Weed: The Science and Psychology of Marijuana  
CAMS-UA.0502

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Course Description
Weed. Pot. Bud. Grass. Ganja. Reefer. Mary Jane. Skunk. Herb. Cannabis. It’s all marijuana – the most commonly used, in most states still illicit, drug in the United States. Calming for some, anxiety provoking for others, perhaps medicinal, always controversial, marijuana causes wonder and confusion among physicians, parents, teachers, adolescents, and lawmakers. After 50 years of debate, marijuana remains one of our most visible modern-day conundrums – is it “okay?” Is marijuana safe and therapeutic, or is it dangerous and a gateway to more harmful drugs? Through lecture, discussion, and a thorough analysis of the current research literature in neuroscience and human development, we will seek to answer these questions and identify marijuana’s role in psychology, medicine, culture, and government policy.

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<thead>
<tr>
<th>Session</th>
<th>Topic and Description</th>
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<tr>
<td>1</td>
<td>Origins and History of Marijuana</td>
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<td>What are the origins of marijuana? How was it historically used? In this introductory session, we will explore the history of marijuana and its journey towards becoming a mainstay of many modern communities. We will discuss various ethnic groups and countries across the world that utilized marijuana in earlier centuries. We will explore how marijuana found its place in America, and the debates that have since ensued about its utility, benefits, and risks.</td>
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<td>Readings:</td>
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<td>The Basics of Brain Anatomy</td>
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<td>In this session, we will look at anatomical structures of the brain. We will emphasize the regions of the brain that are involved in executive functioning, including attention, problem solving, and memory. This will lay the groundwork for further neurobiological exploration of the effects of marijuana on the brain.</td>
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3  **Your Brain on Pot**

How does this drug work? In this class, we will dissect some of the basic neuroscience by exploring the relationship between marijuana and the endocannabinoid system in our brains.

Readings:


4  **The Adolescent Brain**

In this session, we will continue to explore neurobiology, now with an emphasis on development. Adolescence is a period of both great opportunity and tremendous vulnerability, during which the brain matures through the process of synaptic pruning. We will discuss how pruning may be affected by marijuana use. We will explore neurobehavioral changes linked to puberty, including effects on motivation and emotion. This will provide a foundation for further discussion regarding outcomes of marijuana use during adolescence.

Readings:


5  **What’s the Harm?**

How does marijuana affect working memory? Does it cause a change in IQ? In this class, we will look at short and long-term effects of marijuana on our brain and body. We will highlight the clinical consequences of adolescent cannabis use, including comparisons between acute and chronic users.
6 Is Marijuana a Gateway Drug?

In this class, we will explore the hypothesis that marijuana is a gateway drug into using other substances, such as opiates and alcohol. We will consider the popularity and consequences of marijuana use on college campuses.

Readings:

7 Marijuana Addiction

What is addiction? How do we know when someone is addicted to marijuana? This class will review the primary principles of addiction, defining marijuana intoxication and withdrawal from a psychiatric perspective.

Assignment Due: Midterm Paper

*Discuss four ways in which marijuana may impact the life of a college student? Be sure to consider both perceived positive and negative effects. Use readings and class discussion to illustrate your points.*

Readings:
2. NIDA (2017). *Addiction is a Chronic Disease*. Drug Abuse and Addiction: One of
### America’s Most Challenging Public Health Problems
Retrieved February 22, 2017, from
https://archives.drugabuse.gov/about/welcome/aboutdrugabuse/chronicdisease/

Retrieved on February 23, 2017, from
http://www.healthline.com/health-news/marijuana-addiction-rare-but-real-072014#10

### Media:

## 8 Marijuana and Mental Health

In this session, we will review the adverse effects of recreational marijuana use and the potential positive results of medical marijuana. We will also explore how marijuana affects mental health, including anxiety, depression, and psychosis.

**Readings:**


**Media (in class):**
https://patinthehat00.wordpress.com/2016/01/02/watch-weed-1-2-and-3/

## 9 Medical Marijuana

This week we will look at the quality of current research into the use of medical marijuana. We will focus on pain management, psychiatric indications, and its use as a chemotherapeutic adjuvant. We will explore physicians’ diverse viewpoints about marijuana as a treatment for physical ailments.

**Readings:**


Media:

10 Driving Under the Influence

We are cognizant of the risks associated with driving under the influence of alcohol; however, research outlining the danger of driving under the influence of marijuana is less robust. In this class, we will discuss the effects of weed on driving and the potential risk of involvement in a motor vehicle accident. What’s worse, alcohol or marijuana? We will compare the degree of driving impairment between alcohol and marijuana users.

Readings:

11 How Does It Compare?

This week we will discuss the U.S. Food and Drug Administration and the Drug Enforcement Administration’s scheduled drug classification system. We will then compare the known harms from alcohol, opiates, and nicotine to the known harms from marijuana. During this discussion, we will examine the extent of drug use worldwide and consider various epidemiological factors, such as prevalence and number of deaths from drug use.

Readings:

12 Marijuana and Pregnancy

Pregnancy can be an exciting and challenging experience for individuals and families. It is a period of vulnerability as the mother’s lifestyle and behavior are inextricably linked to the health of the fetus. In this class, we will discuss marijuana consumption during pregnancy and the impact on fetal growth, maturation, and neural development.
Readings:

13 Government Policy

This class will focus on historical changes in marijuana legislation and the various policy factors that have led to legalization in some states. We will review the states that have legalized recreational and medicinal marijuana.

Readings:

14 Law and Order

In this session, we will explore what we have learned so far from those states that have legalized marijuana for medical and recreational purposes. We will focus on the implications of legalization for adolescent marijuana use.

*Assignment due: Final Paper*

Readings:

15 Final Examination: 75 minutes
**Books**


**Grading**

1) Midterm Paper (20%): Students will write one, 4-5 page, double-spaced typed paper with references in APA style, due week #7. Assignment: *Discuss four ways in which marijuana may impact the life of a college student? Be sure to consider both perceived positive and negative effects. Use readings and class discussion to illustrate your points.*

2) Final Paper (30%): Students will complete a 6-8 page, double-spaced paper with references in APA style. In choosing a topic, students will be encouraged to explore an area of their interest in greater detail. Topics must be preapproved by instructor and will be chosen during week #8. Final paper will be due week #14.

3) Final Exam (50%): Students will complete a final examination during exam week. The exam will employ multiple choice and short answer questions, assessing students’ understanding and ability to synthesize the material presented during the course.

**Policy on Late Submissions:** Late papers will be accepted. However, grades on all late papers will be lowered by 1/3 for each day they are late (e.g., from an A- to a B+ on late day #1, from a B+ to a B on late day #2, etc.). Under no circumstances will any papers be accepted after the date of the final exam. Papers received after this date will not be graded and will receive a score of zero. Students requesting an exemption from the late submission policy must present a written note from a school Dean, Academic Advisor, or personal physician (e.g., not the student’s parent or family member) justifying the late submission, which will then be considered by the instructors.