

ADS R103: PHARMACOLOGY OF DRUGS OF ABUSE

Originator

ptrujillo

Co-Contributor(s)
Name(s)

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College

Oxnard College

Discipline (CB01A)

ADS - Addictive Disorders Studies

Course Number (CB01B)

R103

Course Title (CB02)

Pharmacology of Drugs of Abuse

Banner/Short Title

Pharmacology of Drugs of Abuse

Credit Type

Credit

Start Term

Fall 2021

Catalog Course Description

This course will give an overview of the physical and psychological effects of commonly used substances of abuse. It will describe the brain neurochemistry, especially as it is affected and changed by drug use. It will describe in detail the effects of all the major drugs of abuse on the body. Other addictions like compulsive gambling, eating disorders, sexual addictions will also be covered. The course will conclude with an overview of the therapeutic approaches for managing withdrawal, overdose, and substance use disorders. This course fulfills one 3-unit core requirement for the California Association for Alcohol/Drug Educators (CAADE).

Taxonomy of Programs (TOP) Code (CB03)

2104.40 - *Alcohol and Controlled Substances

Course Credit Status (CB04)

D (Credit - Degree Applicable)

Course Transfer Status (CB05) (select one only)

B (Transferable to CSU only)

Course Basic Skills Status (CB08)

N - The Course is Not a Basic Skills Course

SAM Priority Code (CB09)

C - Clearly Occupational

Course Cooperative Work Experience Education Status (CB10)

N - Is Not Part of a Cooperative Work Experience Education Program

Course Classification Status (CB11)

Y - Credit Course

Educational Assistance Class Instruction (Approved Special Class) (CB13)

N - The Course is Not an Approved Special Class

Course Prior to Transfer Level (CB21)

Y - Not Applicable

Course Noncredit Category (CB22)

Y - Credit Course

Funding Agency Category (CB23)

Y - Not Applicable (Funding Not Used)

Course Program Status (CB24)

1 - Program Applicable

General Education Status (CB25)

Y - Not Applicable

Support Course Status (CB26)

N - Course is not a support course

Field trips

May be required

Grading method

Letter Graded

Does this course require an instructional materials fee?

No

Repeatable for Credit

No

Is this course part of a family?

No

Units and Hours

Carnegie Unit Override

No

In-Class

Lecture

Minimum Contact/In-Class Lecture Hours

52.5

Maximum Contact/In-Class Lecture Hours

52.5

Activity

Laboratory

Total in-Class

Total in-Class

Total Minimum Contact/In-Class Hours

52.5

Total Maximum Contact/In-Class Hours

52.5

Outside-of-Class

Internship/Cooperative Work Experience

Paid

Unpaid

Total Outside-of-Class

Total Outside-of-Class

Minimum Outside-of-Class Hours

105

Maximum Outside-of-Class Hours

105

Total Student Learning

Total Student Learning

Total Minimum Student Learning Hours

157.5

Total Maximum Student Learning Hours

157.5

Minimum Units (CB07)

3

Maximum Units (CB06)

3

Student Learning Outcomes (CSLOs)

Upon satisfactory completion of the course, students will be able to:

- | | |
|---|---|
| 1 | Identify the effects of stimulants, depressants, and hallucinogenic drugs on the body and the brain. |
| 2 | Define non-drug addictions and their similarity to drug addictions. |
| 3 | Explain the need to use prescribed medications and other techniques in the prevention and treatment of drug addictions. |

Course Objectives

Upon satisfactory completion of the course, students will be able to:

- | | |
|----|--|
| 1 | Explain the neurochemistry of the brain and how it is affected by drug use and abuse. |
| 2 | Identify the effects of stimulant, depressant, and hallucinogenic drugs on the body and brain. |
| 3 | Recognize non-drug addictions and their similarity to drug addictions. |
| 4 | Explain concepts of tolerance, tissue dependence, and withdrawal. |
| 5 | Identify risks associated with specific routes of administration. |
| 6 | Describe the symptoms of intoxication, overdose, and withdrawal for specific drugs. |
| 7 | Recognize the various treatments for managing withdrawal, overdose, and substance use disorders. |
| 8 | Identify chronic physical effects of addictive substances, as well as medical complications of use. |
| 9 | Describe the mechanism of action of commonly used mental health medications such as antidepressants, mood stabilizers and antipsychotic medications. |
| 10 | Describe and evaluate current trends in the treatment of substance use disorder and addiction, including medication assisted treatment (i.e. MAT). |

Course Content

Lecture/Course Content

1. Scientific Overview of Alcoholism and Drug Addiction
 - a. Definition of pharmacology, psychoactive drug, blood brain barrier, synergism and neurotransmitter
 - b. History of psychoactive drugs and their use
 - c. Classification of psychoactive drugs
2. Heredity, Environment, and Psychoactive Drugs
 - a. How psychoactive drugs affect people
 - i. How drugs get to the brain
 - ii. The nervous system
 - iii. Neuroanatomy and how addictive substances alter the system
 - iv. Physiological responses to drugs including tolerance, tissue dependence and withdrawal
 - v. Medical complications of use
 - vi. Risks of various routes of administration
 - b. From experimentation to addiction
 - i. Desired effects vs side effects
 - ii. Theories of addiction
 - iii. Heredity, environment, psychoactive drugs and compulsive behaviors
 - iv. Alcoholic mice and sober mice
 - v. A simplified view of the addictive process
3. Uppers – All Stimulants
 - a. General effects
 - b. Cocaine
 - c. Amphetamines
 - d. Look-alikes
 - e. Over-the-counter
 - f. Caffeine and nicotine
4. Downers – Opiates, Opioids, and Sedative Hypnotics
 - a. Major and minor depressants
 - b. Prescription Drug Epidemic
 - c. Opiates/Opioids
 - i. Classification
 - ii. History of methods of use
 - iii. Effects of Opioids
 - iv. Therapeutic pain control vs hyperalgesia
 - v. Additional complications caused by opioids
 - vi. From experimentation to addiction
 - d. Sedative –hypnotics
 - i. History
 - ii. Classification
 - iii. Use, misuse, abuse, and addiction
 - iv. Benzodiazepines
 - v. Barbiturates
 - vi. Other sedative-hypnotics
 - vii. Drug interactions
 - viii. Prescription drugs and the pharmaceutical industry
5. Downers – Alcohol
 - a. Overview
 - b. Alcoholic beverages
 - c. Absorption, distribution, and metabolism
 - d. Desired effects, side effects, health consequences
 - e. Addiction: alcohol dependence or alcoholism
 - f. Other problems with alcohol
 - g. Epidemiology
6. All-Arounders
 - a. History and classification
 - b. General effects

- i. LSD, Psilocybin mushrooms and other indole psychedelics
 - ii. Peyote, MDMA, and other phenylalkylamine psychedelics
 - iii. Anticholinergic psychedelics
 - iv. PCP, Ketamine, Salvia Divinorum, and other psychedelics
 - v. Marijuana and other cannabinoids
- 7. Other Drugs, Other Addictions
 - a. Other drugs
 - i. Inhalants
 - ii. Sports and drugs, including Steroids
 - iii. Miscellaneous drugs
 - b. Other addictions
 - i. Compulsive behaviors
 - ii. Heredity, environment, and compulsive behaviors
 - iii. Compulsive gambling
 - iv. Compulsive shopping and buying
 - v. Hoarding
 - vi. Eating disorders
 - vii. Love and sex addiction
 - viii. Internet addiction
- 8. Drug Use and Prevention: From Cradle to Grave
 - a. Prevention
 - b. From Cradle to Grave
- 9. Treatment approaches for withdrawal, overdose, and substance use disorders
 - a. A Disease of the brain
 - b. Symptoms of intoxication, overdose and withdrawal
 - c. Current issues and trends in treatment
 - d. Treatment effectiveness
 - e. Principles and goals of treatment
 - f. Selection of a program
 - g. Beginning treatment
 - h. Treatment continuum
 - i. Individual vs group therapy
 - j. Treatment and the family
 - k. Trauma-Informed and trauma-focused care
 - l. Recovery coach
 - m. Adjunctive and complementary treatment services
 - n. Drug-specific treatment
 - o. Target populations
 - p. Treatment obstacles
 - q. Medical intervention developments
 - i. Medications approved to treat SUDs vs those used off-label
 - ii. Medical strategies in development to treat SUDs
 - iii. New drug development process
- 10. Mental Health and Drugs
 - a. Determining factors
 - b. Co-Occurring Disorders
 - i. Definition
 - ii. Epidemiology
 - iii. Patterns of Co-Occurring
 - iv. Making the diagnosis
 - v. Mental health vs substance abuse
 - vi. Psychiatric disorders: pre-existing mental disorders
 - vii. Substance-induced mental disorders
 - c. Treatment
 - i. Psychopharmacology and mechanism of action

Laboratory or Activity Content

None

Methods of Evaluation

Which of these methods will students use to demonstrate proficiency in the subject matter of this course? (Check all that apply):

Written expression

Methods of Evaluation may include, but are not limited to, the following typical classroom assessment techniques/required assignments (check as many as are deemed appropriate):

Essay exams
Essays
Group projects
Individual projects
Objective exams
Quizzes
Reports/papers
Research papers

Instructional Methodology

Specify the methods of instruction that may be employed in this course

Audio-visual presentations
Computer-aided presentations
Class discussions
Distance Education
Field trips
Group discussions
Guest speakers
Internet research
Lecture

Describe specific examples of the methods the instructor will use:

1. Instructor will use computer-aided presentations to cover specific topics from the reading
2. Instructor will lead the students in discussing how the reading applies to people with a substance use disorder
3. Students will break into pairs/small groups to discuss the substance use challenges in our community
4. Instructor lead a discussion in treatment options/therapeutic approaches to withdrawal, overdose, and substance use disorders.

Representative Course Assignments

Writing Assignments

1. Students may be required to write a two thousand word research paper on a drug of their choosing covering the following issues: history of the drug, pharmacological data, production, effects of the drug and symptoms of addiction, treatment and the latest research. Students must consult at least three outside sources (bibliography provided).

Critical Thinking Assignments

1. Participate in class and small group discussions debating the pros and cons of various therapeutic approaches to treating substance use disorders
2. Compare and contrast abstinence vs harm reduction approaches

Reading Assignments

1. Students will be required to read textbook chapters to learn about the pharmacology of drugs of abuse then pass the chapter quizzes

Outside Assignments

Representative Outside Assignments

1. Students will read the chapters in their text book
2. Students will review assigned videos
3. Students will do research and write a term paper

Articulation

C-ID Descriptor Number

ADS 140X

Status

Conditionally approved

Expiration Date

02/2021

Additional C-ID Descriptor(s)

| C-ID Descriptor(s) | Status |
|---|------------------------|
| Pharmacology of Alcohol and Other Drugs | Conditionally approved |

District General Education

A. Natural Sciences

B. Social and Behavioral Sciences

C. Humanities

D. Language and Rationality

E. Health and Physical Education/Kinesiology

F. Ethnic Studies/Gender Studies

Course is CSU transferable

Yes

CSU GE-Breadth

Area A: English Language Communication and Critical Thinking

Area B: Scientific Inquiry and Quantitative Reasoning

Area C: Arts and Humanities

Area D: Social Sciences

Area E: Lifelong Learning and Self-Development

CSU Graduation Requirement in U.S. History, Constitution and American Ideals:

IGETC

Area 1: English Communication

Area 2A: Mathematical Concepts & Quantitative Reasoning

Area 3: Arts and Humanities

Area 4: Social and Behavioral Sciences

Area 5: Physical and Biological Sciences

Area 6: Languages Other than English (LOTE)

Textbooks and Lab Manuals

Resource Type

Textbook

Description

Uppers, Downers and All Arounders by Inaba, D.S., Cohen, W.E., von Radics, E., & Chowela, E.K., 8th ed. 2014 (or latest edition). Ashland, Oregon CNS Publications.

Resource Type

Other Instructional Materials

Description

"Cocaine" - DVD.

Resource Type

Other Instructional Materials

Description

"Eating Disorders" - video.

Resource Type

Other Instructional Materials

Description

"Compulsive Gambling" – video.

Resource Type

Other Instructional Materials

Description

"Medical Consequences of Addiction" – video.

Resource Type

Other Instructional Materials

Description

"Amphetamines: Neurochemistry and Recovery" – DVD.

Resource Type

Other Instructional Materials

Description

"The Peyote Road" - video.

Resource Type

Other Instructional Materials

Description

"PCP-Angel Dust" - video.

Resource Type

Other Instructional Materials

Description

"Drug Abuse and the Brain" - video.

Distance Education Addendum**Definitions****Distance Education Modalities**

Hybrid (51%–99% online)
Hybrid (1%–50% online)
100% online

Faculty Certifications

Faculty assigned to teach Hybrid or Fully Online sections of this course will receive training in how to satisfy the Federal and state regulations governing regular effective/substantive contact for distance education. The training will include common elements in the district-supported learning management system (LMS), online teaching methods, regular effective/substantive contact, and best practices.

Yes

Faculty assigned to teach Hybrid or Fully Online sections of this course will meet with the EAC Alternate Media Specialist to ensure that the course content meets the required Federal and state accessibility standards for access by students with disabilities. Common areas for discussion include accessibility of PDF files, images, captioning of videos, Power Point presentations, math and scientific notation, and ensuring the use of style mark-up in Word documents.

Yes

Regular Effective/Substantive Contact

Hybrid (1%–50% online) Modality:

| Method of Instruction | Document typical activities or assignments for each method of instruction |
|--|---|
| Synchronous Dialog (e.g., online chat) | Instructor will have live on-line chat with students |
| Asynchronous Dialog (e.g., discussion board) | Students will respond to prompts about the skills covered in the chapter then respond to other students' postings as well |
| Other DE (e.g., recorded lectures) | Instructor will use recorded lectures and videos demonstrating counseling skills |

Hybrid (51%–99% online) Modality:

| Method of Instruction | Document typical activities or assignments for each method of instruction |
|--|--|
| Synchronous Dialog (e.g., online chat) | Instructor will have live on-line chat with students |
| Asynchronous Dialog (e.g., discussion board) | Students will respond to prompts about the skills covered in the chapter then respond to other students' postings as well |
| Video Conferencing | Instructor will have live video lectures/presentations of the material with role modeling skills and having students practice the skills |

100% online Modality:

| Method of Instruction | Document typical activities or assignments for each method of instruction |
|--|--|
| Synchronous Dialog (e.g., online chat) | Instructor will have live on-line chat with students |
| Asynchronous Dialog (e.g., discussion board) | Students will respond to prompts about the skills covered in the chapter then respond to other students' postings as well |
| Other DE (e.g., recorded lectures) | Instructor will use recorded lectures and videos demonstrating counseling skills |
| Video Conferencing | Instructor will have live video lectures/presentations of the material with role modeling skills and having students practice the skills |

Examinations

Hybrid (1%–50% online) Modality

Online
On campus

Hybrid (51%–99% online) Modality

Online
On campus

Primary Minimum Qualification

ADDICTION PARAPROFESSIONAL TRG

Review and Approval Dates

Department Chair

08/26/2020

Dean

08/26/2020

Technical Review

09/09/2020

Curriculum Committee

09/09/2020

Curriculum Committee

12/09/2020

CCCCO

MM/DD/YYYY

Control Number

CCC000340734

DOE/accreditation approval date

MM/DD/YYYY