Term Information

Effective Term   Spring 2026

General Information

Course Bulletin Listing/Subject Area   Pharmacy
Fiscal Unit/Academic Org   Pharmacy - D1800
College/Academic Group   Pharmacy
Level/Career   Undergraduate
Course Number/Catalog   3710
Course Title   From Botanicals to Pharmaceuticals: The Evolution of Culture on Drug Production and Policies
Transcript Abbreviation   Botanical to Pharm
Course Description   In this course, students will examine the pivotal moments and paradigm shifts in the early rise, development, and maturation of pharmacy and pharmaceutical sciences as a profession with a keen eye on the role that power and authority played in this developmental process.
Semester Credit Hours/Units   Fixed: 3

Offering Information

Length Of Course   14 Week, 7 Week
Flexibly Scheduled Course   Never
Does any section of this course have a distance education component?   Yes
Is any section of the course offered   100% at a distance
Grading Basis   Letter Grade
Repeatable   No
Course Components   Lecture
Grade Roster Component   Lecture
Credit Available by Exam   No
Admission Condition Course   No
Off Campus   Never
Campus of Offering   Columbus, Lima, Mansfield, Marion, Newark, Wooster

Prerequisites and Exclusions

Prerequisites/Corequisites
Exclusions
Electronically Enforced   No

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code   51.2010
Subsidy Level   Baccalaureate Course
Intended Rank   Freshman, Sophomore, Junior, Senior

Requirement/Elective Designation

Traditions, Cultures, and Transformations

Course Details

Course goals or learning objectives/outcomes

- Students will learn about key developments in botanica and drug development.

- Students will read, understand, and express in writing complex ideas and issues relating to botanic and drug development.

- Students will leave the course able to comprehend, use, and produce analyses about botanic and drug development.

- Students will learn through critical engagement with and about materials presented throughout the course.

Content Topic List

- Paradigm shifts and transformational ideas; Foundations of drug, discovery, medicine and pharmacy as disciplines

- Overview of material culture as guiding lens for course; Examine the intersection of how society views disease and the response of dominant and sub-cultures in pharmacy and medicine.

  Overview of identify discourses of pharmacists

- Early beginnings of Pharmacy - Role of early "pharmacist": apothecary/herbalist; use of materia medica and botanticals

- Drug Discovery via plant extraction (Age of Plants); herbal remedies and material medica; Indigenous views on botanicals

- Heroic medicine and homeopathic medicine and the intersection with pharmacy; cultural perspective of pharmacist and drug treatments

- Role of pharmacist: formulator, retailer; divergence from heroic medicine; role of ether in surgery

- Drug Discovery shifting from plant extraction to chemical synthesis; the Civil War's impact on medicine and pharmacy

- Role of Pharmacist During and Post Civil War: compounder, retailer; formuation of APhA in 1852; end of nostrums

- Drug Discovery: Targeted therapies; Creation of FDA and initial regulation; Germ Theory and key influential figures

- Role of Pharmacist: Reduction of traditional compounding and dispensing; increase in retail (e.g., soda fountains and commercial goods); formation of American Society of Hospital Pharmacists (1942); patents as legal entities for drugs

- Drug Discovery: Targeted Therapies Continued; Key Drugs: Sulfa Drugs, Penicillin; Mustard Gas and Cancer

- Role of Pharmacist: reduce retail, dispensing increased (due to explosion of new drugs), but of pre-made drugs; evolution of pharmacies for patient care; new innovations in clinical pharmacy services; regulations

- Drug Discovery: Age of Genetics; evolution of Policy Making in the US

- Modern therapies for Cancer and Heart Disease; Opioid Crisis; Modern Day Role of Pharmacist: Non-dispensing services like vaccinations and medication adherence (Post-Pharmaceutical Care)

- Holistic impact of evolution of drug discovery and pharmacy profession on society; resurgence of botanicals via complementary and alternative medicine; Pharmacy, Drug Discovery and the Environment

Sought Concurrence

No

Attachments

- AWG-Botanicals to Pharmaceutics submission-traditions.pdf: GE Themes submission worksheet

  (Other Supporting Documentation. Owner: Bowman,Michael Robert)

- PHR 3710 Syllabus- Botanics-Pharmaceuticals_JUNE 2025 copy.docx: revised syllabus

  (Syllabus. Owner: Bowman,Michael Robert)

- GE Theme Committee Cover Letter Response_6-13-25.docx: revision response

  (Cover Letter. Owner: Bowman,Michael Robert)

Comments

- approved by Undergraduate Studies Committee 12/13/24

  updated syllabus incorporating revisions added 2/12/25

  new updated syllabus incorporating 2/25/25 revisions added 6/23/25 *(by Bowman,Michael Robert on 06/23/2025 10:10 AM)*

- Please see feedback email sent 2/25/24. *(by Neff,Jennifer on 02/25/2025 04:13 PM)*

- This is a syllabus without a weekly schedule of activities. Also, the goals and ELOs of the requested GE category + explanatory paragraph do not appear in the syllabus. Please address. *(by Vankeerbergen,Bernadette Chantal on 01/29/2025 02:11 PM)*

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Bowman,Michael Robert	01/10/2025 11:41 AM	Submitted for Approval
Approved	Mercerhill,Jessica Leigh	01/10/2025 12:52 PM	Unit Approval
Approved	Kwiek,Nicole Cartwright	01/10/2025 03:01 PM	College Approval
Revision Requested	Vankeerbergen,Bernadette Chantal	01/29/2025 02:12 PM	ASCCAO Approval
Submitted	Bowman,Michael Robert	02/12/2025 03:41 PM	Submitted for Approval
Approved	Mercerhill,Jessica Leigh	02/12/2025 04:32 PM	Unit Approval
Approved	Kwiek,Nicole Cartwright	02/12/2025 04:43 PM	College Approval
Revision Requested	Neff,Jennifer	02/25/2025 04:13 PM	ASCCAO Approval
Submitted	Bowman,Michael Robert	06/23/2025 10:12 AM	Submitted for Approval
Approved	Mercerhill,Jessica Leigh	06/24/2025 08:25 AM	Unit Approval
Approved	Kwiek,Nicole Cartwright	06/24/2025 09:35 AM	College Approval
Pending Approval	Jenkins,Mary Ellen Bigler Hilty,Michael Neff,Jennifer Vankeerbergen,Bernadette Chantal Steele,Rachel Lea	06/24/2025 09:35 AM	ASCCAO Approval

GE Committee Feedback Cover Letter for PHR 3710

Dear reviewing faculty,

We thank you for your feedback on the course, PHR 3710: Botanicals to Pharmaceuticals. In this cover letter, you will find your requested changes outlined:

1. We have made more direct linkages between GE ELOs and course assignments and weekly topics. Course assignments contain additional detail about what students will do (syllabus pages 7 through 9). Additionally, the course calendar indicates specific GE ELOs to underscore week by week alignment (syllabus pages 20 through 25).

2. We have revised the course schedule with details about course reading assignments. These readings are mixture of primary literature, students reading the entirety of the book, The Drug Hunters the improbable quest to discovery new medicines, and other selections from popular press books about pharmacy, medicine, drug discovery and pharmaceutical sciences (syllabus pages 20 through 25).

3. In order to address deeper scholarly exploration within the theme, we have added on average 3 readings per week including at least one peer-reviewed paper. Additionally, we have recorded custom interviews with staff at the Medical Heritage Center to emphasize the importance of examining material culture to understand transformations in pharmacy, medicine, drug discovery, and pharmaceutical sciences. Students will be able to dig deep into scholarly material via hypothesis assignments for selected readings, engagement with interactive lectures, and custom multimedia to capture relevant material culture artifacts.

4. In order to take the Provost's AI fluency initiative into consideration, we've outlined appropriate Generative AI use for the course (see pages 15 and 15) and added a new assignment where students engage in prompting GenAI around questions of interest to the course, critical its outputs, review how Dr. Welling Gregg critiques the outputs leveraging her subject matter expertise, and then react and reflect on how they could better use Generative AI within the context of the course.

5. We have embedded a reflective component in the pre/post course reflection assignment, the midterm project, and final project (see page 7 of the syllabus for assignment details).

6. We have adjusted the ways in which students can demonstrate learning via multiple means including (see table "How your grade is calculated" on page 7 of syllabus): discussion boards focusing on reflection, case study presentations, and cultural

analysis, hypothesis assignments, a midterm assignment to serve as practice for the final project, and a multi-part final project. Additionally, we have indicated that the two lowest grades for discussions and two lowest grades for hypothesis assignments will be dropped.

7. We have elected to modify that course from an online, synchronous offering to a fully asynchronous offering based upon your feedback and some additional feedback at the college.

8. We have added the Traditions, Cultures, and Transformations goals to the syllabus on page 3.

9. With respect to updates around syllabus language, we have completed the following:
    a. Adding the most recent religious accommodations language (see page 17)
    b. Adding the most recent diversity statement (see page 17).

10. Finally, while the committee did not ask for this change, we slightly modified the theme rationale on syllabus page 3 to best represent the course.

Sincerely,

Dr. Amy Welling Gregg, Senior Lecturer

Steven Nagel, MS, MLT, Director of Learning Design and Multimedia

Botanicals to Pharmaceuticals Syllabus

PHR 3710 Spring 2026

Course Information

- **Course times and location:** No required schedule meetings; all instruction occurs in Carmen each week
- **Credit hours:** 3
- **Mode of delivery:** Distance Learning

Instructor

- **Name:** Dr. Amy Welling Gregg
- **Email:** gregg.86@osu.edu
- **Office hours:** Optional Zoom Weekly Office Hour: 2:30 PM to 3:30 PM
- **Preferred means of communication:**
    - My preferred method of communication for questions is **email.**
    - My class-wide communications will be sent through the Announcements tool in CarmenCanvas. Please check your notification preferences (go.osu.edu/canvas-notifications) to be sure you receive these messages.
- The professor reserves the right to change details in the syllabus once the course is underway

Course Prerequisites

None.

Course Description

In this course, students will examine the pivotal moments, and paradigm shifts in the early rise, development, and maturation of pharmacy and pharmaceutical sciences as a profession with a keen eye on the role that power and authority played in this developmental process. Key pivotal points include the examination of the early field of Botanics, the divergence of pharmacy from medicine, the formalization and maturation of pharmaceuticals as a distinct discipline. While exploring the maturation of pharmaceuticals, students examine

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pharmacogenomics and personalized medicine and two significant disease states that contributed to the rise of the pharmaceutical industry: cancer and heart disease. Finally, throughout the course, students consider the field's cultural, societal, and technological impacts and its "return to roots" in its resurgence in Botanics.

The readings are compiled from various disciplines to broaden student understanding from a historical, socio-political, economic, and pharmaceutical standpoint. Readings are selected from online sources via the OSU Libraries; consequently, textbook purchase is not required. The course is 100% online.

Learning Outcomes

By the end of this course, students should successfully be able to:

- Students will learn about key developments in botanical and drug development.

- Students will read, understand, and express in writing complex ideas and issues relating to botanic and drug development.

- Students will leave the course able to comprehend, use, and produce analyses about botanic and drug development.

- Students will learn through critical engagement with and about materials presented throughout the course. This course takes two things for granted: first, the material is relevant to our understanding of drug development. Second, historical and contemporary drug development impacts societies across the globe, and this impact can be accessed and analyzed through thoughtful engagement and rhetorical analysis.

General Education Expected Learning Outcomes

As part of the Traditions, Cultures, and Transformations category of the General Education curriculum, this course is designed to prepare students to be able to do the following:

Goals:

1. Successful students will analyze an important topic or idea at a more advanced and in-depth level than in the Foundations component. [Note: In this context, "advanced" refers to courses that are e.g., synthetic, rely on research or cutting-edge findings, or deeply engage with the subject matter, among other possibilities.]

2. Successful students will integrate approaches to the theme by making connections to out-of-classroom experiences with academic knowledge or across disciplines and/or to work they have done in previous classes and that they anticipate doing in future.

3. Successful students will engage in a systematic assessment of how cultures and sub-cultures develop and interact, historically or in contemporary society.

4. Successful students will engage in a systematic assessment of differences among societies, institutions, and individuals' experience within traditions and cultures.

Expected Learning Outcomes:

Successful students are able to:

- 1.1. Engage in critical and logical thinking about the topic or idea of the theme.

- 1.2. Engage in an advance, in-depth, scholarly exploration of the topic or idea of the theme.

- 2.1. Identify, describe, and synthesize approaches or experiences as they apply to the theme.

- 2.2. Demonstrate a developing sense of self as a learner through reflection, self-assessment, and creative work, building on prior experiences to respond to new and challenging contexts.

- 3.1. Describe the influence of an aspect of culture (e.g., religious belief, gender roles, institutional organization, technology, epistemology, philosophy, scientific discovery, etc.) on at least one historical or contemporary issue.

- 3.2. Analyze the impact of a "big" idea or technological advancement in creating a major and long-lasting change in a specific culture.

- 3.3. Examine the interactions among dominant and sub-cultures.

- 3.4. Explore changes and continuities over time within a culture or society.

- 4.1. Recognize and explain differences, similarities, and disparities among institutions, organizations, cultures, societies, and/or individuals.

- 4.2. Explain ways in which categories such as race, ethnicity, and gender and perceptions of difference impact individual outcomes and broader societal issues.

Theme Rationale

The course explores various perspectives and methodologies in medicine and pharmacy, focusing on societal and institutional viewpoints (e.g., eclectics versus allopathic). It delves into the evolution of pharmacy and drug discovery, highlighting the significant paradigm shifts that have shaped the field and influenced societal and cultural transformations. The course will emphasize major changes in approaches within pharmacy and medicine, particularly as pharmacy has emerged as a distinct discipline from medicine. Course readings will concentrate on historical, epidemiological, and cultural factors that have contributed to the development and rise of pharmacy, drug discovery and pharmaceutical sciences.

Commented [SN1]: Slightly revised as of 6/3

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How This Online Course Works

Mode of delivery: This course is 100% online.

Pace of online activities: This course is divided into weekly modules that are released one week ahead of time. Students are expected to keep pace with weekly deadlines but may schedule their efforts freely within that time frame.

Credit hours and work expectations: This is a 3 credit-hour course. According to Ohio State bylaws on instruction (go.osu.edu/credit hours), students should expect around 3 hours per week of time spent on direct instruction (instructor content and Carmen activities, for example) in addition to 6 hours of homework (reading and assignment preparation, for example) to receive a grade of C average.

Based on university policy, for each course credit hour, students are expected to spend one hour in a classroom setting and two additional hours outside the classroom dedicated to course studies. Accordingly, for a 3-credit hour, 16-week term, synchronous online course, students are expected to dedicate approximately nine hours per week to completing the various module activities—this includes the reading of texts, viewing of online videos and narrated lectures, writing guide exercises, studying course materials, participation in weekly discussions, and completing all course assessments.

Attendance and participation requirements: Research shows regular participation is one of the highest predictors of success. With that in mind, I have the following expectations for everyone's participation:

- **Participating in online activities for attendance**: **at least twice per week**
  You are expected to log in to the course in Carmen every week. During most weeks you will probably log in many times. If you have a situation that might cause you to miss an entire week of class, discuss it with me *as soon as possible*.

- **Zoom meetings and office hours**: **optional**
  All live, scheduled events for the course, including my office hours, are optional. I will post recordings of synchronous sessions for those who cannot attend.

- **Participating in discussion forums**: **two or more times per week**
  As part of your participation, each week you can expect to post at least twice as part of our substantive class discussion on the week's topics.

IMPORTANT: All graded assignments must be submitted in Carmen no later than 11:59 p.m. on their respective due dates to avoid the associated late penalty noted in the syllabus posted in Carmen. The professor reserves the right to change details in the syllabus once the course is underway.

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Course Materials, Fees and Technologies

Required Materials and/or Technologies

- OSU Libraries website
- Hypothes.is
- EchoVideo

Required Equipment

- **Computer:** current Mac (MacOS) or PC (Windows 10) with high-speed internet connection
- **Webcam:** built-in or external webcam, fully installed and tested
- **Microphone:** built-in laptop or tablet mic or external microphone
- **Other:** a mobile device (smartphone or tablet) to use for BuckeyePass authentication

If you do not have access to the technology you need to succeed in this class, review options for technology and internet access at go.osu.edu/student-tech-access.

Required Software

Microsoft Office 365: All Ohio State students are now eligible for free Microsoft Office 365. Visit the installing Office 365 (go.osu.edu/office365help) help article for full instructions.

CarmenCanvas Access

You will need to use BuckeyePass (buckeyepass.osu.edu) multi-factor authentication to access your courses in Carmen. To ensure that you are able to connect to Carmen at all times, it is recommended that you do each of the following:

- Register multiple devices in case something happens to your primary device. Visit the BuckeyePass - Adding a Device help article for step-by-step instructions.
- Install the Duo Mobile application on all of your registered devices for the ability to generate one-time codes in the event that you lose cell, data, or Wi-Fi service.
- Read about options to authenticate with BuckeyePass.

If none of these options will meet the needs of your situation, you can contact the IT Service Desk at 614-688-4357 (HELP) and IT support staff will work out a solution with you.

Technology Skills Needed for This Course

- Basic computer and web-browsing skills

- [Navigating CarmenCanvas](go.osu.edu/canvasstudent) (go.osu.edu/canvasstudent)
- [CarmenZoom virtual meetings](go.osu.edu/zoom-meetings) (go.osu.edu/zoom-meetings)

Technology Support

For help with your password, university email, CarmenCanvas, or any other technology issues, questions or requests, contact the IT Service Desk, which offers 24-hour support, seven days a week.

- **Self Service and Chat**: [go.osu.edu/it](go.osu.edu/it)
- **Phone:** [614-688-4357 (HELP)](614-688-4357)
- **Email:** servicedesk@osu.edu

Grading and Faculty Response

How Your Grade is Calculated

Assignment Category	Points
Discussion Assignments (7 at 20 points each) **[The two lowest scores are dropped]**	100 points
Hypothesis Assignments (8 at 15 points each) **[The two lowest scores are dropped]**	90 points
Midterm Assignment	40 pts
Final Project: Checkpoint #1 (topic and thesis) Checkpoint #2 (annotated bibliography) Checkpoint #3 (draft) Final Paper	 10 points 25 points 70 points 110 points
Total points:	445

See Course Schedule for due dates.

Descriptions of Major Course Assignments

Discussion Assignments

Description: Students will participate in six asynchronous discussions throughout the semester. These discussions encourage critical analysis and reflection with course content. Students will submit their initial responses by Thursday evenings and complete peer responses by Sunday evenings.

Discussion Topics below:

- Pre/Post Course Reflection: During the first week of the course, students will consider what do you understand about the role of culture, tradition, scientific discovery in shaping the history and practice of pharmacy and drug discovery? Whose perspectives

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do you think have been most influential and whose might be missing? During the final week of the course, students will answer: How has your understanding of pharmacy and drug discovery's history, cultural influences, and professional evolution changed? What new questions or perspectives do you now bring to your understanding of pharmacy as a cultural and scientific practice? What additional perspectives may you continue to seek out to refine your understandings?

  o GE ELOs: 1.1, 2.1, 3.2, 3.3, 3.4, 4.1, 4.2

- Generative AI considerations for doing research: During one class discussion, students will complete a critical evaluation of outputs from a Generative AI tool as it relates to gathering resources for research around the evolution of drug discovery and/or the professionalization of pharmacy. Students will be provided with at least two prompts to help curate useful resources to engage a Generative AI tool. Students will then evaluate the outputs for accuracy, reliability, and quality. Dr. Welling Gregg will also provide her assessment of outputs from these two prompts. Students will then be asked to react and reflect upon her application of subject matter expertise on reviewing these Generative AI outputs.

  o GE ELOs: 1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4

- Cultural analysis: During two discussion assignments, students will discuss dominant and sub-cultures (e.g., Indigenous approach and Western approaches to botanical medicines, allopaths and homeopaths on treatment options).

  o GE ELOs: 1.1, 3.3., 3.4, 4.1

- Case studies: During two discussion assignments, students will create a short presentation on a historical medical case with botanical treatment and a short presentation on a modern treatment with pharmaceuticals. In these presentations, students should review and consider cultural, ethical, and institutional responses to these treatments including an analysis of public trust and pharmaceutical regulation (or lack thereof) in the case.

  o GE ELOs: 1.1, 1.2, 2.2, 3.4, 4.2

Hypothes.is Annotation Assignments
Description: Students will participate in eight hypothes.is annotation assignments to dive deeper into course reading materials. Students will be asked to answer specific questions about the readings in addition to identifying paradigm shifting and/or transformational ideas or broader impacts to the development and maturation of the field of pharmacy as conveyed by the authors.

Students will submit their initial responses by Thursday evenings and complete peer responses by Sunday evenings.

GE ELOs: 1.1, 3.1, 3.4

Midterm Project

Description: For the midterm project, students will be analyze three different researchers: Curtis Gates Lloyd, Francis Porcher, and Paul Stamets and their investigation of mushrooms for potential drugs. Students will gain additional practice in comparing the scientific approaches of researchers taken toward drug discovery in the 19th, 20th, and 21st century, in analysis of how their approaches contributed to the paradigm shifts in drug discovery, overall, and how their approaches impacted or intersect with elements of culture. For this project, students will read two references about mushrooms from the 19th and 20th centuries [Fungi, edible and poisonous, Porcher, 1886; The Lycoperdaceae of Australia, New Zealand and Neighboring Islands, Lloyd, 1905] while having the opportunity to select a reading of their choosing for the 21st century from the peer-reviewed literature. Students will also use this assignment as an opportunity to reflect on how to hone their research and interdisciplinary skills for their final project.

GE ELOs: 1.1., 1.2., 2.2, 3.1, 3.4, 4.1, 4.2

Final Project

Description: For the final project, students will analyze how society impacted the ride of pharmacy as a profession or the pharmaceutical industry. Throughout this multi-step project, students will develop a cumulative response that discusses the construction of pharmacy as a profession, the drug discovery process and/or the pharmaceutical industry. Students should aim to consider elements of culture such as scientific discovery, technology, education, institutions, etc., in this analysis. Instructions for each checkpoint and the final paper are posted in the Assignment tab on Carmen Canvas.

GE ELOs: 1.1., 1.2., 2.2, 3.1, 3.4, 4.1, 4.2

There are four checkpoint assignments:

1. Checkpoint 1: Students will submit a selected topic and thesis statement for the first checkpoint

2. Checkpoint 2: An annotated bibliography, correctly formatted in the APA Style citations.

3. Checkpoint 3: A rough draft of your paper for the third checkpoint.

For the final paper, in 2000 to 2500 words (no more, no less,) analyze how society impacted the rise of pharmacy as a profession or the pharmaceutical industry. Your final project is a cumulative response paper that discusses the construction of pharmacy as a profession or the pharmaceutical industry.

- Use at least three-course materials. Two of which need to be reading materials. Reading materials ARE NOT PowerPoints, while the other may be a film or materials from a course lecture.

- The secondary sources you find must connect your primary sources to the course material.

- Failure to utilize the required course materials and four primary sources will reduce the paper's final grade by 15 points for every missing source. Use of outside sources other than the four primary sources and two secondary sources will reduce your letter grade by 30 points for every outside source employed.

All papers must be typed in 12-point Times New Roman font, titled, and double-spaced, and each page must be numbered. Cover sheets are required, which must include your name, course section, semester, and title for your paper. You must use the APA citation style. It is due, via upload, in Carmen by 11:59 PM on April 28th. There is no final exam. Your final papers are due when assigned. NO LATE ASSIGNMENTS will be accepted without proof of a life event (serious illness, including COVID-19, family death, or military deployment.)

Academic integrity and collaboration: Your written assignments, including discussion posts, should be your own original work. In formal assignments, you should follow APA style to cite the ideas and words of your research sources. You are encouraged to ask a trusted person to proofread your assignments before you turn them in but no one else should revise or rewrite your work.

Late Assignments

Please refer to Carmen for due dates. Due dates are set to help you stay on pace and to allow timely feedback that will help you complete subsequent assignments.

Illness or Other Issues: If you are unable to complete an assignment by the due date or find yourself falling behind due to illness, technological problems, life disruptions, or other personal issues, please contact Dr. Welling Gregg by email to discuss your situation no later than 24 hours before the assignment's due date. NO LATE ASSIGNMENTS will be accepted without proof of a life event (serious illness, including COVID-19, family death, or military deployment.)

Weather or Other Short-Term Closing: Online classes are not normally affected by weather closures but may be subject to other types of university closings. In the case of a closure, communication will be available via an Announcement in CarmenCanvas.

Instructor Feedback and Response Time

I am providing the following list to give you an idea of my intended availability throughout the course. Remember that you can call 614-688-4357 (HELP) at any time if you have a technical problem.

- **Preferred contact method:** If you have a question, please contact me first through my Ohio State email address. I will reply to e-mails within 24 hours, Monday through Sunday, unless otherwise noted via a course Announcement.

- **Class announcements:** I will send all important class-wide messages through the Announcements tool in CarmenCanvas. Please check your notification preferences (go.osu.edu/canvas-notifications) to ensure you receive these messages.

- **Discussion board:** I will check and reply to messages in the discussion boards once mid-week and once at the end of the week.

- **Grading and feedback:** You can generally expect feedback for all assignments within 7 – 10 days. Feedback may appear in a written, audio, or video format.

Grading Scale

Note: I round final course grades to the percentage point if it is going to change the earned letter grade (e.g., 89 will be rounded to a 90.0; however, an 88.99 will not be rounded to a 90.0). Your total score is calculated as an unweighted percent of total of points available.

Grade Appeal Procedure: If you believe your grade on any assignment should be different from the grade received, you must clearly explain in writing the basis for your request for re-evaluation. This gives you an opportunity to prepare and present cogent arguments for reassessment. While a grade appeal may result in a higher grade, there is no guarantee, and a re-evaluation may result in a lower grade if such is warranted. Any rebuts to grades earned must be brought to the instructor's attention no later than 48 hours after receiving the grade. Do this by either emailing or meeting with your instructor on Carmen Zoom. Do not communicate using the comments boxes on the assignment submission page. Further information on formal grade appeal rights and procedures is outlined in your student handbook.

93–100: A
90–92.9: A-
87–89.9: B+
83–86.9: B
80–82.9: B-
77–79.9: C+
73–76.9: C
70–72.9: C-
67–69.9: D+
60–66.9: D
Below 60: E

Other Course Policies

Discussion and Communication Guidelines

The following are my expectations for how we should communicate as a class. Above all, please remember to be respectful and thoughtful.

- **Writing style**: While there is no need to participate in class discussions as if you were writing a research paper, you should remember to write using good grammar, spelling, and punctuation. A more conversational tone is fine for non-academic topics.

- **Tone and civility**: Let's maintain a supportive learning community where everyone feels safe and where people can disagree amicably. Remember that sarcasm doesn't always come across online. I will provide specific guidance for discussions on controversial or personal topics.

- **Citing your sources**: When we have academic discussions, please cite your sources to back up what you say. For the textbook or other course materials, list at least the title and page numbers. For online sources, include a link.

- **Backing up your work**: Consider composing your academic posts in a word processor, where you can save your work, and then copying into the Carmen discussion.

- **Synchronous sessions**: During our Zoom sessions I ask you to use your real name and a clear photo of your face in your Carmen profile. During our full-group lecture time, you may turn your camera off if you choose. When in breakout rooms or toher small-group discussions, having cameras and mics on as often as possible will help you get the most out of activities. You are always welcome to use the free, Ohio State-themed virtual backgrounds (go.osu.edu/zoom-backgrounds). Remember that Zoom and the Zoom chat are our classroom space where respectful interactions are expected.]

Netiquette

Virginia Shea wrote "Netiquette," which is available online at http://www.albion.com/netiquette/book/. Netiquette is a code of behavior for using the internet. Your language demonstrates your personality, age, locality, and attitude.

Please follow the proper online etiquette when completing all course assessments and communicating with your instructor via email.

- **Avoid using all caps.**

  Using all capitalization to compile your words is ineffective—when communicating online, it is equivalent to screaming. In addition, it confuses the eye and makes it difficult to focus.

- **Avoid dramatic punctuation.**

  While you can use the exclamation mark (!) to show excitement, do not solely rely on it. It is often hard to tell if an exclamation mark is negative excitement or positive

excitement. Try using word choice and syntax to help convey your feelings rather than a single keystroke.

- **Understand that word choice counts.**

  Please consider word choice when composing your discussion posts and assignments. One word can change an entire statement. Avoid offensive language and flaming. Flaming is a form of verbal abuse when you intentionally attack or disparage someone.

- **Use proper grammar and spelling. Always refrain from e-speak.**

  If u rite liek this u will drvie prof P crrrrrrazy lol. :) Typos and basic spelling mistakes will happen. However, using e-speak to communicate in an academic setting is unacceptable. It affects your credibility, confuses the reader, and will result in loss of points. Please ensure your academic writing, including any communication with your instructor, uses proper grammar, spelling, and punctuation.

- Shea, Virginia. Netiquette. Albion Books, 1994.

Academic Integrity Policy

See Descriptions of Major Course Assignments for specific guidelines about collaboration and academic integrity in the context of this online class.

Ohio State's Academic Integrity Policy

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the university's Code of Student Conduct (studentconduct.osu.edu), and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the university's *Code of Student Conduct* and this syllabus may constitute "Academic Misconduct."

The Ohio State University's *Code of Student Conduct* (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the university or subvert the educational process." Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the university's *Code of Student Conduct* is never considered an excuse for academic misconduct, so I recommend that you review the *Code of Student Conduct* and, specifically, the sections dealing with academic misconduct.

If I suspect that a student has committed academic misconduct in this course, I am obligated by university rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the university's Code of Student Conduct (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the university.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include:
- The Committee on Academic Misconduct web pages (COAM Home)

- Ten Suggestions for Preserving Academic Integrity (Ten Suggestions)

- Eight Cardinal Rules of Academic Integrity (www.northwestern.edu/uacc/8cards.htm)

Artificial Intelligence and Academic Integrity

There has been a significant increase in the popularity and availability of a variety of generative artificial intelligence (AI) tools, including ChatGPT, Sudowrite and others. These tools will help shape the future of work, research and technology but when used in the wrong way, they can stand in conflict with academic integrity at Ohio State.

All students have important obligations under the Code of Student Conduct to complete all academic and scholarly activities with fairness and honesty. Our professional students also have the responsibility to uphold the professional and ethical standards found in their respective academic honor codes. Specifically, students are not to use unauthorized assistance in the laboratory, on field work, in scholarship or on a course assignment unless such assistance has been authorized specifically by the course instructor. In addition, students are not to submit their work without acknowledging any word-for-word use and/or paraphrasing of writing, ideas or other work that is not your own. These requirements apply to all students undergraduate, graduate, and professional.

To maintain a culture of integrity and respect, these generative AI tools should not be used in the completion of course assignments unless an instructor for a given course specifically authorizes their use. Some instructors may approve of using generative AI tools in the academic setting for specific goals. However, these tools should be used only with the explicit and clear permission of each individual instructor, and then only in the ways allowed by the instructor.

Artificial Intelligence Policy for this Course

Acceptable and Unacceptable Uses of AI

- Students are expected to generate their own work in this course. Submitting content that has been generated by someone other than yourself or that was created or written by a computer application or tool, including artificial intelligence (AI) programs such as ChatGPT and Google Bard, outside of the acceptable uses outlined below constitutes a

violation of the Ohio State University Code of Student Conduct. Specific examples of acceptable and unacceptable uses of AI tools in this course are highlighted below.

The use of generative AI tools is permitted in this course for the following activities:

- Brainstorming and refining your ideas

- Fine-tuning your research questions

- Finding information/sources on your topic (although multiple tools should be used for this purpose)

- Organizing your thoughts and ideas into a paper structure

- Suggesting counterarguments or objections; and

- Checking grammar and style.

The use of generative AI tools is NOT permitted in this course for the following activities:

- Impersonating you in classroom contexts, including using these tools to compose discussion board prompts, answer quiz questions, or complete other assignments.

- Drafting a thesis statement.

- Writing a draft of a writing assignment.

- Writing entire sentences, paragraphs, or papers to complete class assignments and

- Other uses that are determined to represent abuse of course policy.

The use of AI for allowable tasks, including both benefits and shortcomings, is discussed throughout the semester. You will also be asked to acknowledge any use of AI in writing assignments when you turn them in. You will not be penalized for allowable uses, and this policy is intended to prepare you for real-world situations in which acknowledgment of the use of AI is expected. If you have any questions about a specific use of AI for a course assignment, please contact your instructor for more information.

Additionally, you are responsible for the content of all work that you submit. AI tools tend to fabricate information to meet user-supplied prompts, including (but not limited to) misrepresenting research findings and creating imaginary sources. Any work turned in with false information will receive a grade deduction based on the assignment rubric and may be subject to penalty under Ohio State's Code of Student Conduct, depending on the severity of the infraction.

Copyright for Instructional Materials

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Creating an Environment Free from Harassment, Discrimination, and Sexual Misconduct

The Ohio State University is committed to building and maintaining a community to reflect diversity and to improve opportunities for all. All Buckeyes have the right to be free from harassment, discrimination, and sexual misconduct. Ohio State does not discriminate on the basis of age, ancestry, color, disability, ethnicity, gender, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, pregnancy (childbirth, false pregnancy, termination of pregnancy, or recovery therefrom), race, religion, sex, sexual orientation, or protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment. Members of the university community also have the right to be free from all forms of sexual misconduct: sexual harassment, sexual assault, relationship violence, stalking, and sexual exploitation.

To report harassment, discrimination, sexual misconduct, or retaliation and/or seek confidential and non-confidential resources and supportive measures, contact the Civil Rights Compliance Office:

1. Online reporting form at civilrights.osu.edu,
2. Call 614-247-5838 or TTY 614-688-8605,
3. Or email civilrights@osu.edu

The university is committed to stopping sexual misconduct, preventing its recurrence, eliminating any hostile environment, and remedying its discriminatory effects. All university employees have reporting responsibilities to the Office of Institutional Equity to ensure the university can take appropriate action:

- All university employees, except those exempted by legal privilege of confidentiality or expressly identified as a confidential reporter, have an obligation to report incidents of sexual assault immediately.

- The following employees have an obligation to report all other forms of sexual misconduct as soon as practicable but at most within five workdays of becoming aware of such information: 1. Any human resource professional (HRP); 2. Anyone who supervises faculty, staff, students, or volunteers; 3. Chair/director; and 4. Faculty member.

Diversity Statement

The Ohio State University affirms the importance and value of diversity of people and ideas. We believe in creating equitable research opportunities for all students and to providing programs and curricula that allow our students to understand critical societal challenges from diverse perspectives and aspire to use research to promote sustainable solutions for all. We are committed to maintaining an inclusive community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among all members; and encourages each individual to strive to reach their own potential. The Ohio State University does not discriminate on the basis of age, ancestry, color, disability, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, race, religion, sex, gender, sexual orientation, pregnancy, protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment.

Religious Accommodations

Ohio State has had a longstanding practice of making reasonable academic accommodations for students' religious beliefs and practices in accordance with applicable law. In 2023, Ohio State updated its practice to align with new state legislation. Under this new provision, students must be in early communication with their instructors regarding any known accommodation requests for religious beliefs and practices, providing notice of specific dates for which they request alternative accommodations within 14 days after the first instructional day of the course. Instructors in turn shall not question the sincerity of a student's religious or spiritual belief system in reviewing such requests and shall keep requests for accommodations confidential.

With sufficient notice, instructors will provide students with reasonable alternative accommodations with regard to examinations and other academic requirements with respect to students' sincerely held religious beliefs and practices by allowing up to three absences each semester for the student to attend or participate in religious activities. Examples of religious accommodations can include, but are not limited to, rescheduling an exam, altering the time of a student's presentation, allowing make-up assignments to substitute for missed class work, or flexibility in due dates or research responsibilities. If concerns arise about a requested accommodation, instructors are to consult their tenure initiating unit head for assistance.

A student's request for time off shall be provided if the student's sincerely held religious belief or practice severely affects the student's ability to take an exam or meet an academic requirement and the student has notified their instructor, in writing during the first 14 days after the course begins, of the date of each absence. Although students are required to provide notice within the first 14 days after a course begins, instructors are strongly encouraged to work with the student to provide a reasonable accommodation if a request is made outside the notice period. A student may not be penalized for an absence approved under this policy.

If students have questions or disputes related to academic accommodations, they should contact their course instructor, and then their department or college office. For questions or to

report discrimination or harassment based on religion, individuals should contact the Civil Rights Compliance Office.

Policy: Religious Holidays, Holy Days and Observances.

Your Mental Health

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing.

If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting **ccs.osu.edu** or calling 614-292-5766. CCS is located on the 4th floor of the Younkin Success Center and 10th floor of Lincoln Tower. You can reach an on-call counselor when CCS is closed at 614-292-5766 and 24-hour emergency help is also available through the 24/7 by dialing 988 to reach the Suicide and Crisis Lifeline.

College of Pharmacy specific resources

Any College of Pharmacy student may contact Dr. Levstek directly via email (levstek.4@osu.edu), and he will offer you an initial counseling session via Zoom to initiate services. During this meeting he will address your current concerns and mental health needs, in addition to collecting background information and assessing your history of concerns. He will also discuss future treatment options with you, and can connect you with other resources as well, where appropriate. If any students have questions or concerns, please email Dr. Levstek directly.

Disability Statement (with Accommodations for Illness)

Requesting Accommodations

The university strives to maintain a healthy and accessible environment to support student learning in and out of the classroom. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion.

If you are ill and need to miss class, including if you are staying home and away from others while experiencing symptoms of a viral infection or fever, please let me know immediately. In cases where illness interacts with an underlying medical condition, please consult with Student Life Disability Services to request reasonable accommodations. You can connect with them at slds@osu.edu; 614-292-3307; or slds.osu.edu.

Accessibility of Course Technology

This course requires use of CarmenCanvas (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations as early as possible.

- CarmenCanvas accessibility (go.osu.edu/canvas-accessibility)

- CarmenZoom accessibility (go.osu.edu/zoom-accessibility)

- The College of Pharmacy uses Echo360 for lecture capture and hosting of recorded lecture content. Echo360 generates transcripts for recorded lecture content through automated speech recognition. If you experience difficulties with these autogenerated transcripts, please contact your instructor at gegg.86@osu.edu.

- This course requires the use of a digital social annotation tool called Hypothes.is. If you encounter an issue with access to this tool, please contact your instructor at gregg.86@osu.edu and cop-digitalaccessibility@osu.edu. Accommodation and assistance will be arranged for you to complete any work required with this tool free of penalty.

Course Schedule

Refer to the CarmenCanvas course for up-to-date due dates.

Week	GE ELOs	Topics	Readings	Assignments
1	1.1, 3.1, 3.2	Course introduction Paradigm shifts and transformational ideas Foundations of drug, discovery, medicine and pharmacy as disciplines	What is a paradigm shift? NPR article Ch 1. Historical Overview of Drug Discovery Historical review of medicinal plants' usage (Petrovska, 2012) Anand, Larson, and Mahoney: Thomas Kuhn on Paradigms Production and Operations Management 29(7), pp. 1650–1657 Price, Johnathon, CHEMISTRY, PHARMACY AND REVOLUTION IN FRANCE, 1777-1809, Ashgate Publishing, Ltd., May 28, 2013	Practice Hypothesis Assignment Discussion: Pre-course reflection
2	1.1, 3.1, 3.2	Overview of material culture as guiding lens for course Examine the intersection of how society views disease and the response of dominant and sub-cultures in pharmacy and medicine. Overview of identify discourses of pharmacists	History and Material Introduction: Historians, Material Culture and Materiality Pharmacists and Physicians: An uneasy relationship (Cowen, 1992) A Historical Discourse Analysis of Pharmacy Identity in Pharmacy Education (Keller et al, 2020)	Hypothesis Assignment 1 Discussion: GenerativeAI considerations for doing research

3	1.1, 2.1, 2.2, 3.4	Early beginnings of Pharmacy - Role of early "pharmacist": apothecary/herbalist; use of materia medica and botanticals	The foundations of Pharmacy in the US (Cowan, 1976); Chapter 2 Introduction to the History and Profession of Pharmacy (Higby, pp 1 through 10); History of Pharmacopoeia (Fullerton, 1946)	Hypothesis Assignment 2
4	3.4, 4.1	Drug Discovery via plant extraction (Age of Plants); herbal remedies and material medica; early figures: Bartram, Barton, & Hosack; Indigenous views on botanicals	Podophyllum Peltatum and Observations on the Creek and Cherokee Indians: William Bartram's Preservation of Native American Pharmacology (Ray, 2009) Selections from "Collections for an essay towards Materia medica of the United States"	Discussion Board: Cultural Analysis I Final Project: Checkpoint 1 – Topic & Thesis Statement
5	3.3, 3.4, 4.1, 4.2	Heroic medicine and homeopathic medicine and the intersection with pharmacy Influential figures: Rush, Hosack, Hahneman Key Drugs: Calomel, Blue Tartar Emetic, Willow bark Cultural perspective of pharmacist and drug treatments	An Enquiry into the effects of spirituous liquors upon the human body, and their influence upon the happiness of society (Rush, 1791) Allopathy and homeopathy before the judgment of common sense (Hiller, 1872) Historical Vignette Calomel and the American Medical Sects During the	Discussion Board: Case Study Presentation I

			Nineteenth Century (Risse, 1973) The Early Chemical and Pharmaceutical History of Calomel (Urdang, 1948)	
6	3.3, 3.4, 4.1, 4.2	Role of pharmacist: formulator, retailer Divergence from heroic medicine Use of botanicals; key figures: Porche, Hahneman Role of ether in surgery	Francis Peyre Porche: Botanist, Physician, Pharmacist, and Scientist (Gregg, 2018); Drug Hunters Chapter 3	Discussion board: Cultural Analysis II
7	3.1, 3.2	Drug Discovery shifting from plant extraction to chemical synthesis. Botanicals: Blackberry balsam; Key Drugs: Opium, (Pre-cursor to) Aspirin The Civil War's impact on medicine and pharmacy	Domestic Medicine Chests: Microcosms of 18th and 19th Century Medical Practice (Crellin, 1979) Opium Slavery: Civil War Veterans and Opiate Addiction (Jones, 2020) On the antiseptic principle in the practice of surgery (Lister, 1867) Drug Hinters Chapter 4	Final Project Checkpoint 2 – Annotated bibliography Hypothesis Assignment 3
8	1.1, 2.1, 3.1, 3.2, 3.4	Role of Pharmacist During and Post Civil War: compounder, retailer; Formuation of APhA in 1852 - William Proctor Jr End of nostrums	Old fashioned medicine still in use, (Weber, 2020) The Historical Development of an Ethic for American Pharmacy (Beurki, 199)	Hypothesis Assignment 4 Midterm Term Assignment

Commented [SN2]: Should we just pick one of these for calomel?

Commented [SN3R2]: Which reading would best represent the information we're trying to get across about Calomel as a treatment and its relation to Rush/heroic medicine?

			Professionalism and the Nineteenth-Century American Pharmacist (Higby, 1986) Design of American Pharmacies (Helfand, 1994)	
9	1.1, 2.1, 3.1, 3.2, 3.4, 4.1	Drug Discovery: Targeted therapies; Creation of FDA and initial regulation; Germ Theory and key influential figures; Key Drugs: Aspirin, Digitalis, Salvarsan, Elixir Sulfanilamide	Uneasy bedfellows: Science and Politics in the Refutation of Koch's Bacterial Theory of Cholera (2000) Elixirs, Diluents, and the Passage of the 1938 Federal Food, Drug, and Cosmetic Act (Wax, 1995) Drug Hunters: Chapters 5 and 6	Discussion: Case Study Presentation II
10	1.1, 2.1, 3.1, 3.4, 4.1	Role of Pharmacist: Reduction of traditional compounding and dispensing; increase in retail (e.g., soda fountains and commercial goods); Formation of American Society of Hospital Pharmacists (1942) - Harvey A.K. Whitney Patents as legal entities for drugs	<u>Patents in Medicine</u> (Smithsonian, n.d.) Towards a Greater Professional Standing: Evolution of Pharmacy Practice and Education, 1920 - 2020 (Urick and Meggs, 2019) American Hospital Pharmacy from the colonial period to 1930s (Higby, 1994)	Hypothesis Assignment 5
11	3.1, 3.2, 3.4, 4.1, 4.2	Drug Discovery: Targeted Therapies Continued; Key Drugs: Sulfa Drugs, Penicillin; Mustard Gas and Cancer	Pneumonia before antibiotics Therapeutic evolution and evaluation in twentieth-century America. Author, Scott H. Podolsky	Hypothesis Assignment 6

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			The Discovery of Penicillin—New Insights After More Than 75 Years of Clinical Use (Gaynes) New light on the history of Penicillin (Hare, 1982) A History of Cancer Chemotherapy (DeVita & Chu, 2008) Drug Hunters: Chapter 7 & 8	
12	3.1, 3.2, 3.4, 4.1, 4.2	Role of Pharmacist: reduce retail, dispensing increased (due to explosion of new drugs), but of pre-made drugs; evolution of pharmacies for patient care; new innovations in clinical pharmacy services; regulations (Pharmacists and WWII: FDR signed Durham-Reynolds Bull establishing Pharmacy Corps of Army)	American Hospital Pharmacy: A Bicentennial perspective (Berman, 1976) Selections from Pharmacy in World War II (Worthen)	Hypothesis Assignment 7
13	3.1, 3.2, 3.4, 4.1, 4.2	Drug Discovery: Age of Genetics; Key Drugs: Human Insulin (recombinant DNA technology), Methotrexate, Interferon; Statins Evolution of Policy Making in the US	Drug Hunters Chapters 9, 10, & 11 Pills, Policy Making and Perceptions: Inside the FDA During the "Reagan Revolution,'' 1981-1982 Statins: A personal story (Chapter 9, Ten Drugs)	Final Project Checkpoint 3 – Rough Draft

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14	3.1, 3.2, 3.4, 4.1, 4.2	Modern therapies for Cancer and Heart Disease Opioid Crisis Modern Day Role of Pharmacist: Non-dispensing services like vaccinations and medication adherence (Post-Pharmaceutical Care)	Selections from The Emperor of all maladies: a biography of cancer (Mukherjee, 2010) – Part 5: "A Distorted Version of our Normal Selves" pp. 335-392 A Dream Deferred (Hepler, 2010)	Hypothesis Assignment 8
15	3.1, 3.2, 3.4, 4.1, 4.2	Holistic impact of evolution of drug discovery and pharmacy profession on society Resurgence of botanicals via complementary and alternative medicine Pharmacy, Drug Discovery and the Environment	Harvard Newsletter: Drugs in the water Pharmaceuticals and the environment (Bartolo, Azzopardi, and Serracino-Inglott, 2021) Drug Hunters Chapters 12 & Conclusion	Discussion: Post-course reflection Final Project – Final Paper Due

Commented [SN4]: You had identified chapter 5...did you mean part 5?

GE Theme course submission worksheet: Traditions, Cultures, & Transformations

Overview

Courses in the GE Themes aim to provide students with opportunities to explore big picture ideas and problems within the specific practice and expertise of a discipline or department. Although many Theme courses serve within disciplinary majors or minors, by requesting inclusion in the General Education, programs are committing to the incorporation of the goals of the focal theme and the success and participation of students from outside of their program.

Each category of the GE has specific learning goals and Expected Learning Outcomes (ELOs) that connect to the big picture goals of the program. **ELOs describe the knowledge or skills students should have by the end of the course**. Courses in the GE Themes **must meet the ELOs common for all GE Themes** and **those specific to the Theme**, in addition to **any ELOs the instructor has developed specific to that course**. All courses in the GE must indicate that they are part of the GE and include the Goals and ELOs of their GE category on their syllabus.

The prompts in this form elicit information about how this course meets the expectations of the GE Themes. The form will be reviewed by a group of content experts (the Theme Advisory) and by a group of curriculum experts (the Theme Panel), with the latter having responsibility for **the ELOs and Goals common to all themes** (those things that make a course appropriate for the GE Themes) and the former having responsibility for **the ELOs and Goals specific to the topic of this Theme**.

Briefly describe how this course connects to or exemplifies the concept of this Theme (Traditions, Cultures, & Transformations)

In a sentence or two, explain **how this class "fits' within the focal Theme**. This will help reviewers understand the intended frame of reference for the course-specific activities described below.

> *(enter text here)*
>
> The course examines different viewpoints and approaches to medicine and pharmacy through different societal and institutional viewpoints (e.g., eclectics versus allopathic) Additionally, the course examines the rise of pharmacy through the power-authority complex to examine the major drivers of change for society and culture **(e.g., big pharma lobbying for statins as preventative medicine for heart attacks, corruption in cancer treatments**). Finally, the course will cover major paradigm shifts in approaches in the field of pharmacy and medicine (as pharmacy emerges out of medicine). Course readings will center on changes in historical, epidemiology, and cultural factors as they relate to the rise of pharmacy/pharmaceutical sciences.

Connect this course to the Goals and ELOs shared by *all* Themes

Below are **the Goals and ELOs common to all Themes**. In the accompanying table, for each ELO, describe the activities (discussions, readings, lectures, assignments) that provide opportunities for students to achieve those outcomes. The answer should be concise and use language accessible to colleagues outside of the submitting department or discipline. The specifics of the activities matter—listing "readings" without a reference to the topic of those readings will not allow the reviewers to understand how the ELO will be met. However, the panel evaluating the fit of the course to the Theme will review this form in conjunction with the syllabus, so if readings, lecture/discussion topics, or other specifics are provided on the syllabus, it is not necessary to reiterate them within this form. The ELOs are expected to vary in their "coverage" in terms of number of activities or emphasis within the course. Examples from successful courses are shared on the next page.

Goal 1: Successful students will **analyze an important topic or idea at a more advanced and in-depth level than the foundations**. In this context, "advanced" refers to courses that are e.g., synthetic, rely on research or cutting-edge findings, or deeply engage with the subject matter, among other possibilities.

Goal 2: Successful students will **integrate approaches to the theme by making connections to out-of- classroom experiences with academic knowledge or across disciplines and/or to work they have done in previous classes and that they anticipate doing in future**.

	Course activities and assignments to meet these ELOs
ELO 1.1 Engage in critical and logical thinking.	This course will build skills needed to engage in critical and logical thinking via the examination of specific instances of authority, medical paradigm shifts practice, and in cultural perceptions of pharmacognosy and pharmacy as modern pharmaceutics evolved out of botanic medicine. Students will engage with the material through developing critically considered questions, class discussions that dissect those questions, and a multiply step assignment that culminate in an argumentative research paper.
ELO 1.2 Engage in an advanced, in-depth, scholarly exploration of the topic or ideas within this theme.	The course assignments require students to engage with scholarly materials so that they develop a broad understanding about the evolution of drugs from botanicals to pharmaceuticals. The final argumentative research paper requires students to intersect course materials with additional scholarly sources about a topic of their choosing that concerns one of the course's key topics.
ELO 2.1 Identify, describe, and synthesize approaches or experiences.	Students engage in advanced exploration of each module topic through a combination of lectures, readings, and discussions. Lecture Course materials come from a variety of sources to help students understand the professional maturation of pharmacy as it intersected with medicine, authority and structure.

	Each of the modules contains lectures that discuss the medicalization of American medicine and pharmacy emerged out of the cultural and social reflections of the nineteenth century. Additionally, each module will incorporate films or a guest lecture to increase student perspective and broaden their understanding about the impact power and authority have on the profession of pharmacy. Reading All materials are available on Carmen Canvas at no cost to the students. I utilize OSU Libraries access to MUSE (John Hopkins University), University Scholarship Online, Hathi Trust, and similar databases of primary and secondary resources. Additionally, I have resources published by the National Library of Medicine, and other significant medical organizations. Discussions • Students will participate in weekly synchronous Zoom discussions that focus on specific module topics. Weekly discussions are meant to help students use information critically and analytically and discuss controversial topics in a productive and respectful manner. • Discussions include posting a discussion question or a response to a posed discussion question that critically engages the week's material and provokes conversation during the class Zoom session.
ELO 2.2 Demonstrate a developing sense of self as a learner through reflection, self-assessment, and creative work, building on prior experiences to respond to new and challenging contexts.	Final Project There are 3 checkpoint assignments: 1. Students will submit a selected topic and thesis statement for the first checkpoint. 2. An annotated bibliography of sources, correctly formatted in APA citation formatting for the second checkpoint. 3. A rough draft of the paper for the third checkpoint. In 2500-words to 3000-words students analyze an aspect of the impact of the struggle for authority impacted the field of pharmacy. The final project is a cumulative response paper, which must discuss the construction of the field of pharmacy as it intersects as it intersected with medicine, authority and structure. Students must use at least 4-different materials (two of which need to be reading materials, while the other two may be films, or PowerPoint lectures) from this course and, 3-primary sources, which students independently research, and two outside secondary sources that connect the course material with the primary sources.

Example responses for proposals within "Citizenship" (from Sociology 3200, Comm 2850, French 2803):

ELO 1.1 *Engage in critical and logical thinking.*	*This course will build skills needed to engage in critical and logical thinking about immigration and immigration related policy through:* *Weekly reading response papers which require the students to synthesize and critically evaluate cutting-edge scholarship on immigration;* *Engagement in class-based discussion and debates on immigration-related topics using evidence-based logical reasoning to evaluate policy positions;* *Completion of an assignment which build skills in analyzing empirical data on immigration (Assignment #1)*
ELO 1.2 Engage in an advanced, in-depth, scholarly exploration of the topic or ideas within this theme.	*Completion 3 assignments which build skills in connecting individual experiences with broader population-based patterns (Assignments #1, #2, #3)* *Completion of 3 quizzes in which students demonstrate comprehension of the course readings and materials.*
ELO 2.1 *Identify, describe, and synthesize approaches or experiences.*	*Students engage in advanced exploration of each module topic through a combination of lectures, readings, and discussions.* *Lecture* *Course materials come from a variety of sources to help students engage in the relationship between media and citizenship at an advanced level. Each of the 12 modules has 3-4 lectures that contain information from both peer-reviewed and popular sources. Additionally, each module has at least one guest lecture from an expert in that topic to increase students' access to people with expertise in a variety of areas.* *Reading* *The textbook for this course provides background information on each topic and corresponds to the lectures. Students also take some control over their own learning by choosing at least one peer-reviewed article and at least one newspaper article from outside the class materials to read and include in their weekly discussion posts.* *Discussions* *Students do weekly discussions and are given flexibility in their topic choices in order to allow them to take some control over their education. They are also asked to provide* *information from sources they've found outside the lecture materials. In this way, they are able to* *explore areas of particular interest to them and practice the skills they will need to gather information* *about current events, analyze this information, and communicate it with others.* *Activity Example: Civility impacts citizenship behaviors in many ways. Students are asked to choose a TED talk from a provided list (or choose another speech of their interest) and summarize and evaluate what it says about the relationship between civility and citizenship. Examples of Ted Talks on the list include Steven Petrow on the difference between being polite and being civil, Chimamanda Ngozi Adichie's talk on how a single story can perpetuate stereotypes, and Claire Wardle's talk on how diversity can enhance citizenship.*

ELO 2.2 Demonstrate a developing sense of self as a learner through reflection, self-assessment, and creative work, building on prior experiences to respond to new and challenging contexts.	Students will conduct research on a specific event or site in Paris not already discussed in depth in class. Students will submit a 300-word abstract of their topic and a bibliography of at least five reputable academic and mainstream sources. At the end of the semester they will submit a 5-page research paper and present their findings in a 10-minute oral and visual presentation in a small-group setting in Zoom. Some examples of events and sites: The Paris Commune, an 1871 socialist uprising violently squelched by conservative forces
	Jazz-Age Montmartre, where a small community of African-Americans–including actress and singer Josephine Baker, who was just inducted into the French Pantheon–settled and worked after World War I. The Vélodrome d'hiver Roundup, 16-17 July 1942, when 13,000 Jews were rounded up by Paris police before being sent to concentration camps The Marais, a vibrant Paris neighborhood inhabited over the centuries by aristocrats, then Jews, then the LGBTQ+ community, among other groups.

Goals and ELOs unique to Traditions, Cultures, & Transformations

Below are **the Goals and ELOs specific to this Theme**. As above, in the accompanying Table, for each ELO, describe the activities (discussions, readings, lectures, assignments) that provide opportunities for students to achieve those outcomes. The answer should be concise and use language accessible to colleagues outside of the submitting department or discipline. The ELOs are expected to vary in their "coverage" in terms of number of activities or emphasis within the course. Examples from successful courses are shared on the next page.

GOAL 3: Successful students will engage in **a systematic assessment of how cultures and sub-cultures develop and interact, historically or in contemporary society**.

GOAL 4: Successful students will engage in **a systematic assessment of differences among societies, institutions, and individuals' experience within traditions and cultures**.

	Course activities and assignments to meet these ELOs
ELO 3.1 Describe the influence of an aspect of culture (religious belief, gender roles, institutional organization, technology, epistemology, philosophy, scientific discovery, etc.) on at least one historical or contemporary issue.	War is catapults medicine forward. General George Washington required his troops be vaccinated against smallpox, which helped legitimate the practice for the American people. The American Civil War impacted medicine in multiple ways, including igniting the divergence of medicine and pharmacy, and transitioning medicinals from botanics to pharmaceutics. Module 7 focuses on an immature medical system coping with the American Civil War's devasting injuries and illnesses, and how the crisis propelled pharmacy into a separate discipline from medicine. Students will learn about the nineteenth century physician Francis Peyre Porcher. He is a representative example because his career spanned from 1847 to 1893, which coincides with the divergence of pharmacy from medicine. Furthermore, he was a physician during the war, and he wrote a renowned botanic compendium.

ELO 3.2 Analyze the impact of a "big" idea or technological advancement in creating a major and long-lasting change in a specific culture.	In Module 8, students will learn about the discovery of germ theory and the prominent scientists and physicians who discovered the cause of many deadly diseases. While Lister, Koch, and Pasteur were not pharmacists, they did help launch the field of pharmacy into the next level of development. With the discovery of the cause, germs, microbes, funguses, and parasites, the cure could be discovered or developed. Thus, the field of pharmacy expanded with evolution of antitoxins, vaccines, sulpha drugs, antibiotics, and antifungals. Students will learn about Lister, Pasteur, Koch, and the preventatives and curatives developed as a result of their discoveries.
ELO 3.3 Examine the interactions among dominant and sub-cultures.	In Module 1, Students will learn about the authority-power construct and its impact on the evolution of botanicals to pharmaceuticals.
ELO 3.4 Explore changes and continuities over time within a culture or society.	In Module 10 and 11, students will learn how cancer and chemotherapy solidified pharmaceutics as a therapeutic practice of chemicals rather botanics. Students will examine how pharmacy evolves in response to cancer care.
ELO 4.1 Recognize and explain differences, similarities, and disparities among institutions, organizations, cultures, societies, and/or individuals.	In Module 5, students will learn about the medicalization of American medicine and pharmacy emerged out of the cultural and social reflections of the nineteenth century. The struggle for authority in nineteenth-century American medicine was not limited to unbiased scientific research, methodology, or strict evidenced based medicine. The acquisition of legitimacy and authority during the professionalization process of nineteenth-century health care by allopathic physicians, sacrificed sectarianism at the altar of professionalism, so that the allopathic physicians could gain authority over medicine and pharmacy.
ELO 4.2 Explain ways in which categories such as race, ethnicity, and gender and perceptions of difference, impact individual outcomes and broader societal issues	In module 14, students will consider the impact of boom of pharmaceutical development in the 1980s-'90s due to regulation repeals in the Reagan administration. Furthermore, the materials will examine the value of pharmaceutical development and therapeutic benefits. The module will conclude with conversations about the pharmaceutical industry's ethics and the resulting impact on trust and mistrust among various social and cultural groups. For example, the mistrust of pharmaceuticals by minority groups based on past unethical clinical trials. The discrimination and hostility against the Gay community which delayed the development and then the exorbitant costs of antiviral drugs to treat HIV/AIDS.