

## Alfred E. Mann School of Pharmacy and Pharmaceutical Sciences

### SP-2023: RXRS-201: The History and Geography of Drugs

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**Course Weight:** 4 units

Days/Time/Location: Mon; Wed; 1:00pm-2:20pm

**Location:** THH-101

**Catalogue description:** Global perspectives; discovery and use of drugs (legal/illegal); poisons. How they helped shape, modify, or change history as described in classical literature through present day.

### Introduction

Since the beginning of time, humans have sought out or discovered by accident compounds that have medicinal, hedonic (mood-altering) or deleterious (poisonous) effects. These effects were, in part, due to the coevolution between the animal and botanical kingdoms whose efforts to survive gave us compounds that could have medicinal, mood-altering, or poisonous effects. The origins of herbal medicine lie in the common empirical experience of humanity, in observing which plants the animals ate when they were feeling sick and following their example. The societal consequences of improper drug and poison use have been documented as early as 4500 B.C. and attempts to regulate their uses have been documented as early as 2240 B.C. This course will consider the benefits and consequences of drug use (legal and illegal) from both a

historical and geographical perspective. Additionally, the course will consider the role of poisons as a political as well as felonious tool. Topics will be presented that highlight how drugs and poisons were used throughout the world to shape, modify, or change history.

### **Objectives**

This course is designed to meet the requirements of the GE H (Global Perspectives: Traditions and Historical Foundations) for undergraduates. Students will explore how humans used drugs and poisons to change the economic, political, cultural and/or social settings of their time. Moreover, this course will examine the historical and cultural foundations of drug use from a contemporary and historical perspective by studying literary, political, economic, philosophical, legal, ethical and religious traditions as they relate to drug use. As an example, the "opium wars" of the nineteenth century between Britain and China and the implications of this historical event is one example of how we will explore links between illegal use of prescription opioids and the increase in accidental opioid overdose deaths. Students will also learn about the historical use and misuse of poisons for good and evil. The Sumerians as far back as 4500 B.C. documented the toxic effects of certain plants and developed poisons such as curare for hunting. In Greek literature, the death of Socrates in 399 B.C. represented one of the earliest recorded incidents where a poison was used for political reasons. In recent time, polonium-210 was used to kill the Russian spy Alexander Litvinenko. A recent public inquiry concluded that President Putin probably approved the assassination. Differences surrounding the ethics of the development and deployment of poisons and biological agents (for example, as a weapon) will be presented that are designed to lead to lively discussions during class.

Chapters from the core textbook will be supplemented with a variety of source materials including online resources, media outlets and cinema.

#### **Objectives for this course include:**

- Compare the historical nature of the discovery of drugs and poisons throughout the world
- Associate the historical and recent biological, psychological, social-psychological, and sociological perspectives related to drug use and abuse
- Evaluate the consequences of improper drug use and abuse and its relationship to health, economy, wellbeing, and society as presented in the literature
- Describe the use of chemical and biological warfare in antiquity and modern day
- Compare and contrast the concurrent practice of Eastern and Western medicines
- Summarize course material and explore connections across historical eras in the development of drugs
- Identify and detail the historical conceptions of drug addiction and drug abuse

### Communication Method

If you have questions or concerns, please contact Dr. Church via email (tdchurch@usc.edu). Your email will be attended to as quickly as possible within a 48-hour window. For more urgent or pressing issues, please contact Dr. Church via telephone at 323.442.0241. Voicemail messages will be addressed within a 24-hour window during the work week.

### Evaluation and Grading:

Evaluation will be based on one midterm examination, a final examination, four in class projects, and two written reaction / reflection essays.

Description	Points	Weight
Midterm exam	70 pts	(30%)
In class projects (@ 20 pts each)	80 pts	(10%)
Final exam (partially cumulative)	100 pts	(40%)
Written Essays (@, 25 pts each)	50 pts	(20%)
Total	300 pts	(100%)

**30% Midterm**: There will be 1 midterm for this course that will cover the first 8 weeks of course material. The midterm will consist of a series of questions involving multiple choice, T/F and fillin the blank questions (60%). There will also be short answers and longer questions requiring critical thought and its articulation in written responses (40%). This midterm exam will help students to generate a critical assessment of key topics in this course, to develop a suitable argument, and to convey their ideas and interpretations through the written word.

**10% In Class Projects**: (each worth 2.5% of your class grade) There will be 4 in class projects over the course of the semester. These projects are designed to reinforce course material by having students work in small groups to accomplish specific objectives and apply knowledge from lecture and readings. Specific details will be provided for each in class project.

40% Final: The Final Exam will be in the form of an in-class examination during exam week. The final exam will be composed of two parts, each having equal weight towards the final grade. The first part of the exam will include questions from the lectures and from the textbook in the form of multiple choice, T/F and fill-in the blank questions (40%). The second part of the final examination will consist of short written answers to demonstrate the students' knowledge regarding topics covered in the course (60%). This latter part of the final exam will allow students to express their ideas based on facts derived from the course.

**20%** Two Short Essays: (each worth 10% of your class grade) The short essays will be written outside of class and submitted via Blackboard under the Assignments Tab. These short essays are designed to help students generate a critical assessment of key topics in this course, to develop a suitable argument, and to convey their ideas and interpretations through the written word. The short essays will be response / reaction papers to the course material and will require two things: summarize the material covered in class and provide a reaction to the material. Students are free to choose which topics they wish to write about from the predefined topic blocks and must submit 2 response / reaction papers throughout the semester. **No late essays will be accepted for any reason short of a serious, documented emergency.** An official note explaining why you were unable to write the essay will be required for an extension.

**Please note, below** is the "Approximate" grading scale breakdown. However, this scale is not set in stone and may slightly shift up or down based on overall scores. This includes the potential for there to be no pluses (+) or minuses (-) assigned to grades in this course.

Percent	Letter Grade
90-100%	A
80-89%	В
70-79%	С
60-69%	D
Below 60%	F

<u>There are no make-up exams</u>. If exceptional circumstances prevent you from attending an exam, your reason for missing it must be accompanied by a written statement from a third party (e.g. a note from a medical doctor).

Students will be asked to complete an anonymous critical evaluation of the course at its completion.

### **Course Readings**

### Required Readings (selected, short, easy to read chapters)

**Terry David Church**. (2022). *Hidden History: Drugs, Geography, and Human Addiction*. Kendall Hunt Publishing Co.

### Supplemental Readings (selected essays, videos, and other media)

Other topical materials including but not limited to the syllabus, supplemental reading assignments and additional handouts will be posted on <a href="http://blackboard.usc.edu/">http://blackboard.usc.edu/</a>. Students will also be encouraged to use the online discussions sessions (via Blackboard) as an additional learning tool.

### Course Outline

This course will be in the format of a directed seminar/lecture under the guidance of the instructor for the specific session. During each biweekly session the instructor will engage the students with questions and draw comments or interpretations primarily based on the assigned reading. Students are expected to ask questions and participate in an interactive fashion. Because this is an area of rapid change in policies, the readings may vary from one term to the next. Additional readings for each section that may be of added use are listed in the table below.

Week & Date	Topic	Subtopics to be Included	Assigned and Supplemental Reading
Week 1  Jan 9, 11	Dr. Church Introduction: expectations and goals of this class.	Outline of course and introduction to Pharmacology.  Course expectations and review of writing assignment / submission schedule.	Hidden History, Chapter 1
		9 Jan – Course overview & Introduction  11 Jan – Introduction	
Week 2	Dr. Church	Humans discover the medicinal and hedonic effects of plants.	Hidden History, Chapter 2
Jan 16, 18	Remote Antiquity	The discovery of opium  The discovery of fermented fruits	"Pharmacological Influences on the Neolithia Transition" Wadley, G and Hayden B (2015) – on Blackboard
		Jan 16 – No Class  Jan 18 – Paleolithic and Neolithic	
Week 3	Dr. Church	The healers from pharaonic times are poorly documented as compared with those form Greece	Hidden History, Chapter 3 and 4
Jan 23, 25	Ancient Egypt and Greece	and Rome the understanding and use of medicines is only partially understood. Explore the Ptolemaic period in Egypt and the changes it brought for drug	"Herbal Medicine in Ancient Egypt" Aboelsoud, NH (2010) – in Blackboard
		Understand the early development of medicines in	http://www.greekmedicine.net/therapies/Herbal_Medicine.html
		Ancient Greece.	* - In Class project, 23 Jan
		23 Jan – In Class Project 24 Jan – Ancient Egypt – [Recorded Lecture] 25 Jan – Ancient Greece	

Week & Date	Торіс	Subtopics to be Included	Assigned and Supplemental Reading
Weeks 4  Jan 30, Feb 1	Dr. Church Ancient Rome	Gain insights into the practices of Roman healers regarding their understanding of disease and remedies	Hidden History, Chapter 5  * - In Class Project; 1 Feb
		30 Jan - Ancient Rome 1 Feb – In class project	
Week 5 Feb 6, 8	Dr. Church  Trade and Smuggling Routes	Discuss the ancient networks of trade of drugs, ideas, and culture. Understand how Arabian civilization curated medical knowledge after the fall of Rome. Introduction to Ayurvedic medicine. Introduction to Nei-Jing and Daoist herbal medicines.	Hidden History, Chapter 6 and 7  "Physicians of Ancient India" Saini, A (2016)  – in Blackboard
		The Age of Discovery led to geographical and political conflicts over trade in an era where pirates vied for their share of the bounty.	"The Use and Abuse of Wine in Ancient China" Poo, MC (1999) – in Blackboard
		6 Feb – Silk Road Drug Exchanges 8 Feb – Maritime Empires	
Week 6 Feb 13, 15	Dr. Church  Exploited Peoples and Drug Wars	Maya, Aztec, and Inca Medicines: Herbs of the America's for healing, pleasure, and sacrifice. The conquistadors and the colonizers exploit new lands.	Hidden History, Chapter 8 and 9  Aztec Medicine: http://ambergriscaye.com/pages/mayan/aztec
		Two armed conflicts in China in the mid-19th century between the forces of Western coalitions and of the Eastern Qing dynasty.	medicine.html
		13 Feb – Americas – The New World Exploited 15 Feb – Opium Wars	

Week & Date	Торіс	Subtopics to be Included	Assigned and Supplemental Reading
Week 7 Feb 20, 22	Dr. Culty Renaissance Poisons	Understand how forensic toxicology has progressed with time to enable determination of cause of death Understand how poisoning developed as an art during the Renaissance Era and how the Borgia and de'Medici families influenced history.	Hidden History, Chapter 10
		20 Feb – No Class 22 Feb – Renaissance Poisons (Culty)	
Week 8 Feb 27,	Dr. Church 19 <sup>th</sup> Century	The influence of dye companies; chemists, pharmacists and doctors and their influence on psycho active drugs. "Snake Oil".	Hidden History, Chapter 11  * - In Class Project; 1 Mar
Mar 1		Scientific advances of the 19 <sup>th</sup> Century.	
		Online Lecture – 19 <sup>th</sup> Century Quackery  27 Feb –19 <sup>th</sup> Century Scientific Innovation  1 Mar – In-Class Project	
Week 9 <i>Mar 6, 8</i>		Review for Mid Term – 6 Mar Mid Term Exam – 8 Mar	
Week 10 Mar 13,15		SPRING BREAK	
Week 11	Dr. Church	Ethical issues related to drugs in the modern age.	Hidden History, Chapter 13
Mar 20, 22	Ethical Consequences Legal Concerns	An overview of drug enforcement. This will include discussions of legal and ethical concerns. These events led to the establishment the Drug Enforcement Agency.	
		20 Mar – Ethical Issues 22 Mar – Legal Concerns	

Week & Date	Topic	Subtopics to be Included	Assigned and Supplemental Reading
Week 12  Mar 27, 29	Dr. Church  20 <sup>th</sup> Century Regulations Drug Panic	Establishment of the Food and Drug Administration and the regulation of medical products in the 20 <sup>th</sup> Century. The big drug scare of 1980s and how media and politics changed drug education policy. Intense public concern about drug abuse between 1986 and 1989 – the new synthetics on the block.	Hidden History, Chapter 12  "One hundred years of drug regulation: where do we go from here", Woosley (2013) – uploaded to Blackboard
		27 Mar – 20 <sup>th</sup> Century Regulations 29 Mar– Drug Panic of 1980s	
Week 13	Dr. Church	Synthetic Music and Synthetic Drugs, the combination of sex, music, and cocaine	Hidden History, Chapter 12
Apr 3, 5	Disco Raves and EDM	Music festivals and raves have grown more popular in recent years. Festival drugs, music, and synthetic drugs will be discussed.	"Adolescents and Drug Abuse: 21st Century Synthetic Substances", Yin (2019) – uploaded to Blackboard
		3 Apr – 1970s and Disco 5 Apr – Raves and EDM	
Week 14  Apr 10, 12	Dr. Jakowec Pain and Opioids  Dr. Church Bioterrorism	Opioids were once the cornerstone in treating severe disabling pain and are now known to underlie an epidemic of substance use disorders and overdose deaths.  Understand the development and uses of chemical and biological warfare. Discuss the ethical considerations of the use of chemical agents on populations and the data collected.	Hidden History, Chapter 14  "The dynamic interaction between pain and opioid misuse", Wilson-Poe (2018) – uploaded to Blackboard
		10 Apr – Pain and the Opioid Crisis (Jakowec) 12 Apr – Biological, Chemical, and Atomic Warfare (Church)	

Week & Date	Topic	Subtopics to be Included	Assigned and Supplemental Reading
Week 15  Apr 17, 19	Dr. Davies Alcohol	Clinical Case review of alcohol at LAC+USC  Discussion of the legalization of cannabis and the historic uses of cannabis in the United States.	"Assessing the public health impacts of legalizing recreational cannabis use: the US experience" Hall, W & Lynskey, M. (2020) – uploaded to Blackboard
		17 Apr – Alcohol Case Review 19 Apr – 4:20 Cannabis Culture	
Week 16	Dr. Church	Explore the history of the diagnosis of addiction.	Hidden History, Chapter 15
Apr 24, 26		24 Apr – Student Reports (In-Class / Take-Home Project) 26 Apr – History of Addiction	* - In Class / Take-Home Project Due by 2pm on 24 Apr
	FINAL EXAM: Wednesday May 3, 2023 2 to 4 PM		

### **Academic Integrity**

### **Academic Integrity:**

The University of Southern California is a learning community committed to developing successful scholars and researchers dedicated to the pursuit of knowledge and the dissemination of ideas. Academic misconduct, which includes any act of dishonesty in the production or submission of academic work, comprises the integrity of the person who commits the act and can impugn the perceived integrity of the entire university community. It stands in opposition to the university's mission to research, educate, and contribute productively to our community and the world.

All students are expected to submit assignments that represent their own original work, and that have been prepared specifically for the course or section for which they have been submitted. You may not submit work written by others or "recycle" work prepared for other courses without obtaining written permission from the instructor(s).

Other violations of academic integrity include, but are not limited to, cheating, plagiarism, fabrication (e.g., falsifying data), collusion, knowingly assisting others in acts of academic dishonesty, and any act that gains or is intended to gain an unfair academic advantage.

The impact of academic dishonesty is far-reaching and is considered a serious offense against the university. All incidences of academic misconduct will be reported to the Office of Academic Integrity and could result in outcomes such as failure on the assignment, failure in the course, suspension, or even expulsion from the university.

For more information about academic integrity see <u>the student handbook</u> or the <u>Office of Academic Integrity's website</u>, and university policies on <u>Research and Scholarship Misconduct</u>.

Please ask your instructor if you are unsure what constitutes unauthorized assistance on an exam or assignment, or what information requires citation and/or attribution.

### **Students and Disability Accommodations:**

USC welcomes students with disabilities into all of the University's educational programs. The Office of Student Accessibility Services (OSAS) is responsible for the determination of appropriate accommodations for students who encounter disability-related barriers. Once a student has completed the OSAS process (registration, initial appointment, and submitted documentation) and accommodations are determined to be reasonable and appropriate, a Letter of Accommodation (LOA) will be available to generate for each course. The LOA must be given to each course instructor by the student and followed up with a discussion. This should be done as early in the semester as possible as accommodations are not retroactive. More information can be found at <a href="mailto:osas.usc.edu">osas.usc.edu</a>. You may contact OSAS at (213) 740-0776 or via email at <a href="mailto:osas.frontdesk@usc.edu">osas.usc.edu</a>.

### **Support Systems:**

### Counseling and Mental Health - (213) 740-9355 - 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

988 Suicide and Crisis Lifeline - 988 for both calls and text messages – 24/7 on call The 988 Suicide and Crisis Lifeline (formerly known as the National Suicide Prevention Lifeline) provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week, across the United States. The Lifeline is comprised of a national network of over 200 local crisis centers, combining custom local care and resources with national standards and best practices. The new, shorter phone number makes it easier for people to remember and access mental health crisis services (though the previous 1 (800) 273-8255 number will continue to function indefinitely) and represents a continued commitment to those in crisis.

### <u>Relationship and Sexual Violence Prevention Services (RSVP)</u> - (213) 740-9355(WELL) – 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to genderand power-based harm (including sexual assault, intimate partner violence, and stalking).

### Office for Equity, Equal Opportunity, and Title IX (EEO-TIX) - (213) 740-5086

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

### Reporting Incidents of Bias or Harassment - (213) 740-5086 or (213) 821-8298

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office for Equity, Equal Opportunity, and Title for appropriate investigation, supportive measures, and response.

### The Office of Student Accessibility Services (OSAS) - (213) 740-0776

OSAS ensures equal access for students with disabilities through providing academic accommodations and auxiliary aids in accordance with federal laws and university policy.

### USC Campus Support and Intervention - (213) 740-0411

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

### Diversity, Equity and Inclusion - (213) 740-2101

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

### USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

<u>USC Department of Public Safety</u> - UPC: (213) 740-6000, HSC: (323) 442-1200 – 24/7 on call Non-emergency assistance or information.

Office of the Ombuds - (213) 821-9556 (UPC) / (323-442-0382 (HSC)

A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.

<u>Occupational Therapy Faculty Practice</u> - (323) 442-2850 or <u>otfp@med.usc.edu</u> Confidential Lifestyle Redesign services for USC students to support health promoting habits and routines that enhance quality of life and academic performance.

### **Short Essays (2 in total)**

Grading will be based upon the quality of your analysis and how clearly you present the information within your essay. You are expected to incorporate key terms and concepts you have learned in this course. Points will be deducted for grammar, punctuation, spelling, and technical errors. You should start with a brief outline for your essay, create a rough draft, and then produce a final draft. *The final draft of each essay is the only document you need to submit.* 

These are reaction / response essays to the material covered in lecture; your essays must consist of:

- A. **An Introduction paragraph**, which contains a minimum of two sentences that introduces your question or topic; and establishes a foundation for the remainder of your essay. This section functions like a roadmap to tell us what you will be discussing in the body of your essay.
- B. **Body paragraph(s)**, which present the major content of your answer. Include at least one body paragraph with three or four sentences within the paragraph.
- C. **A conclusion paragraph**, which contains a minimum of two sentences and summarizes the major points contained in the body paragraphs.

In writing a good reaction paper, it is not enough to simply praise the strengths or criticize the weakness of the lecture or reading material. More than that, students must be able to justify their "reaction". It is important to provide the reasons why, for example, the information related to prohibition was compelling, or why the argument of a particular historical figure resonates a strong message with you.

#### **Format Requirements**

Carefully follow the format requirements below. Any variation will result in lost points or no credit.

- Margins = 1 inch
- Font type = Arial, Times New Roman, or any Sans type font
- Font size = 11 point
- 2 sources (in-text and works cited / bibliography)
- 2 pages (double spaced) (references not included)
- Use week number to indicate your topic (e.g. Week 3 Rome)
- Filename should have your last name and first name (e.g. *Trojan Tommy ShortEssay1*)
- Acceptable file formats:
  - Word (DOC or DOCX)
  - o No other formats will be accepted!

#### **Direct Quotations**

These essays are expected to be written in your own words therefore no more than 5% of the essay should be quoted or copied word – for – word. If you submit an essay with more than 5%

quoted material, you will be penalized one point for each percentage above 5%. If you submit an essay with more than 15% quoted material, you will receive an automatic zero.

#### **APA Citations**

**THIS IS NOT AN APA paper**; however, you are expected to demonstrate understanding of the rules of plagiarism and expected to use APA style citations appropriately, which include in-text and full citations with a Reference page.

You are expected to cite at least <u>2</u> sources (class books and articles, articles from journals, books, etc) per essay. You will be penalized <u>-5</u> points for each missing resource.

**Do NOT** use Wikipedia or any other similar form of wiki to write these essays.

### **General Topics and Weekly Submission Dates**

(Essays are due the week after their presentation date, see table below for submission dates)

Essay Topic Week Number	Essay Topic	Essay Topic Selection	Due Date (by 2pm)
3	Ancient Egypt		30 Jan
4	Greece & Rome	Essay 01	6 Feb
5	Silk Road & Maritime Empires	Choose a	13 Feb
6	Opium Wars & Americas	topic week	20 Feb
7	Renaissance Poisons		27 Feb
8	19th Century – Quackery & Scientific Innovation		6 Mar
11	Ethical and Legal Issues	Essay 02	27 Mar
12	20 <sup>th</sup> Century Regulations & 1980s	Choose a	3 Apr
13	Disco and EDM	topic week	10 Apr
14	Pain & Bioterrorism		17 Apr

Students will sign up to submit topics through Blackboard by going to the Content tab and selecting the Reaction Paper Sign-up link.

Students are required to submit 2 reaction / response papers based on the weekly class topics summarized in the table above. Once the due date has passed, no papers will be accepted for that topical week. Which means an essay on prehistoric drugs (Week 2) cannot be submitted when we are in Week 9.

### Late Penalties –

Starting Grade	Description
On Time	No penalties
1 Day – 6 Days Past Deadline	20% reduction of score
7 Days – 13 Days Past Deadline	40% reduction of score
14 Days – 20 Days Past Deadline	60 % reduction of score
>21 Days Past Deadline	Will not be accepted for grading

**General Essay Template** 

#### Introduction

The introduction serves two key functions –

- 1) it gets your reader interested in the topic and encourages them to read your argument; and
- 2) it acts as a roadmap of what you are going to say and provides the overarching point you plan on making i.e. your thesis statement.

All topic sentences should relate to the thesis statement.

	Body Paragraph 1	
	(repeat format for each of the body paragraphs)	
<b>Topic Sentence</b>		
• Evidence  Citation -		
• Evidence  Citation -		
• Evidence  Citation -		
Analysis		

#### **Concluding Paragraph**

In a concluding paragraph, you must summarize what you have written about in your essay.

You should bring back your main statement.

The conclusion should leave the readers with something to consider.

Concluding paragraphs should convey a sense of completeness and closure to the topics discussed.

There should be a sense of the lingering possibilities of the topic, perhaps its broader meaning... or its implications.

The final paragraph should close your topic without closing it off.

Paragraph Transitions	
Do the paragraphs build directly on the one before?	How?

REFERENCES – use <u>in-text citations</u> throughout your essay and provide a complete <u>Works Cited / Bibliography</u> at the end.