

USC School of Pharmacy
RXRS 201: The History and Geography of Drugs

Primary Course Instructor: Terry David Church, DRSc, MA, MS
Assistant Professor, Department of Regulatory and Quality Sciences
Associate Director, Undergraduate Education
USC School of Pharmacy
tdchurch@usc.edu
(323) 442-0241
Office: HSC campus CHP-140

Guest Instructors: Daryl L. Davies, PhD
Professor, Department of Clinical Pharmacy
USC School of Pharmacy

Michael W. Jakowec, PhD
Associate Professor
Keck School of Medicine
Department of Neurology

Martine Culty, PhD
Associate Professor, Department of Clinical Pharmacy
USC School of Pharmacy

Office Hours: Health Sciences Campus, CHP-140 – Friday 10am – 2pm
University Park Campus, UPC – appointment, tdchurch@usc.edu
Zoom Meeting – appointment, tdchurch@usc.edu

Course Weight: 4 units

Days/Time/Location: **In-Person:** Tues, Thurs; 3:30pm-4:50pm; THH-210
Zoom: Link to be provided via blackboard

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

USC School of Pharmacy
RXRS 201: The History and Geography of Drugs

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
- Understand the historical and recent biological, psychological, social-psychological, and sociological perspectives related to drug use and abuse
- Use course content to evaluate key aspects of civilization and drug use in the historical context and summarize those findings
- 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

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.

USC School of Pharmacy
RXRS 201: The History and Geography of Drugs

Evaluation and Grading:

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

| <i>Description</i> | Points | Weight |
|--|----------------|---------------|
| <i>Quizzes 4 (@ 10 pts each)</i> | 40 pts | (10%) |
| <i>Midterm exam</i> | 65 pts | (25%) |
| <i>In class projects 3 (@ 15 pts each)</i> | 45 pts | (10%) |
| <i>Final exam (partially cumulative)</i> | 100 pts | (35%) |
| <i>Written Essays (@ 25 pts each)</i> | 100 pts | (20%) |
| Total | 350 pts | (100%) |

10% Quizzes: (each worth 2.5% of your class grade) There will be 4 quizzes over the course of the semester to count towards their grade. The quizzes will be based on questions from the lecture and from the textbook and will include multiple choice, T/F and fill-in the blank questions.

25% 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 short answers as well as a longer question requiring critical thought and its articulation in written responses. 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 3.33% of your class grade) There will be 3 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.

35% 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 (10%). The second part of the final examination will consist of short written answers to demonstrate the students' knowledge regarding topics covered in the course (25%). This latter part of the final exam will allow students to express their ideas based on facts derived from the course.

20% Four Short Essays: (each worth 5% 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 and must submit 4 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.

USC School of Pharmacy
RXRS 201: The History and Geography of Drugs

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. There are no pluses (+) or minuses (-) assigned to grades in this course.

| Percent | Letter Grade |
|-----------|--------------|
| 90-100% | A |
| 80-89% | B |
| 70-79% | C |
| 60-69% | D |
| Below 60% | F |

There are no make-up exams. 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).

Notes, books, calculators, electronic dictionaries, regular dictionaries, cell phones or any other aids are not allowed during exams.

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)

Antonio Escobedo. (1999). *A brief history of drugs: from the stone age to the stoned age*. Simon and Schuster.

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 <http://blackboard.usc.edu/>. 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

USC School of Pharmacy
RXRS 201: The History and Geography of Drugs

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.

USC School of Pharmacy
RXRS 201: The History and Geography of Drugs

| Week & Date | Topic | Subtopics to be Included | Assigned and Supplemental Reading |
|---|---|---|---|
| Week 1 <i>Aug 18,20</i> | 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. 18 Aug – Introduction 20 Aug – Course overview and expectations | |
| Week 2 <i>Aug 25, 27</i> | Dr. Church Remote Antiquity | Humans discover the medicinal and hedonic effects of plants. The discovery of opium The discovery of fermented plants – wine in the old testament 25 Aug – Paleolithic Age 27 Aug – Neolithic Age | A Brief History of Drugs Chapter 1 “Pharmacological Influences on the Neolithic Transition” Wadley, G and Hayden B (2015) – on Blackboard * - In class project, 27 Aug |
| Week 3 <i>Sep 1, 3</i> Quiz #1 – Sep 3 | Dr. Church Ancient Egyptian Medicine | The healers from pharaonic times are poorly documented as compared with those from 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 culture. 1 Sep – Dynastic Egypt 3 Sep – Ptolemaic Egypt | “Herbal Medicine in Ancient Egypt” Aboelsoud, NH (2010) – in Blackboard |

USC School of Pharmacy
RXRS 201: The History and Geography of Drugs

| Week & Date | Topic | Subtopics to be Included | Assigned and Supplemental Reading |
|--|--|--|---|
| Weeks 4 <i>Sep 8, 10</i> | Dr. Church Ancient Greece Ancient Rome | Understand the early development of medicines in Ancient Greece. Gain insights into the practices of Roman healers regarding their understanding of disease and remedies 8 Sep – Ancient Greece 10 Sep – Ancient Rome | A Brief History of Drugs Chapters 2 & 3 http://www.greekmedicine.net/therapies/Herbal_Medicine.html * - In class Project; 10 Sep |
| Week 5 <i>Sep 15, 17</i> Quiz #2 – 17 Sep | Dr. Church Silk Road Drug Exchanges The Americas | 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. The conquistadors and the colonizers. Maya, Aztec, and Inca Medicines: Herbs of the America’s for healing, pleasure and sacrifice. 15 Sep – Silk Road Drug Exchanges 17 Sep – The Americas | A Brief History of Drugs Chapters 4 & 5 “Physicians of Ancient India” Saini, A (2016) – in Blackboard “The Use and Abuse of Wine in Ancient China” Poo, MC (1999) – in Blackboard Aztec Medicine: http://ambergriscaye.com/pages/mayan/aztec_medicine.html |
| Week 6 <i>Sep 22, 24</i> | Dr. Church Maritime Empires Opium Wars | The Age of Discovery led to geographical and political conflicts over trade in an era where pirates vied for their share of the bounty. Two armed conflicts in China in the mid-19th century between the forces of Western countries and of the Qing dynasty. 22 Sep – Maritime Empires 24 Sep – Opium Wars | A Brief History of Drugs Chapter 8 |

USC School of Pharmacy
RXRS 201: The History and Geography of Drugs

| Week & Date | Topic | Subtopics to be Included | Assigned and Supplemental Reading |
|---|---|--|---|
| Week 7 <i>Sep 29, Oct 1</i> | Dr. Church 19 th Century, Quackery 19 th Century, Scientific Innovation | The influence of dye companies; chemists, pharmacists and doctors and their influence on psycho active drugs. “Snake Oil”. Scientific advances of the 19 th Century. 29 Sep – Quackery 1 Oct – Scientific Innovation | A Brief History of Drugs Chapter 9 * - In class project; 1 Oct |
| Week 8 <i>Oct 6, 8</i> | Dr. Church Dr. Culty 20 th Century Renaissance Poisons | Regulation of medical products in the 20 th Century. 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 6 Oct – 20 th Century (Dr. Church) 8 Oct – Renaissance Poisons (Dr. Culty) | A Brief History of Drugs Chapter 13 & 14 “One hundred years of drug regulation: where do we go from here”, Woosley (2013) – uploaded to Blackboard |
| Week 9 <i>Oct 13, 15</i> | Review for Mid Term – 13 Oct Mid Term Exam – 15 Oct | | |
| Week 10 <i>Oct 20, 22</i> | Dr. Church Ethical Consequences | Ethical issues related to drugs in the modern age. 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 Oct – Ethical Consequences 22 Oct – Legal Concerns | Required reading to prepare for class lecture: “Drug Enforcement in the United States: History, Policy, and Trends”, Sacco (2014) – uploaded to Blackboard |

USC School of Pharmacy
RXRS 201: The History and Geography of Drugs

| Week & Date | Topic | Subtopics to be Included | Assigned and Supplemental Reading |
|---|---|---|---|
| Week 11 <i>Oct 27, 29</i> Quiz #3 – 29 Oct | Dr. Church Disco Raves and EDM | Music festivals and raves have grown more popular in recent years. Festival drugs, music, and synthetic drugs will be discussed. 27 Oct – 1970s and Disco 29 Oct – Raves and EDM | “Adolescents and Drug Abuse: 21 st Century Synthetic Substances”, Yin (2019) – uploaded to Blackboard |
| Week 12 <i>Nov 3, 5</i> | Dr. Church Dr. Jakowec Pain and Opioids 1980s Drug Panic | 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. 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. 3 Nov – 1980s Drug Panic 5 Nov – Pain and Opioids (Jakowec) | “The dynamic interaction between pain and opioid misuse”, Wilson-Poe (2018) – uploaded to Blackboard “The American drug panic of the 1980s: social construction or objective threat?”, Goode (1990) – uploaded to Blackboard |
| Week 13 <i>Nov 10, 12</i> Quiz #4 – 12 Nov | Dr. Church Duck and Cover History of Addiction | 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. Explore the history of the diagnosis of addiction. 10 Nov – Bioterrorism 12 Nov – History of the diagnosis of addiction | “History of the Concept of Addiction” Nathan, P. (2016) – uploaded to Blackboard |

USC School of Pharmacy
RXRS 201: The History and Geography of Drugs

| Week & Date | Topic | Subtopics to be Included | Assigned and Supplemental Reading |
|---|--------------------------|--|--|
| Week 14 <i>Nov 17, 19</i> | Dr. Davies Dr. Church | Alcohol clinical case review. 17 Nov – Alcohol (Dr. Davies) 19 Nov – Final | |
| <i>Final Exam Week</i> <i>Tuesday, 19 Nov; 2pm-4pm</i> | | | |

USC School of Pharmacy
RXRS 201: The History and Geography of Drugs

STATEMENT ON ACADEMIC CONDUCT AND SUPPORT SYSTEMS

Academic Conduct:

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, “Behavior Violating University Standards” policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, policy.usc.edu/scientific-misconduct.

Support Systems:

Counseling and Mental Health - (213) 740-9355 – 24/7 on call
studenthealth.usc.edu/counseling

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

National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call
suicidepreventionlifeline.org

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Relationship and Sexual Violence Prevention and Services (RSVP) - (213) 740-9355(WELL), press “0” after hours – 24/7 on call
studenthealth.usc.edu/sexual-assault

Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

Office of Equity and Diversity (OED)- (213) 740-5086 | Title IX – (213) 821-8298
equity.usc.edu, titleix.usc.edu

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. The university prohibits discrimination or harassment based on the following *protected characteristics*: race, color, national origin, ancestry, religion, sex, gender, gender identity, gender expression, sexual orientation, age, physical disability, medical condition, mental disability, marital status, pregnancy, veteran status, genetic information, and any other characteristic which may be specified in applicable laws and governmental regulations. The university also prohibits sexual assault, non-consensual sexual contact, sexual misconduct, intimate partner violence, stalking, malicious dissuasion, retaliation, and violation of interim measures.

USC School of Pharmacy
RXRS 201: The History and Geography of Drugs

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

usc-advocate.symplcity.com/care_report

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

The Office of Disability Services and Programs - (213) 740-0776

dsp.usc.edu

Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

USC Support and Advocacy - (213) 821-4710

uscsa.usc.edu

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

Diversity at USC - (213) 740-2101

diversity.usc.edu

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

dps.usc.edu, emergency.usc.edu

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.

USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call

dps.usc.edu

Non-emergency assistance or information.

USC School of Pharmacy
RXRS 201: The History and Geography of Drugs

Short Essays (4 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 answer to the reader and establishes a foundation for the remainder of your answer.
- 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 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)**
 - **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.

USC School of Pharmacy
RXRS 201: The History and Geography of Drugs

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 **2** sources (class books and articles, articles from journals, books, etc) per essay. You will be penalized **-5** 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 <i>(by 2pm)</i> |
|----------------------------|--|-----------------------------------|-----------------------------|
| 2 | Remote Antiquity | <i>Choose one from this group</i> | 1 Sep |
| 3 | Ancient Egypt | | 8 Sep |
| 4 | Greece & Rome | | 15 Sep |
| 5 | Silk Road and the Americas | <i>Choose one from this group</i> | 22 Sep |
| 6 | Maritime Empires & Opium Wars | | 29 Sep |
| 7 | 19 th Century Quackery & 19 th Century Scientific Innovation | | 6 Oct |
| 8 | 20 th Century Regulations & Renaissance Poisons | <i>Choose one from this group</i> | 13 Oct |
| 10 | 20 th Century Ethics & 20 th Century Legal Concerns | | 27 Oct |
| 11 | Disco and Raves | <i>Choose one from this group</i> | 3 Nov |
| 12 | Opioids & 1980s Drug Panic | | 10 Nov |
| 13 | Bioterrorism | | 17 Nov |

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

USC School of Pharmacy
RXRS 201: The History and Geography of Drugs

Students are required to submit 4 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. It is recommended that students select essays as listed in the selection group column.

USC School of Pharmacy
RXRS 201: The History and Geography of Drugs

General Essay Template

| Introduction |
|--|
| <p>The introduction serves two key functions –</p> <ol style="list-style-type: none">1) it gets your reader interested in the topic and encourages them to read your argument; and2) 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. <p style="text-align: center;">All topic sentences should relate to the thesis statement.</p> |

| Body Paragraph 1 <i>(repeat format for each of the body paragraphs)</i> |
|--|
| <p>Topic Sentence</p> <ul style="list-style-type: none">• Evidence... <i>Citation -</i>• Evidence... <i>Citation -</i>• Evidence... <i>Citation -</i> |
| <ul style="list-style-type: none">• Analysis... |

| Concluding Paragraph |
|---|
| <p>In a concluding paragraph, you must summarize what you have written about in your essay.</p> <p>You should bring back your main statement.</p> <p>The conclusion should leave the readers with something to consider.</p> <p>Concluding paragraphs should convey a sense of completeness and closure to the topics discussed.</p> <p>There should be a sense of the lingering possibilities of the topic, perhaps its broader meaning... or its implications.</p> <p>The final paragraph should close your topic without closing it off.</p> |

| Paragraph Transitions |
|--|
| <p>Do the paragraphs build directly on the one before? How?</p> |

References – use *in-text citations* throughout your essay and provide a complete *Works Cited / Bibliography* at the end.