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## Term Information

Effective Term Spring 2024

## General Information

Course Bulletin Listing/Subject Area Chemistry  
Fiscal Unit/Academic Org Chemistry - D0628  
College/Academic Group Arts and Sciences  
Level/Career Undergraduate  
Course Number/Catalog 3301  
Course Title Science and Policy of Drug Development  
Transcript Abbreviation Sci&PolDrgDmt  
Course Description The course focus is on the science and public policy that govern drug development. The principles of chemistry and biochemistry are applied to research and development of drug therapeutics. The drug approval process of drug safety, toxicity, and clinical trials will focus on pharmaceutical industry challenges of drug affordability, safety, and drug development impact on global public health.  
Semester Credit Hours/Units Fixed: 3

## Offering Information

Length Of Course 14 Week, 12 Week, 7 Week  
Flexibly Scheduled Course Never  
Does any section of this course have a distance education component? No  
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 Chem 1220 and Biology 1113  
Exclusions Not open to students with credit for PHR3301  
Electronically Enforced Yes

## Cross-Listings

Cross-Listings Crosslisted in PHR

## Subject/CIP Code

Subject/CIP Code 40.0501  
Subsidy Level Baccalaureate Course  
Intended Rank Sophomore, Junior, Senior

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## Requirement/Elective Designation

Health and Well-being

## Course Details

### **Course goals or learning objectives/outcomes**

- Students will gain an advanced understanding of the intersection of chemistry, biochemistry, and scientific policy as it applies to drug discovery, development, testing, safety, and global public health.
- Students will develop an understanding the concepts of global health how it influences other disciplines such as public health, social work, pharmaceutical sciences, and other chemistry and biology experiences.
- Students develop critical thinking skills as they analyze multiple dimensions of health and well-being by studying clinical trial results for drugs therapeutics and evaluate data on the side effects, safety, and efficacy of drugs.

### **Content Topic List**

- Understanding the chemistry behind drug and therapeutic development.
- The policies and procedures necessary to bring therapeutics and vaccines safely to market.
- Identify diseases affecting mental and/or physical health and how therapeutics treat those diseases.
- Understanding therapeutic side effects that can negatively affect mental and/or physical health and well-being such as drug dependence.
- Develop an understanding that evolution of current therapeutics and next-generation advancements is continuing process.

### **Sought Concurrence**

Yes

## Attachments

- submission-health-well-being\_CHEM 3301.pdf: GE Theme Submission  
*(Other Supporting Documentation. Owner: Ramirez, Ana G)*
- PHR concurrence for CHEM 3301.pdf: Concurrence Email PHR  
*(Concurrence. Owner: Ramirez, Ana G)*
- CHEM-PHR 3301\_Syllabus 9-6-23.pdf: syllabus  
*(Syllabus. Owner: Ramirez, Ana G)*

## Comments

- Updated syllabus. *(by Ramirez, Ana G on 09/06/2023 11:25 AM)*
- Please see Subcommittee feedback email sent 09/05/2023. *(by Hilty, Michael on 09/05/2023 03:37 PM)*
- Concurrence obtained from Pharmacy for cross-listed course *(by Jackman, Jane E on 06/07/2023 09:55 AM)*
- Please request a concurrence from the College of Pharmacy *(by Vankeerbergen, Bernadette Chantal on 02/16/2023 01:03 PM)*

**COURSE REQUEST**  
3301 - Status: PENDING

Last Updated: Vankeerbergen, Bernadette  
Chantal  
09/06/2023

**Workflow Information**

Status	User(s)	Date/Time	Step
Submitted	Ramirez, Ana G	01/19/2023 02:03 PM	Submitted for Approval
Approved	Jackman, Jane E	02/06/2023 12:57 PM	Unit Approval
Revision Requested	Vankeerbergen, Bernadette Chantal	02/16/2023 01:03 PM	College Approval
Submitted	Ramirez, Ana G	06/07/2023 09:23 AM	Submitted for Approval
Approved	Jackman, Jane E	06/07/2023 09:55 AM	Unit Approval
Approved	Vankeerbergen, Bernadette Chantal	08/22/2023 08:34 AM	College Approval
Revision Requested	Hilty, Michael	09/05/2023 03:37 PM	ASCCAO Approval
Submitted	Ramirez, Ana G	09/06/2023 11:25 AM	Submitted for Approval
Approved	Jackman, Jane E	09/06/2023 11:52 AM	Unit Approval
Approved	Vankeerbergen, Bernadette Chantal	09/06/2023 02:52 PM	College Approval
Pending Approval	Jenkins, Mary Ellen Bigler Hanlin, Deborah Kay Hilty, Michael Neff, Jennifer Vankeerbergen, Bernadette Chantal Steele, Rachel Lea	09/06/2023 02:52 PM	ASCCAO Approval

## CHEM/PHR 3301– SP 2024: Science & Policy of Drug Development

### COURSE OVERVIEW

**Instructor:** Dr. Marie Southerland & TBD (Pharmacy)    **Email Address:**

**Undergraduate Office:** 614-292-6009, Celeste Laboratory, room 110 (CE 110). Stop by any time Monday–Friday, 8:00am–4:30pm for assistance.

**Office Hours & Communication:** A schedule for office hours will be posted to the course website on Carmen. To schedule an alternative appointment, contact one of the instructors via email and include times that may be convenient for you to meet. *Please include CHEM 3301 in the subject line of any email correspondence.* We will do what we can to work with your schedule and would encourage you to directly reach out whenever you feel the need, whether your concerns relate to the material or the course itself or anything else. We will do our best to get back to you via email within 24 hours during the week and 48 hours on the weekend. The instructors will only use official OSU channels for communication both with individual students and the course as a whole (OSU Email, Carmen Inbox, etc.).

**Lecture:** TBD (3 credit hours)

**Prerequisites:** CHEM 1220 and BIOL 1113.

**Course Description:** This theme course takes students on a journey to learn more about the science and processes that govern how molecules become drugs. Fundamental ideas of chemistry and biochemistry will be established, which will allow a study of how those principles are applied to the research and development of drug and therapeutic candidates. The approval process for drugs to come to market will be discussed, focusing on aspects such as safety, toxicity, and clinical trials. Challenges within the pharmaceutical industry, namely affordability, will also be highlighted. Several classes of drugs that treat a variety of afflictions will serve as case studies that students will analyze together in small groups.

**GE Health and Wellness Theme:** This class is part of the Health and Wellness Theme of the General Education program. This course is classified as a 3-credit hour theme class. This course will deeply engage with the process of drug discovery and development, allowing students to understand the various facets involved in this process such as potency, specificity, safety, toxicity, metabolism. This class will also discuss the process of clinical trials and allow students to analyze actual data from a recent drug that went through phase III clinical trials. Students will be able to understand how drug development supports the constant improvement of health and wellness by exploring the intersection of chemical/biochemical principles and global health impacts. In addition, there will be case studies on various drug classes to appreciate how various diseases such as bacterial infection, cancer, and depression are treated. This will enable students to better grasp the complexities of each disease and how drugs are used safely to improve health and wellness through rigorous development and testing.

### GE Course Goals for Health and Wellness Theme:

- 1) Successful students will analyze an important topic or idea at a more advanced and in-depth level than in the Foundations component.
- 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 work they have done in previous classes and that they anticipate doing in the future.
- 3) Students will explore and analyze health and wellbeing through attention to at least two dimensions of wellbeing (e.g. physical, mental, emotional, career, environmental, spiritual, intellectual, creative, financial, etc).

## Learning Outcomes:

Upon the completion of this course, students will be able to:

- 1) Understand and articulate the chemistry behind drug and therapeutic development.
- 2) Explain the policies and procedures necessary to bring therapeutics and vaccines safely to market.
- 3) Identify diseases that affect mental and/or physical health and how therapeutics are able to treat those diseases.
- 4) Summarize possible therapeutic side effects that can negatively affect mental and/or physical health and well-being such as drug dependence.
- 5) Be conscious of drug discovery and development from a variety of perspectives.
- 6) Be aware of the continuing evolution of what is known about current therapeutics and next-generation advancements and be equipped with the knowledge to understand future work in the subject area.

## GE Learning Outcomes for Health and Wellness Theme:

ELO 1.1 Engage in critical and logical thinking about the topic or idea of the theme.	<p>The critical analysis of real clinical trial data will allow students to understand how drug safety must be balanced with drug potency and weigh the pros and cons of a new drug. The students will need to think about whether this new drug would <i>improve</i> health and wellness significantly.</p> <p>Exams will test critical and logical thinking by expecting students to solve scientific problems based on the knowledge they accrue during the course.</p>
ELO 1.2 Engage in advanced, in-depth, scholarly exploration of the topic or idea of the theme.	Students will generate a literature report on an FDA approved drug and read the primary literature to understand how the drug works, the disease it treats, and its safety profile. They will need to synthesize information from various sources to determine if this drug <i>improves</i> health and wellness.
ELO 2.1 Identify, describe, and synthesize approaches or experiences as they apply to the theme.	<p>This class is very interdisciplinary and will expose students to how chemistry is used to design new drugs, which are then evaluated biologically to determine things like potency and safety. Then these drugs are studied in clinical trials in the medical field.</p> <p>Analysis of clinical trial data and the literature report will require students to analyze data from various sources and synthesize them together to build a compelling argument for approval. In-class discussion of the clinical trial results will foster appreciation for different viewpoints, approaches, and experiences. These varying experiences may impact how the pros and cons may be weighted when evaluating a drug.</p>
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.	<p>The challenges of the drug discovery process will be discussed throughout this class. New avenues of drug discovery, especially in the treatment of cancer, will be discussed.</p> <p>Students will prepare a literature report by the end of this class, which will allow them to build upon what they learned in this class and previous experiences. They will also need to discuss various contexts that impact a drug's ability to improve health and wellness such as cost, availability, and other cultural aspects. Students will present on their findings from their literature report to the class, which will also give students an opportunity to assess their peers. Students will then read their peer and instructor feedback to reflect on their presentation.</p>

<p>ELO 3.1 Explore and analyze health and well-being from theoretical, socio-economic, scientific, historical, cultural, technological, policy and/or personal perspectives.</p>	<p>FDA policies that guide drug development and clinical trials will be discussed. A case study on the ethics of high prices for a critical drug will be discussed to understand the socio-economic side of drug development. Various technological advances in the drug discovery pipeline will be discussed in regard to their impact on the industry.</p> <p>Students will analyze clinical trial data and need to discuss the various policies set by the FDA in deciding whether to vote to approve the drug or not.</p>
<p>ELO 3.2 Identify, reflect on, or apply strategies for promoting health and well-being.</p>	<p>Students will identify in their literature report how a specific FDA-approved drug significantly improves the health and well-being of the public by treating a specific disease/disorder. Students will reflect on how the specific drug balances a therapeutic effect with safety/toxicity concerns. Students will also identify and reflect on these factors in analyzing real clinical trial data at the end of Unit II.</p>

## HOW THIS COURSE WORKS

**Credit hours and work expectations:** This is a **3-credit-hour course**. According to [Ohio State policy](#), students should expect around 3 hours per week of time spent on direct instruction in addition to 6 hours of study and preparation to achieve an overall C grade in the course. Students should expect to spend additional time outside of class to receive a higher grade.

**Student Responsibility:** General course policies will be covered in this first lecture section. It is your responsibility to read this material and be familiar with the course content, procedures, and grading. You are also responsible for any announcements concerning course procedures that are made in class or out of class (via Carmen or your OSU email) throughout the semester. If you are absent for any class, it is your responsibility to notify the instructor and get notes or any announcements. Weekly readings, assignments, lecture materials, and due dates will be regularly updated in Carmen. Grades for assignments will be regularly updated in Carmen and will allow you to track your current standing in the course throughout the semester.

## COURSE MATERIALS

### Textbooks:

1. *Fundamentals of Chemistry for Today*, 1<sup>st</sup> ed. Spencer L. Seager, Tiffiny Rye-McCurdy, Ryan J. Yoder (Cengage, published Autumn 2023)
2. *Textbook of Drug Design and Discovery*, 5<sup>th</sup> ed. Edited by Kristian Stromgaard, Povl Krogsgaard-Larsen, and Ulf Madsen. (Rent from Vital Source for 180 days, \$66.00)
3. *Basic Principles of Drug Discovery and Development*, 1<sup>st</sup> ed. Benjamin Blass. (E-text FREE through [OSU Library](#))

### Primary literature sources:

1. Gornall, J and Hoey, A. A pill too hard to swallow: how the NHS is limiting access to high priced drugs. *BMJ* (2016) 354, i14117. <https://doi.org/10.1136/bmj.i4117>
2. Rasmussen, S.G.F., DeVree, B.T., Zou, Y. et al. 2011. Crystal structure of the  $\beta_2$  adrenergic receptor-Gs protein complex. *Nature* 477:549–555
3. Penmatsa, A., Wang, K.H., and Gouaux, E. 2013. X-ray structure of dopamine transporter elucidates antidepressant mechanism. *Nature* 503:85–91
4. Borgelt, L.M., Franson, K.L., Nussbaum, A.M., and Wang, G.S. 2013. The pharmacologic and clinical effects of medical cannabis. *Pharmacotherapy* 33:195–209.
5. Kwak, E.L., Bang, Y.-J., Camidge, D.R. et al. 2010. Anaplastic lymphoma kinase inhibition in non-small-cell lung cancer. *New Engl. J. Med.* 363:1693–1703.

## COURSE SCHEDULE

WEEK	Monday	Wednesday
1	Syllabus and course introduction Unit I: Science of Drug Development <a href="#">Text #1 Ch. 8: Organic structure</a>	<a href="#">Text #1 Ch. 10 Carbonyl functional groups</a>
2	<b>NO CLASS</b>	<a href="#">Text #1 Ch. 12: Amino acids and Proteins</a>
3	<b>Quiz 1</b> <a href="#">Text #2 Ch. 1: Intro to Drug Design &amp; Discovery</a>	<a href="#">Text #2 Ch. 2: Molecular recognition</a>
4	<a href="#">Text #2 Ch. 3: Ligand-Based Drug Design</a>	<a href="#">Text #2 Ch. 5: Drug-Like Properties</a>
5	<b>MIDTERM EXAM</b>	<a href="#">Unit II: Policies of Drug Development</a> <a href="#">Text #3 Ch. 2: History of drug discovery, from ancient times to today</a>
6	<a href="#">Text #3 Ch. 2: Societal and governmental impacts</a>	<a href="#">Text #3 Ch. 8: Safety and Toxicity</a>
7	<a href="#">Text #3 Ch. 8: Safety and Toxicity</a>	<b>Quiz 2</b> <a href="#">Text #3 Ch. 9: Basics of Clinical Trials</a>
8	<a href="#">Text #3 Ch. 9: Basics of Clinical Trials</a>	<a href="#">Text #3 Ch. 11: The Pharmaceutical Industry</a>
9	<a href="#">Ethics of a high-priced drug (BMJ article)</a>	<b>ANALYSIS OF REAL CLINICAL TRIAL RESULTS</b>
10	<b>SPRING BREAK</b>	<b>SPRING BREAK</b>
11	<a href="#">Unit III: Drug Case Studies</a> <a href="#">Text #2 Ch. 11: Enzyme Inhibitors</a>	<a href="#">Text #2 Ch. 11: Enzyme Inhibitors</a>
12	<a href="#">Text #2 Ch. 12: Receptors and Signal Transduction</a>	<a href="#">Text #2 Ch. 18: Antidepressants</a>
13	<b>Quiz 3</b> <a href="#">Text #2 Ch. 19: Opioid and Cannabinoids</a>	<a href="#">Text #2 Ch. 21: Anticancer agents</a>
14	<a href="#">Text #2 Ch. 23: Antibiotics</a>	<a href="#">Text #1 Ch. 13: COVID-19 &amp; Vaccines</a>
15	<b>Student Presentations on FDA approved drugs</b>	<b>Student Presentations on FDA approved drugs</b>
F	<b>Take-home final exam due</b>	

**\*SCHEDULE SUBJECT TO CHANGE! ANY CHANGES WILL BE COMMUNICATED THROUGH OFFICIAL COURSE CHANNELS**

### COURSE TECHNOLOGY

**Course Technology:** For help with your password, university email, Carmen, or any other technology issues, questions, or requests, contact the Ohio State IT Service Desk. Standard support hours are available at [ocio.osu.edu/help/hours](https://ocio.osu.edu/help/hours), and support for urgent issues is available 24/7.

- **Self-Service and Chat support:** [ocio.osu.edu/help](https://ocio.osu.edu/help)
- **Phone:** 614-688-4357(HELP)    **Email:** [servicedesk@osu.edu](mailto:servicedesk@osu.edu)    **TDD:** 614-688-8743

## Baseline Technical Skills and Required Equipment/Software:

- Navigating Carmen: for questions about specific functionality, see the [Canvas Student Guide](#).
- [CarmenZoom virtual meetings](#): Please read the Zoom App handout posted on Carmen on the Modules page.
- [Microsoft Office 365](#): All Ohio State students are eligible for free Microsoft Office 365 through Microsoft's Student Advantage program. Full instructions for downloading can be found [at go.osu.edu/office365help](http://go.osu.edu/office365help).

**Carmen Access** (<https://carmen.osu.edu>): You will need to use [BuckeyePass](#) 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 take the following steps: 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.

## HOW YOUR GRADE IS CALCULATED

Your performance in the course will be evaluated on the basis of total points earned for the semester. The goal of the instructor is for the course average at the end of the semester to fall as close as possible to the dividing line between a C+/C. Thus, should individual assignments have averages well below that threshold, adjustments in points could be made to certain assignments. Assignments in the course schedule below (and the schedule itself) are subject to change. The distribution of points and the OSU grading scale are shown below.

Assignment Type	Points	Description of Assignment and Points	Percentage
Pre-lecture assignments	150	15 pre-lecture assignments worth 10 pts each	15%
Quizzes	150	3 quizzes each worth 50 pts	15%
Exam	150	Midterm exam worth 150 pts	15%
Clinical Trial Analysis	150	Analysis of real clinical trial results	15%
Drug literature report	150	Literature report on an FDA approved drug	15%
Final Presentation	100	Presentation on literature report, peer-feedback, and self-reflection	10%
Take-home final exam	150	Take-home (open-note/book) cumulative final exam	15%
<b>Total Points</b>	<b>1000</b>		<b>100%</b>

### OSU Grading Scale

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

## ASSIGNMENT DESCRIPTIONS:

**Pre-lecture assignments:** Students will answer questions and summarize key terms from the assigned reading before attending lecture. These assignments will be worth 10 pts each and turned in on Carmen prior to the start of class.

**Clinical trial analysis:** Students will be provided with real clinical trial results during class and will work together in groups to analyze the results and make a decision on the approval of the drug. **These groups will be randomly assigned by the instructor.** Each group will need to summarize their results to the class and discuss and debate the pros and cons of the drug. **Students will be graded as a group, however individual contributions will be taken into account and individual scores may be modified accordingly.** Each group member will fill out a group evaluation form to report on the individual contributions of each member of the group.

**Drug literature report:** Students will be assigned an FDA approved drug to research **following Spring Break at the beginning of Unit III (week 11).** Students will compile a literature report on that drug with information about the effectiveness of the drug, its biological target, and safety and toxicity. **This project will be completed individually.**

**Final Presentation:** Each student will prepare a short presentation on their literature report on an FDA approved drug and present in class (70 points). Students will also provide feedback to each other during these presentations (10 points). Finally, students will submit a reflection on their presentation after they have read over the peer and instructor feedback (20 points).

**Take-home final exam:** Students will complete a cumulative take-home final exam, in which they will be able to use their notes and books/literature sources to complete. Each student will complete the exam individually and will have one week to complete the exam. **The final exam must be submitted on the assigned final exam day for this class.**

### OTHER COURSE POLICIES

**Copyright Disclaimer:** 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.

### Marion Campus Syllabus Statements:

Marion campus policies regarding academic misconduct, Office of Disability Services, etc can be found at:  
<https://osumarion.osu.edu/faculty-and-staff/marion-campus-syllabus-statements>

## Health and Safety

**Classroom Safety Measures:** We will follow all university guidelines regarding classroom safety. Since these guidelines may change during the semester given the unpredictable nature of the COVID-19 pandemic, you can find the latest updates to university safety guidelines [here](#).

**COVID-19 Absences:** The university's office of Student Life Disabilities Services (SLDS) will give you the documentation and resources you need if you contract COVID-19, must quarantine due to COVID-19, or have a high-risk factor that leaves you vulnerable to COVID-19. Please request temporary accommodations for COVID-related conditions through SLDS's [online form](#) and reach out to Dr. Southerland and your Lab Supervisors to make a personalized plan for your academic progress while you recover. If COVID-19 prevents you from attending an exam, please read the [Alternate Midterm Policy](#) or [Make-up Final Exam Policy](#) and submit the request form linked within.

## Important Resources for Academic Success

**Disability Services:** The general chemistry department strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), reasonable accommodations can be established in partnership with Student Life Disability Services (SLDS).

*Please note:* Applying for SLDS accommodations in general chemistry is a multi-step process that involves working with both the SLDS office and our office.

- First, follow [these directions](#) to register with SLDS.
- Second, follow [these directions](#) to use your accommodations in CHEM 1110.
- Finally, carefully read all correspondence you receive regarding your SLDS accommodations.

We understand that this setting up SLDS accommodations can be a confusing and daunting process, but Holly is especially good at navigating it, so please reach out to her if you have any questions or uncertainties. You can stop in the office, call (614-292-6009), or [email Holly](#) for help.

## Disability Services Contacts

### Contact SLDS

Email: [slds@osu.edu](mailto:slds@osu.edu)  
Phone: 614-292-3307  
Address: 098 Baker Hall

### Contact Holly Wheaton

Email: [wheaton.4@osu.edu](mailto:wheaton.4@osu.edu)  
Phone: 614-292-6009  
Address: 110B Celeste Lab

**Commitment to Diversity:** Advancing diversity, inclusion, and student success is central to the mission of the Department of Chemistry and Biochemistry. We are excited to serve and support students from diverse backgrounds with respect to race, ethnicity, gender, sexual orientation, socioeconomic status, disability, religion, and national origin. The department's faculty and staff have collectively committed to create a welcoming and inclusive learning environment, both virtually and in-person. We want every student to successfully learn and achieve their academic and career goals.

We acknowledge that systemic racism and various forms of injustices have contributed to the marginalization and exclusion of many student populations in scientific fields of study including chemistry. As a department, we have made progress towards enacting equity-minded actions to address systemic inequities and barriers that students encounter in the classroom, department, and university. However, we continually strive to do more to advance the success of our diverse student body. As we do the important work of teaching and supporting students, we welcome your feedback and look forward to learning from you! Please email [Dr. Southerland](#) or the Vice Chair of Undergraduate Studies, [Dr. Jane Jackman](#), with your suggestions, concerns, and questions. We value each student's perspectives and are excited to collectively work towards ensuring Black, Latinx, Indigenous, LGBTQ+, and female students are well-represented in scientific disciplines and professions.

**Mental Health Resources:** As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, feeling down, difficulty concentrating and/or lack of motivation. Mental health concerns or stressful events may lead to diminished academic performance or impact 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.

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](https://ccs.osu.edu) or calling 614-292-5766. If you need immediate assistance, call 614-292-5766 and request an urgent appointment. If it is after hours, press 2. 24-hour emergency help is also available through the 24/7 National Suicide Prevention Hotline by dialing 988 or at [suicidepreventionlifeline.org](https://suicidepreventionlifeline.org).

# Academic Conduct

## ACADEMIC CONDUCT IN CHEMISTRY

The university expects us all to know and adhere to the University Code of Student Conduct, so please do check it out [here](#). Below are some highlights you need to know for the purposes of CHEM 1110.

Any graded material you submit (for any component of this course) must be your own work. We are obligated by university rules to report any suspicions that you have compromised academic integrity or committed academic misconduct.

Here are some examples of academic misconduct in chemistry courses:

### On exams:

- Having another person take your exam.
- Receiving assistance from another person while taking the exam (including looking at another student's exam without their knowledge).
- Taking screenshots or photos of the exam.
- Using screen sharing software during the exam.
- Sharing or receiving exam questions or materials in group chats, text messages, phone calls, or on websites, apps, and the like.

And here are some hints on how you can avoid academic misconduct<sup>1</sup>:

1. **Acknowledge Your Sources.** Whenever you use words or ideas that are not your own, use quotation marks, cite your source in a footnote, and end your work with a list of sources consulted.
2. **Protect Your Work.** In examinations, do not allow your neighbors to see what you have written; you are the only one who should receive credit for what you know.
3. **Avoid Suspicion.** Do not put yourself in a position where you can be suspected of having copied another person's work, or of having used unauthorized notes to complete an assignment or exam.
4. **Do your own work.** The purpose of assignments is to develop your skills and measure your progress. Letting someone else do your work defeats the purpose of your education and may lead to serious charges against you.
5. **Never fabricate data, citations, or experimental results.**
6. **Know Your Rights.** Do not let other students in your class diminish the value of your achievement by taking unfair advantage. Report any academic dishonesty you see.

*If you are unsure about what constitutes academic misconduct, PLEASE ASK a member of your instructional team*

## ACADEMIC CONDUCT IN THE UNIVERSITY

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>.

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<sup>1</sup> From Northwestern University, "[Academic Integrity: A Basic Guide.](#)" Pg. 5. Sept 2020.

# GE Theme course submission worksheet: Health & Wellbeing

## Overview

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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 (Health & Wellbeing)

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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)*

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

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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
<b>ELO 1.1</b> Engage in critical and logical thinking.	
<b>ELO 1.2</b> Engage in an advanced, in-depth, scholarly exploration of the topic or ideas within this theme.	
<b>ELO 2.1</b> Identify, describe, and synthesize approaches or experiences.	
<b>ELO 2.2</b> 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.	

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

<b>ELO 1.1</b> Engage in critical and logical thinking.	<i>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)</i>
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	<p>Completion 3 assignments which build skills in connecting individual experiences with broader population-based patterns (Assignments #1, #2, #3)</p> <p>Completion of 3 quizzes in which students demonstrate comprehension of the course readings and materials.</p>
<p><b>ELO 2.1</b> Identify, describe, and synthesize approaches or experiences.</p>	<p>Students engage in advanced exploration of each module topic through a combination of lectures, readings, and discussions.</p> <p><u>Lecture</u>  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.</p> <p><u>Reading</u>  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.</p> <p><u>Discussions</u>  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.</p> <p>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.</p>
<p><b>ELO 2.2</b> 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.</p>	<p>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.</p> <p>Some examples of events and sites:  The Paris Commune, an 1871 socialist uprising violently squelched by conservative forces</p>

	<p><i>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.</i></p> <p><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</i></p> <p><i>The Marais, a vibrant Paris neighborhood inhabited over the centuries by aristocrats, then Jews, then the LGBTQ+ community, among other groups.</i></p>
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**Goals and ELOs unique to Health & Wellbeing**

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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:** Students will explore and analyze health and wellbeing through attention to at least two dimensions of wellbeing. (Ex: physical, mental, emotional, career, environmental, spiritual, intellectual, creative, financial, etc.).

	Course activities and assignments to meet these ELOs
<b>ELO 3.1</b> Explore and analyze health and wellbeing from theoretical, socio-economic, scientific, historical, cultural, technological, policy, and/or personal perspectives.	
<b>ELO 3.2</b> Identify, reflect on, or apply strategies for promoting health and well-being.	