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# LEWIS & CLARK COLLEGE

## GRADUATE SCHOOL OF EDUCATION AND COUNSELING

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### DRUGS, BRAIN AND BEHAVIOR / MHCA 545-02

Time & Day: Mondays 5:30 pm to 8:45 pm – September 8, 2014 to December 8, 2014

Class Room: Rogers Hall, Room 219

Instructor: Keith Mackie (Adjunct Faculty)

Phone & voice mail (971) 207-5010

Campus Mailbox in Counseling Psychology Office

Email: [keithm@lclark.edu](mailto:keithm@lclark.edu)

Office Hours: I am adjunct faculty and do not have an office on campus. Therefore, if you want to talk to me between class sessions, please contact me via phone or email me at [keithm@lclark.edu](mailto:keithm@lclark.edu). I also have a mailbox in the Counseling Psychology Office in Rogers Hall and will pick up mail weekly only on Monday afternoons.

### COURSE REQUIREMENTS:

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|-----------------------------------|----------------------------|
| 1) Five tests on Moodle:          | 50 points and 50% of grade |
| 2) Current Research Presentation: | 20 points and 20% of grade |
| 3) Final Exam:                    | 30 points and 30% of grade |

#### 1. Five Tests on Moodle

There will be five tests (multiple-choice, true or false) on Moodle. Each test is worth 10 points. The schedule of when these tests will be given is at the end of this syllabus in the “WEEKLY TOPICS, READINGS, and ASSIGNMENTS DUE” section. Each test will be open for seven days and students will be able to make two attempts to complete each test during the week that the test is open. **Once the test has been closed, students will only be able to access the test by permission of the instructor, and will only be able to receive a maximum of 5 points per test (50% of the possible points total).**

#### 2. Current Research Presentation

The Current Research Presentation will be given on the date assigned per the sign-up sheet. Students will select a psychoactive drug or psychotropic medication as a topic that will be presented on the corresponding date designated on the sign-up sheet. Students will utilize the most recent research on their drug/medication of choice (research published in 2013 or 2014) and present for 20 minutes on their findings. Presentations will utilize the Current Research Presentation Outline, which will be discussed in class and made available on Moodle.

Grading of the presentation will be done via peer evaluation based on applicability, use of print and multimedia, adequate research, adequate use of time, and presentation/feedback skills. The evaluation will be open to all class members attending the presentation as well as the instructor, and grades will be derived as a result of averages for each evaluation question. A total of 20 points is possible for the presentation.

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***Any student who is unable to present on their designated date will be required to present on the next class day and will only be eligible to receive a maximum of 10 points or 50% of the possible grade for the case presentation.*** With at least one-week notice given to the instructor, a student can swap their presentation date with another student if necessary and still be eligible to achieve all 20 points. The intention to swap a presentation date must be approved by the instructor with no less than one-week advance notice and both students electing to swap presentation dates must contact the instructor for approval.

### **3. Final Exam**

The final exam will be taken during class on the last day of class. It is a pen & paper exam that is designed to prepare students for taking the NCAC I National Certification Exam; the national certification examination from the National Association of Alcohol and Drug Abuse Counselors (NAADAC) that is required to become a Certified Alcohol and Drug Counselor (CADC) in most states including Oregon and Washington.

The exam will be comprehensive based on information covered in the required textbook readings, class lectures and presentations including student case presentations. The final will include multiple choice, true or false, short answer, matching and fill-in the blank questions. The final exam will only be offered during class as indicated.

**TEXT: Required:** Inaba, Daryl S. & William E. Cohen, *Uppers, Downers, All Arounders: Physical and Mental Effects of Psychoactive Drugs*. Seventh Edition. CNS Publications, Inc., 2011.

**Supplemental Reading (not required):**

Erickson, Carlton K., *The Science of Addiction, From Neurobiology to Treatment*, W.W. Norton & Company, 2007.

Grant, Jon E., *Impulse Control Disorders, A Clinician's Guide to Understanding and Treating Behavioral Addictions*, W.W. Norton & Company, 2008.

Julien, Robert M., *A Primer of Drug Action (Tenth Edition), A Comprehensive Guide to the Actions, Uses, and Side Effects of Psychoactive Drugs*, Worth Publishers, 2005.

Sinacola, Richard S. & Peters-Strickland, Timothy, *Basic Psychopharmacology for Counselors and Psychotherapists*. Second Edition. Pearson Inc., 2011

**Supplemental Research Websites (not required):**

<http://www.drugabuse.gov/>

<http://www.naadac.org/education>

<http://www.samhsa.gov/index.aspx>

<http://www.utexas.edu/research/asrec/>

<http://library.lclark.edu/reference/guide/522/>

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### **NOTES ON THE ABOVE:**

1) Students are expected to **attend each session** and to **actively participate** in the class discussions and presentations. Assigned reading needs to be completed before the class session. See CPSY departmental attendance policy found below in this syllabus.

2) This class requires the student to cover a lot of detailed information in order to become familiar with pharmacological and neurological terminology as well as the specifics of each psychoactive drug of abuse and psychotropic medication. Consequently **it is imperative that the readings be done thoroughly and on time.**

3) To facilitate learning, there is a web site associated with the Inaba and Cohen text for students at [www.cnsproductions.com/7essg/](http://www.cnsproductions.com/7essg/), which includes:

- Chapter overviews and outlines;
- Interactive guided chapter reviews;
- Practice tests;
- Keywords and phrases;
- Drug identification table (using classifications and street names);
- Glossary;
- Video presentations for each chapter;
- Addiction education blogs.

The procedure for student viewing of the long-chapter videos is as follows:

- You must create your own account - using your email address as your username and creating a password of your own choice.
- You will still need an ACCESS CODE to view the videos. The current access code will be good until the end of the year. The new access will be given to you the first day of class.

Following is a step-by-step set of instructions. Note: these instructions pop up when you click on the student tab at the top of CNS's home page.

1. Register an account. If you have already done so, please go on to the next step.
2. Log in.
3. Enter the access code given to you on the first day of class.
4. Watch the video series!

(For access problems, contact Howard LaMere at CNS Productions, Inc.: [www.cnsproductions.com](http://www.cnsproductions.com), 800.888.0617 or 541.779.3361.

### **Make-up Presentation for Missed Class**

If you miss a class, you will be asked to make a class presentation. This involves the following:

- ❑ Complete all the required readings assigned for the class that you missed, and choose two extra readings related to the topic from the supplemental reading list or websites, and/or peer reviewed journals.
- ❑ You will make an oral presentation to the entire class for 10 minutes about your findings from the readings. During the presentation, you will make references to all the readings (both the assigned and the ones you chose to read further about).

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- ❑ At the end of your presentation, you will answer any questions that the class may have. Finally, before the class disperses that evening, you will turn in a two-page paper (APA format) to the instructor. This paper will succinctly and clearly state what your findings are in light of your readings and personal reflection. **Failure to turn in your paper the same day of your presentation will result in a 5% drop in your final semester grade.**

### **GRADING**

93-100 = A	90-92 = A-	
88-89 = B+	83-87 = B	80-82 = B-
78-79 = C+	73-77 = C	70-72 = C-
68-69 = D+	60-67 = D	< 60 = F

“A” grades will be reserved for particularly outstanding work. Grades on the border may be determined by attendance and demonstration of completing readings prior to each class session.

### **CATALOG DESCRIPTION**

Psychopharmacology of alcohol and drug abuse. Major drugs and classes of abused substances. Mechanisms of action in the brain, patterns of physiological response in abuse, addiction (dependence) and recovery. Impact on the brain function, cognition, emotions, behavior, social effects. Pharmacological adjuncts to detoxification and treatment.

### **COURSE DESCRIPTION**

The course is specifically designed to present the current knowledge of how psychoactive and psychotropic substances work at the level of neurobiology.

The primary purpose of the course is to acquaint the student with knowledge of symptoms of intoxication, withdrawal and toxicity for all psychoactive substances, alone and with one another. Consequently, how psychoactive drugs of abuse affect the user physically and cognitively resulting in changes in cognition, behavior and affect will be addressed in detail.

A central focus of this class will be a basic overview of the factors that influence the absorption, distribution, metabolism and excretion of drugs (i.e., pharmacokinetics), and the interactions of psychoactive drugs and the receptors responsible for the action of the drugs in the body (i.e., pharmacodynamics).

Each major classification of psychoactive drugs will be explored in depth: stimulants, opiates, sedative-hypnotics, and psychedelics. A special emphasis will be placed on alcohol. The current state of the use of prescribed drugs to facilitate recovery, including agonist treatment (i.e., methadone et. al.) will be explored.

We will explore how drugs of abuse interact with major psychotropic drugs used for treatment of co-existing mental and emotional disorders.

### **CACREP 2009 COUNSELING OBJECTIVES AND STUDENT LEARNING OUTCOMES**

AC.A.6 Knows the behavioral, psychological, physical health, and social effects of psychoactive substances and addictive disorders on the user and significant others.

AC.A.7 Recognizes the potential for addictive disorders to mimic a variety of medical and

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psychological disorders and the potential for medical and psychological disorders to coexist with addiction and substance abuse.

AC.G.4 Understands basic classifications, indications and contraindications of commonly prescribed psychopharmacological medications so that appropriate referrals can be made for medication evaluations and so that the side effect of such medications can be identified.

AC.K.2 Knows the impact of co-occurring addictive disorders on medical and psychological disorders.

### **COURSE PURPOSE & OBJECTIVES**

1. Discuss the fundamental concepts of pharmacological properties and effects of all psychoactive substances. [Section I,A,3,K,a: p.16]\*\*
2. Relate detailed knowledge of the continuum of drug use, such as initiation, intoxication, harmful use, abuse, dependence, withdrawal, craving, relapse, and recovery. [Section I,A,3,K,b: p.16]
3. Discuss with depth the behavioral, psychological, social, and health effects of psychoactive substances. [Section I,A,3,K,c: p.16]
4. Describe the philosophies, practices, policies, and outcomes of pharmacotherapy for psychoactive substance use disorders (e.g., methadone treatment). [Section I,B,1,K,a-1&b: p.17]
5. Demonstrate familiarity with medical and pharmacological resources in the treatment of substance use disorders including:
  - current literature regarding medical and pharmacological interventions;
  - assets and liabilities of medical and pharmacological interventions;
  - health practitioners in the community who are knowledgeable about
  - addiction and addiction treatment. [Section I,C,6,K,a,b,c: p.21]
6. Demonstrate in-depth knowledge of symptoms of intoxication, withdrawal, and toxicity for all psychoactive substances, alone and in interaction with one another. [Section II, A,3,a: p.31]
7. Relate the physical, pharmacological, and psychological implications of psychoactive substance use. [Section II, A,3,b: p.31]
8. Discuss the effects of chronic psychoactive substance use or intoxication on cognitive abilities. [Section II, A,3,c: p.31]
9. Demonstrate knowledge of:
  - when to refer for toxicity screening or additional professional help;
  - the basic concepts of toxicity screening options, limitations, and legal
  - implications;
  - toxicology reporting language and the meaning of toxicology reports.
  - [Section II, A,3,e,f,g: p.31]
10. Discuss the relationship between psychoactive substance use and violence. [Section II, A,3,h: p.31]
11. List and discuss mental and physical conditions that mimic drug intoxication, toxicity, and withdrawal. [Section II, A,3,j: p.31]
12. Describe the warning signs, symptoms, and the course of substance use disorders. [Section VI, 4: p.87]

\*\*Brackets refer to TAP 21: Addiction Counseling Competencies: The Knowledge, Skills and Attitudes of Professional Practice, U. S. Department of Health and Human Services, SAMHSA, DHHS Publication No. (SMA)98-3171, 1998.

### **NON-DISCRIMINATION POLICY/SPECIAL ASSISTANCE**

*Lewis & Clark College adheres to a nondiscriminatory policy with respect to employment, enrollment, and program. The College does not discriminate on the basis of race, color, creed, religion, sex,*

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*national origin, age, handicap or disability, sexual orientation, or marital status and has a firm commitment to promote the letter and spirit of all equal opportunity and civil rights laws.*

### **PARTICIPATION IN THE LEARNING COMMUNITY**

Students are required to attend and actively participate in all scheduled class meetings. This includes being on time, being prepared, following through on group activities, and otherwise engaging with colleagues as fellow professionals. Becoming a counselor/therapist involves looking closely at values, our beliefs, biases, and ourselves. This can be a very personal, and sometimes emotional, process. Treating colleagues with respect, listening deeply to their experiences, and being open to diverse world views encourages a collaborative milieu of care in which we can all challenge ourselves and each other to critically examine and develop our skills and perspectives. In order to prepare for each class, students should carefully read and study all assigned materials to be ready to discuss, debate, and apply the content of readings. Class discussion and interaction with colleagues are fundamental to the process of learning to be a therapist and all sessions include necessary information. Therefore, if you must miss a class, fellow students and the instructor may ask you to contribute to learning community in another way. If you must be absent or late, please email the instructor at least 8 hours prior to class.

### **CPSY DEPARTMENTAL ATTENDANCE POLICY**

Class attendance is expected and required. Any missed class time will be made up by completing extra assignments designed by the instructor. Missing more than ten percent of class time may result in failure to complete the class. This would be 4.5 hours of a 45 hour class (3 credits), 3.0 hours for a 30 hour class (2 credits) or 1.5 hours for a 15 hour class (1 credit.) In case of extreme hardship and also at the discretion of the instructor, a grade of incomplete may be given for an assignment or the entire course. In such cases, the work to be submitted in order to remove the incomplete must be documented appropriately and stated deadlines met. Students are expected to be on time to class and tardiness may be seen as an absence that requires make-up work.

### **SPECIAL ASSISTANCE**

The Student Support Services Office, located in the Templeton Student Center, is a resource for students with disabilities. A variety of services are available through this office according to the particular needs of each student. Students interested in such services may contact Student Support Services at 503-768-7191. This contact is the necessary first step for receiving appropriate accommodations and support services. Please inform me if you need accommodations in class.

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## **WEEKLY TOPICS, READINGS, and ASSIGNMENTS DUE:**

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**WEEK-1:** (9/8/2014)

Course Introduction; Course Completion Requirements; Presentation of Study Guide; Current Research Presentation information & sign-ups; Small group exercise

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**WEEK-2:** (9/15/2014)

History; Reading discussion: Classifications of Psychoactive Substances, Basic Pharmacology.

**READINGS:** **Chapter 1 - *Uppers, Downers, All Arounders***

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**WEEK-3:** (9/22/2014)

Basic Neurobiology. Brain Study Groups w/Group Presentations. Current Research Presentations.

**READINGS:** **Chapter 2 pages 45 to 65 through column two - *Uppers, Downers, All Arounders***

**TEST #1 on Moodle available until 9/29/14 at 5pm**

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**WEEK-4:** (9/29/2014)

Pharmacokinetics; Pharmacodynamics. Case Vignette #5. Current Research Presentations.

**READINGS:** **Chapter 2 pages 65 column three to end - *Uppers, Downers, All Arounders***

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**WEEK- 5:** (10/6/2014)

CNS Stimulants including Caffeine and Nicotine. Case Vignette #10. Current Research Presentations.

**READINGS:** **Chapter 3 - *Uppers, Downers, All Arounders***

**TEST #2 on Moodle available until 10/13/14 at 5pm**

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**WEEK-6:** (10/13/2014)

Opiates/Opioids, Pain Control, Sedative-Hypnotics. Case Vignette #3. Current Research Presentations.

**READINGS:** **Chapter 4 - *Uppers, Downers, All Arounders***

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**WEEK-7:** (10/20/2014)

Alcohol. Case Presentations.

**READINGS:** **Chapter 5 pages 207 through 227 column one - *Uppers, Downers, All Arounders***

**TEST #3 on Moodle available until 10/27/14 at 5pm**

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**WEEK-8:** (10/27/2014)

Alcohol continued from Week 7. Case Presentations.

**READINGS:** **Chapter 5 pages 227 column two to end - *Uppers, Downers, All Arounders***

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**WEEK-9:** (11/3/2014)

Psychedelics with emphasis on Marijuana. Current Research Presentations.

**READINGS:** **Chapter 6 - *Uppers, Downers, All Arounders***

**TEST #4 on Moodle available until 11/10/14 at 5pm**

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**WEEK-10:** (11/10/2014)

Other Drugs, Inhalants, Sports and Drugs. Case Vignette #7. Current Research Presentations.

**READINGS:** **Chapter 7 - *Uppers, Downers, All Arounders***

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**WEEK 11:** (11/17/2014)

Basic Prevention Concepts; Current Research Presentations.

**READINGS:** **Chapter 8 - *Uppers, Downers, All Arounders***

**TEST #5 on Moodle available until 11/23/14 at 5pm**

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**WEEK 12:** (11/23/2014)

Treatment: Psychotropic Psychiatric Medications; Interactions with Recreational Drugs. Current Research Presentations.

**READINGS:** **Chapter 9 - *Uppers, Downers, All Arounders***

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**WEEK 13:** (12/1/2014)

Mental Health and Co-occurring Disorders. Current Research Presentations.

**READINGS:** **Chapter 10 - *Uppers, Downers, All Arounders***

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**WEEK 14:** (12/8/2014)

Course Summary. **FINAL EXAM – 90-minutes**