inpatient
- C. Private Programs vs. Social Programs

COURSE LEARNING OUTCOMES AND COMPETENCIES

Upon successful completion of this course, the student will:

- A. CLO #1 The student will understand how a variety of pharmacological factors and non-pharmacological factors can contribute to the drug experience for a user
 - 1. The student will become knowledgeable of the chemical structure of a drug and how it acts on the body.
 - 2. The student will become familiar with the various routes of administration.
 - 3. The student will understand the importance of the amount of drug taken.

- B. CLO #2 The student will explain how neurons communicate and how a psychoactive drug could alter that communication.
 - 4. The student will define various terms, such as neuron, neurotransmitter,

synapse, mesolimbic dopaminergic pathway.

5. The student will explain how neurons communicate.

6. The student will understand how psychoactive drugs affect the communication between neurons.

- C. CLO #3 The student will evaluate the evidence that psychoactive drugs, when used to the point of addiction, can permanently alter the brain.
7. The student will research the ways in which brain imaging techniques can be applied to examine and, perhaps, answer various questions about psychoactive drugs in the brain.
8. The student will learn that there can be long-term consequences of drug use, including changes to the brain.
- D. CLO #4 The student will describe the various routes of administration and explain which routes are more likely to increase the addictive potential of a psychoactive drug.
9. The student will examine the methods by which drugs are absorbed by and distributed throughout the body.
10. The student will recognize the different routes of administration from the fastest to the slowest.
11. The student will understand that the faster a psychoactive drug is absorbed by the body the higher the addiction potential of that psychoactive drug is.
- E. CLO #5 The student will explain what tolerance is and the different mechanisms underlying its development.
12. The student will list all types of tolerance and be able to differentiate between them.
13. The student will understand the biological changes and learning mechanisms involved in the development of tolerance.
- F. CLO #6 The student will examine the withdrawal process and know the difference between psychological withdrawal and physiological withdrawal.
14. The student will learn that withdrawal is the characteristic syndrome that occurs when drug use decreases or stops.
15. The student will be able to differentiate between psychological withdrawal and physiological withdrawal.
16. The student will realize that withdrawal symptoms, whether psychological, physiological or both, differ from one drug to another.
- G. CLO#7 The student will be able to discern the pharmacological differences between the various drugs of abuse.
17. The student will be able pharmacologically distinguish nicotine from other drugs.
18. The student will be able pharmacologically distinguish cocaine from other drugs.
19. The student will be able pharmacologically distinguish amphetamines from other drugs.
20. The student will be able pharmacologically distinguish alcohol from other drugs.
21. The student will be able pharmacologically distinguish opiates from other

drugs.

22. The student will be able pharmacologically distinguish marijuana from other drugs.

23. The student will be able pharmacologically distinguish hallucinogens from other drugs.

H. CLO #8 The student will discuss antipsychotic, antidepressant, antianxiety and mood-stabilizing drugs, including any potential they might have for abuse.

24. The student will list the various kinds of antipsychotic, antidepressant, antianxiety and moodstabilizing drugs.

25. The student will describe various medical conditions that might require these medications and their prevalence in society today.

26. The student will examine these antipsychotic, antidepressant, antianxiety and Mood-stabilizing medications to determine their potential for abuse or adverse Reactions.

I. CLO #9 The student will become familiar with the pharmacology of steroids, smart drugs and dietary supplements.

27. The student will discuss the ways in which these drugs can be used to enhance physical and mental performance.

28. The student will list the acute and chronic effects of steroids and smart drugs.

29. The student will research dietary supplements and complete a report on any potential they may have for abuse or adverse reactions.

J. CLO #10 The student will be knowledgeable of available resources for clients.

30. The student will develop a comprehensive list of medical and self-help referral sources.

ASSESSMENT OF COURSE LEARNING OUTCOMES AND COMPETENCIES

Student progress is evaluated through both formative and summative assessment methods. Specific details may be found in the instructor's course information document.

COLLEGE POLICIES AND PROCEDURES

Student Handbook

<https://www.kckcc.edu/files/docs/student-resources/student-handbook-and-code-of-conduct.pdf>

College Catalog

<https://www.kckcc.edu/academics/catalog/index.html>

College Policies and Statements

<https://www.kckcc.edu/about/policies-statements/index.html>

Accessibility and Accommodations

<https://www.kckcc.edu/academics/resources/student-accessibility-support-services/index.html>