



Chemistry 6940/8940 **Scientific Communication**

The University of Toledo

College of Natural Sciences and Mathematics

Department of Chemistry & Biochemistry

CHEM 6940-001 (CRN 45769), CHEM 6940-002 (CRN 58426)

CHEM 8940-001 (CRN 45770), CHEM 8940-002 (CRN 58427)

Instructor:	Dr. Joseph Schmidt	Class Location:	BO 2059
E-Mail:	Joseph.Schmidt@utoledo.edu	Class Day/Time:	F 2:00-3:50 PM
Office Hours:	MW 1:00 PM – 3:30 PM and by appointment	Credit Hours:	1-2 credit hours
Office:	WO 3277	Term:	Fall 2021
Phone:	419-530-1512		

CATALOG DESCRIPTION:

Instruction on different modes of scientific communication: written communication, oral presentation, and research proposals, to enable students to think and converse competently in the language of science.

STUDENT LEARNING OUTCOMES:

Upon completion of the course, students will

- Be familiar with methods for searching the chemical and biochemical literature and databases.
- Understand ethical responsibilities associated with scientific communication.
- Understand fundamental principles of clear writing and how to apply those principles to specific formats (research papers and proposals).
- Gain practical experience in literature searching, critical evaluation of published research, writing drafts, peer review, revision and oral presentations.

TEACHING STRATEGIES:

The learning outcomes will be accomplished through completion of assigned readings, student participation in discussion of topics from readings and lectures, lectures and presentations by instructors, and practical exercises (writing, reviewing, revising, oral presentation).

PREREQUISITES AND COREQUISITES:

None

COURSE MATERIALS:

There are no required textbooks or other materials to purchase. Readings for each class will be handed out in class and/or found on the course Blackboard page. The resources used in the class will include the following:

- *The ACS Style Guide: Effective Communication of Scientific Information*; Coghill, Anne M. and Garson, Lorrin R. Eds. American Chemical Society: Washington, D.C., 2006.
- *On Being A Scientist: Ethical Conduct in Research (Third Edition)*; National Academy Press: Washington D.C., 2010.
- *Honor in Science*; Sigma Xi, The Scientific Research Society, Inc.: Research Triangle Park, N.C.: 2000.

If students wish to obtain additional resources to help with improving their skills as a writer or to use as references, there are many excellent books that can help writers improve their craft. Here are a few possibilities:

- Strunk, W., Jr.; White, E. B. *The Elements of Style*, 3rd ed.; Allyn & Bacon: New York, 1995.
- Zinsser, W. *On Writing Well: The Classic Guide to Writing Nonfiction*, 6th ed.; Harper-Perennial: New York, 1998.
- Zinsser, W. *Writing To Learn*; Harper Collins: New York, 1993.
- Pinker, S. *The Sense of Style: The Thinking Person's Guide to Writing in the 21st Century*; Penguin: New York, 2014.

COURSE EXPECTATIONS:

- Students are expected to attend all scheduled class meetings.
- Students should arrive on time for class, and prepared to discuss readings and other assignments.
- Each assignment should be turned in on time at the beginning of class on the day it is due. Late assignments will be accepted only under extenuating circumstances, and credit will be deducted for each day an assignment is late.
- Plagiarism is a serious violation of academic honesty and will not be tolerated. This topic will be discussed exhaustively during the lectures on Ethical Issues in Science.

OVERVIEW OF COURSE GRADE ASSIGNMENT:

Midterm Grading

Midterm grading serves as a point in the term where the instructor of record may provide a midterm grade assessment and may identify any student who has never attended, has stopped attending, or who is not actively participating in the course. In addition, students may use their midterm grade to help make a decision in regards to withdrawing from the course.

The U.S. Department of Education requires the University to document both active participation and satisfactory academic progress as part of the compliance with federal financial aid regulations. Students receiving Title IV Federal Aid funds are required to have regular attendance and satisfactory academic progress in their courses to receive federal aid.

Final Grading

Your final grades will be calculated based on the final percentage of points obtained.

GRADING

Attendance, preparation and class participation	10 points
Writing assignment 1: Short narrative essay	10
Literature search assignment	10
Writing assignment 2: Summary and analysis of paper from the primary literature	20
Writing assignment 3: Mock research paper or proposal	
Draft	10
Peer review of another student's draft	5
Revision	15
10-12 minute oral presentation	20

It is understood that students will be coming into this course with a wide range of abilities in expressing themselves clearly in oral and written form. It will not be necessary for a student to become an exceptional writer and presenter by the end of the course to do well in the course. Completing the assignments diligently and on time, participating fully in discussions and workshops, and improving one's communication skills from the beginning to the end of the course will be the primary considerations in determining the final course grade.

Drop, Withdrawal and Incomplete Grades:

- Course drop and withdrawal procedures have been set by the University faculty. *Dropped* courses do not appear on your transcript. If you are in a course after that date, there will be a grade on your transcript (A-F, W, or Incomplete). The deadline for dropping is **September 13th**.

- You may *withdraw* from the course and receive a grade of **W**. W's do not affect your GPA. For both dropping the course or withdrawing you should go to the Registrar's Office in Rocket Hall. You do not need your instructor's permission for either process. Please note that course registration changes might change your **financial aid**. The deadline for withdrawal is the end of the 10th week, **November 5th**.
- A course grade of **Incomplete** is given only to those who have completed all but a small percentage of course requirements for an acceptable reason.

Academic Dishonesty:

As a student in this course and enrolled at The University of Toledo you should be familiar with the policies that govern the institution's academic processes, for example, Academic Dishonesty, Enrollment Status, and Grades and Grading. Please consult the Graduate Academic Policies via the UT website.

Graduate Policies: <http://www.utoledo.edu/policies/academic/graduate/>

Institutional Classroom Attendance Policy:

Please be aware that the university has implemented an attendance policy, which requires faculty to verify student participation in every class a student is registered at the start of each new semester/course. For this course, if you have not attended/participated in class (completed any course activities or assignments) within the first 14 days, I am required by federal law to report you as not attended. Unfortunately, not attending/participating in class impacts your eligibility to receive financial aid, so it is VERY important that you attend class and complete course work in these first two weeks. Please contact me as soon as possible to discuss options and/or possible accommodations if you have any difficulty completing assignments within the first two weeks.

Special Needs:

If you have special needs with respect to your participation in this course, please make an appointment to discuss this matter with your instructor. The instructor will work with you and the Office of Accessibility to make appropriate accommodations for your needs.

UNIVERSITY POLICIES

Policy Statement on Non-Discrimination on the Basis of Disability (ADA)* The University is an equal opportunity educational institution. Please read [The University's Policy Statement on Nondiscrimination on the Basis of Disability Americans with Disability Act Compliance](#). Students can find this policy along with other university policies listed by audience on the [University Policy webpage \(http://www.utoledo.edu/policies/audience.html/#students\)](http://www.utoledo.edu/policies/audience.html/#students).

ACADEMIC ACCOMMODATIONS

The University of Toledo embraces the inclusion of students with disabilities. We are committed to ensuring equal opportunity and seamless access for full participation in all courses. For students who have an Accommodations Memo from the Office of Accessibility and Disability Resources, I invite you to correspond with me as soon as possible so that we can communicate confidentially about implementing accommodations in this course.

For students who have not established accommodations with the Office of Accessibility and Disability Resources and are experiencing disability access barriers or are interested in a referral to health care resources for a potential disability, please connect with the office by calling 419.530.4981 or sending an email to StudentDisability@utoledo.edu.

ACADEMIC AND SUPPORT SERVICES

Please follow this link to view a comprehensive list of [Student Academic and Support Services](#) (<http://www.utoledo.edu/studentaffairs/departments.html>) available to you as a student

SAFETY AND HEALTH SERVICES FOR UT STUDENTS

Please use the following link to view a comprehensive list [Campus Health and Safety Services](#) available to you as a student.

INCLUSIVE CLASSROOM STATEMENT

In this class, we will work together to develop a learning community that is inclusive and respectful. Our diversity may be reflected by differences in race, culture, age, religion, sexual orientation, gender identity/expression, socioeconomic background, and a myriad of other social identities and life experiences. We will encourage and appreciate expressions of different ideas, opinions, and beliefs so that conversations and interactions that could potentially be divisive turn, instead, into opportunities for intellectual and personal development.

SPECIAL COURSE EXPECTATIONS DURING COVID-19

Maintaining a safe campus during the ongoing COVID-19 pandemic remains a top priority. UToledo continues to follow the guidance of the U.S. Centers for Disease Control and Prevention and Ohio Department of Health to keep our campus safe.

ATTENDANCE

The University of Toledo has a missed class policy. It is important that students and instructors discuss attendance requirements for the course. Before coming to campus each day, students should take their temperature and complete a self-assessment for symptoms of COVID-19, such as cough, chills, fatigue or shortness of breath. Anyone with a temperature at or above 100.0 degrees Fahrenheit or who is experiencing symptoms consistent with COVID-19 should not come to campus and should contact their primary care physician or the Main Campus Health Center at 419.530.3451 or Health Science Campus Student Health and Wellness Center at 419.383.5000. For more information on the symptoms of COVID-19, please go to <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>

COVID-19 testing for sick students is available on both Main Campus and Health Science Campus. Call 419.383.4545 for an appointment. Absences due to COVID-19 quarantine or isolation requirements **are** considered excused absences. Students should notify their instructors and follow the protocols summarized in this document on [Navigating COVID-Related Course Concerns](#).

In the event that you have tested positive for COVID-19 or have been diagnosed as a probable case, please review the [CDC guidance](#) on self-isolation and symptom monitoring, and report the disclosure to the Division of Student Affairs by emailing StudentAffairs@utoledo.edu or by connecting with their on-call representative at 419.343.9946. Disclosure is voluntary and will only be shared on a need to know basis with staff such as in the Office of Student Advocacy and Support, The Office of Residence Life, and/or the Office of Accessibility and Disability Resources to coordinate supportive measures and meet contact tracing requirements.

FACE COVERINGS

Face coverings are required while on campus, except while eating, alone in an enclosed space, or outdoors practicing social distancing. Students will not be permitted in class without a face covering. If you have a medical reason preventing you from wearing a face covering due to a health condition deemed high-risk by the CDC, submit an [online application](#) to request an accommodation through the Office of Accessibility and Disability Resources. Students will need to provide documentation that verifies their health condition or disability and supports the need for accommodations. Students already affiliated with the Office of Accessibility and Disability Resources who would like to request additional accommodations due to the impact of COVID-19, should contact their accessibility specialist to

discuss their specific needs. You may connect with the office by calling 419.530.4981 or sending an email to StudentDisability@utoledo.edu.

VACCINATION

Doctors and other health care professionals agree that the best way to protect ourselves and each other is to get vaccinated. Case data clearly show that vaccines remain highly effective at preventing serious illness from COVID, including the highly contagious delta variant. If you have not yet received your COVID vaccine, the University encourages you do so as soon as possible. No appointment is needed to get the shot at the UTMC Outpatient Pharmacy, University Health Clinic or Main Campus Pharmacy. Once you receive the COVID vaccination, please register on the COVID Vaccine Registry site at: <https://utvaccinereg.utoledo.edu/>.

SPECIAL NOTES

It is important to note that based on the unpredictability of the COVID-19 virus, things can change at any time. So please be patient and understanding as we move through the semester. Please refer to <https://www.utoledo.edu/coronavirus/> on a regular basis for updates to current requirements or mandates. I also ask that you keep me informed of concerns you may have about class, completing course work/assignments timely and/or health concerns related to COVID.

Course Schedule

Date	Topic	Major Assignment Due Dates
9/3	Course overview Types of scientific communication	
9/10	The philosophy and methods of science (and writing) How to distinguish good scientific writing from bad	
9/17	Reading and critically analyzing research papers	Writing assignment #1 due
9/24	The chemical literature and scientific databases Guest Lecturer: Wade Lee, Science Librarian, Carlson Library	
10/1	The chemical literature and scientific databases Guest Lecturer: Wade Lee, Science Librarian, Carlson Library	Literature search assignment due
10/8	Ethical issues in science - Part One	
10/15	No Class - Fall Break	
10/22	Ethical issues in science - Part Two	Writing assignment #2 due
10/29	How to write good well	
11/5	Writing up your results - the research paper	
11/12	Writing a research proposal; Communicating science orally and visually - talks and posters	
11/19	Writing workshop	Draft of writing assignment #3 due
11/26	No Class - Thanksgiving	
12/3	Student oral presentations	Peer review due
12/10	Student oral presentations	
12/17	Student oral presentations (2:45 - 4:45 PM) (if necessary)	Revised writing assignment #3 due