

# **Pharmacological & Physiological Effects of Addiction**

## **Social Work / Human Services 82 – Spring 2024**

**Instructor:** Meghan Murphy, MSW

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**Office Hours:** TBA

**Class:** Wednesday 7-9pm, Bertolini 4734, Santa Rosa Campus

### **Course Description**

This course reviews the medical and pharmacological aspects of alcohol and psychoactive substances. Students will also review theories and research pertaining to chemical dependency, pharmacological actions of drugs, drug classifications, medical and physical effects of alcohol and other drugs. The potential for abuse and dependency, and how psychoactive substances affect the mind and body will also be reviewed.

### **Student Learning Outcomes:**

At the conclusion of this course, the student should be able to:

1. Describe the medical and pharmacological resources available in the treatment of substance use disorders.
2. Recognize and describe the differences and similarities between physical and psychological dependency, tolerance, and withdrawal.
3. Recognize and screen clients for psychoactive substance toxicity, intoxication, and withdrawal symptoms.

### **Objectives:**

At the conclusion of this course, the student should be able to:

1. Identify the progressive stages of the disease of chemical dependency.
2. Describe and list the most commonly abused drugs and their effects on the body.
3. Recognize and analyze the basic metabolic and neurological processes involved in drug use.
4. Describe the social effects of psychoactive substances on the user.
5. Describe the special service needs and staff precautions necessary when working with clients who may be Human Immunodeficiency Virus ((HIV), hepatitis, Sexually Transmitted Infection (STI) or tuberculosis positive.
6. Analyze in writing the risk and intervention issues associated with prenatal drug use.
7. Ability to identify medical and pharmacological resources.

### **Required Text**

Kuhn, C., Swartzwelder, S., & Wilson, W. (2019). *Buzzed: The straight facts about the most used and abused drugs from alcohol to ecstasy* (5<sup>th</sup> ed.). Norton & Company

Gahlinger, P. (2004). *Illegal Drugs: A complete guide to their history, chemistry, use, and abuse* (updated and revised edition). Plume

Substance Abuse and Mental Health Services Administration. (2023). Key substance use and mental health indicators in the United States: Results from the 2022 National Survey on Drug Use and Health (HHS Publication No. PEP23-07-01-006, NSDUH Series H-58). Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration.

<https://www.samhsa.gov/data/report/2022-nsduh-annual-national-report>

**Class Schedule** \*dates are subject to change to best meet class needs

Readings in the class schedule will be referred to with the following acronyms:

- Illegal Drugs: A complete guide to their history, chemistry, and abuse (Illegal)
- Buzzed: The straight facts about the most used and abused drugs from alcohol to ecstasy (Buzzed)
- Key substance use and mental health indicators in the United States: Results from the 2022 National Survey on Drug Use and Health (SAMHSA)

<b>Week</b>	<b>Date</b>	<b>Topics and reading due before class</b>
Week 1	January 17 <sup>th</sup>	Welcome, introduction, syllabus, overview, history of drug use
Week 2	January 24 <sup>th</sup>	Psychoactive Drugs Required reading: Illegal chapter 4; Buzzed Introduction, Just Say Know, Test Your Knowledge, and chapter 14
Week 3	January 31 <sup>st</sup>	Neurochemistry Required reading: Illegal chapter 6; Buzzed chapter 13
Week 4	February 7 <sup>th</sup>	The Spectrum of Drug Use and Theories of Addiction Required reading: review Buzzed chapter 15
Week 5	February 14 <sup>th</sup>	Synapse Sharing and Midterm Review Required reading: SAMHSA pgs 9-30 <b>Synapse Assignment Due</b>
Week 6	February 21 <sup>st</sup>	<b>Midterm Exam - in class</b>
Week 7	February 28 <sup>th</sup>	Amphetamines & Barbiturates Required reading: Illegal chapters 8 & 9, Buzzed chapters 10 & 12
Week 8	March 6 <sup>th</sup>	Cocaine Required Reading: Illegal chapter 11
Week 9	March 13 <sup>th</sup>	Psilocybin, LSD, and other Psychedelics Required reading: Illegal chapters 12 & 16, Buzzed chapter 4
	March 20 <sup>th</sup>	Spring Break; No Class No reading or assignments due, enjoy the break!
Week 10	March 27 <sup>th</sup>	Marijuana Required reading: Illegal chapter 17, Buzzed chapter 7
Week 11	April 3 <sup>rd</sup>	MDMA & GHB Required reading: Illegal chapters 14 & 18, Buzzed chapter 3 <b>Paper Due</b>

Week 12	April 10 <sup>th</sup>	Opiates Required reading: Illegal chapter 20, Buzzed chapter 9
Week 13	April 17 <sup>th</sup>	Alcohol Required reading: Buzzed chapter 1
Week 14	April 24 <sup>th</sup>	Steroids & Barbiturates Required reading: Illegal chapter 9, Buzzed chapters 10 & 11 <b>Prenatal Drug Exposure Handout Due</b>
Week 15	May 1 <sup>st</sup>	Prenatal Drug Exposure Information Roundtables Required reading: Pregnancy and Substance Use: A Harm Reduction Toolkit pages 1-17
Week 16	May 8 <sup>th</sup>	TBD <b>Prenatal Drug Exposure Reflection Paper Due</b>
Week 17	May 15 <sup>th</sup>	Course review and final preparation Required reading: TBD
	May 22 <sup>nd</sup>	<b>Final Exam</b>

### Attendance

Attendance is expected for all class sessions. SRJC policy states that students may be dropped if they miss more than 10% of class hours. **Students will be dropped if they have a third absence, unless there is a documented extraordinary circumstance. Students who miss more than 3 classes will be dropped, regardless of the reason for absences.** It is the responsibility of the student to track their absences and their attendance record in Canvas and to inform the instructor immediately if there is a discrepancy. Students with perfect attendance will receive 10 points of extra credit at the end of the semester.

*\* With advanced notice and appropriate documentation, members of the U.S. Military Armed Services and Reservists shall have their absences accommodated due to service obligations provided that satisfactory academic progress is being made prior to suspending their studies. For the purpose of this policy, a student is making satisfactory academic progress so long as, at the start of the absence, the student has the potential to pass the class after completing the remaining assignments.*

### Participation

Participation in in-class discussion and activities is expected of all students. Academic rigor, robust discussion, and diverse viewpoints are welcome and important in the pursuit of learning. Students are expected to use the utmost in respectful and inclusive language. Insults, bullying, and intentional misinformation will not be tolerated as they limit and interfere with the learning experience.

Asynchronous assignments will be provided at least 5 days before class and must be completed before class begins. Details will be posted in the course module. Late submissions of Asynchronous assignments will not receive any points.

### **Assignments**

Assignments are due by 7pm on the date given and must be submitted through Canvas unless otherwise stated. Late assignments will not be accepted unless previously arranged. Late assignments accepted will be accepted with a point penalty.

Students must choose different drugs to focus on for the paper and presentation.

### **Synapse Diagram – Image in class, additional information by 2/14**

Create an image of a synapse (you can be as creative as you want...you can make it digitally, draw, paint, collage, make a model, sew, etc.). It must be your own creation and you must be prepared to share it in class on 2/14. The definitions and descriptions must be submitted in document format through canvas.

Label the following parts and give a simple definition of each in your own words:

- Transmitting Neuron
- Receiving Neuron
- Synaptic Vesicle
- Receptor
- Transporter
- Synaptic Cleft

Describe in your own words how tolerance makes changes to these elements of the brain.

### **Paper –by 4/3**

Choose one of the two options offered below and write a 3-5 page paper that addresses all components of the assignment. This paper must be submitted as a Word document written in Times New Roman, Calibri, or Cambria 12pt font, with 1” margins, double-spaced. Correct grammar, spelling, and punctuation are required. Citations should be formatted in alignment with APA standards. Do NOT put your name on the paper.

#### Option 1: Analysis of Substance Use Effects:

Analyze the portrayal of a specific drug. Watch one of the documentaries or movies listed below and write a paper describing the following: levels of use depicted, biopsychosocial impacts of the drug on individuals portrayed (both positive and negative), reasons for using the drug(s), experience of withdrawal (if shown), and whether the impacts portrayed are realistic based on information provided in the text. Provide citations for all references to the book.

- Have a Good Trip (2020)
- Oxyana (2013)
- Meth Storm (2017)
- Take Your Pills (2018)
- Drinking to Oblivion (2016)
- A Star is Born (2018)
- Cherry (2021)
- A Good Person (2023)
- Rocketman (2019)
- Beautiful Boy (2018)

### Option 2: Exploration of a Particular Drug:

Analyze a specific psychoactive drug including the drug class, neurotransmitters involved, whether the drug is an agonist or antagonist, risk of death from use or withdrawal, rates of use in the United States, pharmacological treatment, and unique conditions posed by the drug (i.e. wet brain, serotonin syndrome, formication, etc.).

Three references are required for this paper in addition to at least one of the text books. All references must be from reputable sources (i.e. SAMHSA, NIH, CDC).

### **Prenatal Drug Exposure: Handout 4/24, sharing 5/1, reflection 5/8**

Research the effects of a particular drug (nicotine, alcohol, marijuana, heroin, cocaine, methamphetamine, or LSD) on an embryo/fetus and nursing infant. Create a poster/handout that covers the following and be prepared to discuss it with your classmates:

- Impact of the drug on the fetus in each trimester of pregnancy and during breastfeeding
- Impact on infants born with the drug in their system
- Treatment for infants born with the drug in their system
- Intervention strategies to support mothers and/or reduce negative impacts on the embryo/fetus while the mother is pregnant

Grading:

- 15 points: poster/handout meeting all required components and information accuracy. The poster must include at least three references, one of which must be The Pregnancy and Harm Reduction Toolkit The other sources must be from reputable sites (i.e. SAMHSA, Centers for Disease Control, National Institute of Health, etc.). One reference can be an interview with a professional in the field about this topic.
- 10 points: sharing of information in class articulately and accurately
- 15 points: submission of a 2-3 page reflection paper covering what you learned from other students during the presentation day and your experience with the assignment.

### **Exams: Midterm 2/21 in class and Final 5/22 in class**

Both exams will be administered in person. You can choose to bring a laptop or tablet and do the exam over Canvas or to do the exam on paper. The exams will be comprised of multiple-choice, short answer, and essay questions. The material covered by the exams will include information from class presentations, guest speakers, and assigned reading. There will be material on exams covered in one only modality (i.e. readings, asynchronous activities, or lectures). The final will be comprehensive and cover material from the entire course.

### **Grading Structure**

360-400 points = A

320-359 points = B

280-319 points = C

240-279 points = D

<240 points = F

<b>Assignment</b>	<b>Points</b>
Asynchronous Learning (Discussion Board Posts)	150 points
Paper	50 points
Synapse Image/Model	50 points
Prenatal Drug Exposure Assignment	50 points
Midterm	50 points
Final	50 points
<b>Total Possible Points</b>	<b>400 points</b>

## **SPRING SEMESTER 2024**

<b>Tuesday, January 16, 2024</b>	<b>CLASSES BEGIN</b>
Sunday, January 28, 2024	Last day to drop semester length class and be eligible for a refund
Sunday, February 4, 2024	Last day to register/add semester length class with the instructor's signature or add code
Sunday, February 4, 2024	Last day to drop a semester length class without "W" symbol
Monday, February 5, 2024	First Census Day
<b>Thursday, February 15, 2024</b>	<b>Mandatory Professional Development Activities Institutional Day (No classes, District closed for PDA)</b>
<b>Friday, February 16, 2024</b>	<b>Lincoln's Day Holiday Observance (No classes, District closed)</b>
Saturday, February 17 - Sunday, February 18, 2024	Saturday and Sunday (Classes will meet)
Monday, February 19, 2024	Washington's Day Holiday (No classes, District closed)
<b>Monday, March 18 - Sunday, March 24, 2024</b>	<b>Spring Break (No classes)</b>
<b>Thursday, March 21, 2024</b>	<b>Professional Development Flex Day (No classes)</b>
<b>Friday, March 22, 2024</b>	<b>Professional Development 1/2 Flex Day (No classes)</b>
Monday, March 25 - Sunday, April 21, 2024	Midterm progress indicators posted in student portal
<b>Monday, April 1, 2024</b>	<b>Cesar Chavez / Dolores Huerta Day (No classes, District closed)</b>
Sunday, April 21, 2024	Last day to drop a semester length class with "W" symbol
Saturday, May 18 - Friday, May 24, 2024	Final Examinations

## **Students Services**

Student Services can be reached online at: <https://student-services.santarosa.edu/>. Some key resources are:

- Disability Resources is online at: <https://drd.santarosa.edu/>. If you feel you need assistance in any of your classes, counselors are available to help you in the process. (707) 527-4278 or [disabilityinfo@santarosa.edu](mailto:disabilityinfo@santarosa.edu)
- Academic Tutoring is online at: <https://college-skills.santarosa.edu/srjc-tutorial-centers>
- Financial Aid services are online at: <https://financialaid.santarosa.edu/>, staff are available to help you with applying for financial aid and understanding funding opportunities
- Health issues (physical and mental) can interfere with your academic success. Student Health Services is here to support you. Located in the Race Building Room 4017, details at <https://shs.santarosa.edu>

## **Student Conduct and Academic Integrity**

Students will conduct themselves in a manner which reflects an awareness of common standards of decency and the rights of others. All students are expected to know the Student Conduct Code (<https://go.boarddocs.com/ca/santarosa/Board.nsf/goto?open&id=A8JTG775682>) and adhere to it in class. Students who violate the code may be removed from class for up to two (2) class periods and referred to the Sr. Dean of Students, for possible discipline sanctions.

All written work is to be original; any act of academic dishonesty of any kind will result in a failing grade ('F') on that assignment. Students could be dropped from all their classes for a second offense of cheating or plagiarism. All Academic Integrity cases are documented and reviewed by the Sr. Dean of Students for possible additional sanctions. Please read the college statement on Academic Integrity at: <https://rightsresponsibilities.santarosa.edu/academic-integrity>

## **Student complaints/grievances**

Students who feel their rights as a student have been violated by an instructor or staff member should first attempt in good faith to resolve the matter with the source of the complaint. If the student is dissatisfied with the outcome of this meeting, they may take their complaint to a Department Chair or Administrator for further review by a third party. If a resolution is not reached at this level, the student may file a formal grievance with the appropriate Dean/Supervising Administrator. For support and advice on the complaint/grievance process, a student may consult a Grievance Officer in the Student Life Office on either the Santa Rosa or Petaluma Campus. For Santa Rosa, call (707) 527-4424; for Petaluma, (707) 778-4141. For the complete procedure, see <https://rightsresponsibilities.santarosa.edu/complaints-grievances>

The procedure is the same for complaints about academic matters including grades and curriculum. The student should begin by first talking to the instructor to attempt resolution. If this is unsuccessful, the student may then proceed with the steps as listed above. The appropriate path is faculty member, Department Chair, area Dean and finally, Vice President, Academic Affairs.

Complaints involving sexual harassment, race discrimination, sex discrimination and discrimination against those with disabilities, should contact the Vice President of Human Resources Office at (707) 527-4954. Reports of complaints of discrimination that proceed to investigation will be investigated by a person knowledgeable about discrimination matters and the investigation process will include, at a minimum, interviewing the complainant, other relevant witnesses, and gathering pertinent documentation.

Student appeals relating to Financial Aid decisions, rules and regulations should contact the Student Financial Services office in order to initiate the Financial Aid appeal process which follows established guidelines. The phone number is (707) 527-4471.

### **Special Needs**

Any student who has special needs of which the instructor should be aware should inform the instructor at the first class session. Accommodations can be made for any aspect of class participation and assignments.