

MSE492 / CHEM494 – Lab Safety Fundamentals

Fall 2026

Course Description:

The primary goals of the course are to 1) introduce basic concepts in laboratory safety, 2) increase awareness of safety issues in research labs and lab courses and 3) provide basic knowledge in dealing with simple lab safety problems. Information will be provided via in-person lectures. Course evaluation will consist of successful completion of in-class quizzes and Division of Research Safety (DRS) online training modules as well as an in-person fire extinguisher training.

Drops/Withdrawals:

Please note that MSE492 / CHEM494 has a scheduled duration of approximately 2.5 weeks during the semester and is thus considered a nonstandard class. As such, it has different rules for drop deadlines and refund percentages. Specific information about this matter can be found at <https://registrar.illinois.edu/tuition-fees/refunds/>.

Instructor:

Dr. Nathan Gabrielson

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Office: 209 Ceramics

Course Text:

There is no required textbook for the class. Copies of lectures will be provided as electronic resources on the course website. However, students are encouraged to review Laboratory Safety for Chemistry Students by Finster and Hill. An eTextbook is available for free via the American Chemical Society (ACS) at <https://institute.acs.org/acs-center/lab-safety/education-training/college-univ-guidelines/laboratory-safety-for-chemistry-students-etextbook.html> (free ACS login required).

Website:

<https://canvas.illinois.edu>

Meetings and Topics:

Class meets Mondays and Wednesdays in 100 Noyes Laboratory from Wednesday, September 9 through Wednesday, September 23. Although the class is scheduled from 7:00PM-8:50PM, we will likely end sooner than that. In addition, in-person fire extinguisher trainings will be conducted once during the course. Students are expected to attend one of the trainings at a time that fits their schedule. Lecture topics and fire extinguisher training will follow the schedule shown below:

Class Meetings:

Date	Lecture Topic
Wednesday, September 9	General Laboratory Safety
Monday, September 14	Risk Assessment
Wednesday, September 16	Chemical Safety
Monday, September 21	Biological Safety
Wednesday, September 23	Laser Safety + Research Security

In-Person Fire Extinguisher Training (see <https://fs.illinois.edu/fire-extinguisher-training/>)

Date	Time	Location	Signup Link
Tuesday, Sept. 1	10:00-10:50AM	Room 107, Animal Sciences Laboratory	https://forms.illinois.edu/sec/1770358591
Wednesday, Sept. 9	2:00-2:50PM	Room 302, Architecture Building	https://forms.illinois.edu/sec/1817133457
Thursday, Sept. 17	9:00-9:50AM	Room 112, Transportation Building	https://forms.illinois.edu/sec/617753449
Thursday, Sept. 17	10:00-10:50AM	Room 112, Transportation Building	https://forms.illinois.edu/sec/84333811
Friday, Oct. 9	1:00-1:50PM	Room 218, Ceramics Building	https://forms.illinois.edu/sec/560992035
Friday, Oct. 9	2:00-2:50PM	Room 218, Ceramics Building	https://forms.illinois.edu/sec/1722155620
Tuesday, Oct. 20	9:00-9:50AM	Room 393, Bevier Hall	https://forms.illinois.edu/sec/478097999
Tuesday, Oct. 20	10:00-10:50AM	Room 393, Bevier Hall	https://forms.illinois.edu/sec/1871752946
Wednesday, Nov. 4	9:00-9:50AM	Room 3217, Everitt Laboratory	https://forms.illinois.edu/sec/1618623901
Wednesday, Nov. 4	10:00-10:50AM	Room 3217, Everitt Laboratory	https://forms.illinois.edu/sec/715817454
Thursday, Nov. 19	1:00-1:50PM	Room 2055, Sidney Lu Mech. Eng. Bldg.	https://forms.illinois.edu/sec/388529053
Friday, Dec. 4	11:00-11:50AM	Room 329, Davenport Hall	https://forms.illinois.edu/sec/955468762

Grading/Evaluation:

MSE492 / CHEM494 is graded on a Satisfactory (S) / Unsatisfactory (U) scale. In order to receive a Satisfactory score, it is necessary to 1) attend class and successfully complete the in-class quizzes, 2) complete the required online training modules offered through the Division of Research Safety (DRS), 3) upload the DRS completion certificates to the course website, and 4) complete the in-person fire extinguisher training.

In-Class Quizzes

Multiple choice quizzes covering the lecture topics will be given at each class and are intended to serve as a check that the lecture material is understood. Quizzes will be given at the start of class and are due at the end.

DRS Training Modules

Visit <https://ovcrportal.research.illinois.edu/> and select the "Training Library" menu item to access the training material. After finishing the required training, submit the certificate at <https://canvas.illinois.edu> as proof of completion. If training has been completed prior to MSE492 / CHEM494, you may upload your existing, valid certificate as proof.

Training Module	Due Date
Laboratory Safety Training	Sunday, September 13 @ 11:59PM
Risk Assessment for Research Procedures	Sunday, September 20 @ 11:59PM
Chemical Safety: An Introduction	Sunday, September 20 @ 11:59PM
Understanding Biosafety	Sunday, September 27 @ 11:59PM
Laser Safety	Sunday, September 27 @ 11:59PM
Consolidated Research Security	Sunday, September 27 @ 11:59PM

Illness/Absences:

You are expected to attend all class meetings. If you cannot attend due to illness or some other conflict, please contact the instructor.

Academic Integrity:

Academic dishonesty may result in a failing grade. Every student is expected to review and abide by the Academic Integrity Policy found at <https://studentcode.illinois.edu/article1/part4/1-401/>. Ignorance is not an excuse for any academic dishonesty. It is your responsibility to read this policy to avoid any misunderstanding. Do not hesitate to ask if you are in doubt about what constitutes plagiarism, cheating, or any other breach of academic integrity.

Students with Disabilities:

To obtain disability-related academic adjustments and/or auxiliary aids, students with disabilities must contact the course instructor as soon as possible and provide the instructor with a Letter of Academic Accommodations from Disability Resources and Educational Services (DRES). To ensure that disability-related concerns are properly addressed from the beginning, students with disabilities who require assistance to participate in this class should apply for services with DRES and see the instructor as soon as possible. If you need accommodation for any sort of disability, please speak to me after class. DRES provides students with academic accommodations, access, and support services. To contact DRES, visit 1207 S. Oak St., Champaign, call 217-333-1970, e-mail mdisability@illinois.edu or visit the DRES website at <http://www.disability.illinois.edu/>.

Mental Health:

Significant stress, mood changes, excessive worry, substance/alcohol misuse or interferences in eating or sleep can have an impact on academic performance, social development, and emotional wellbeing. The University of Illinois offers a variety of confidential services including individual and group counseling, crisis intervention, psychiatric services, and specialized screenings which are covered through the Student Health Fee. If you or someone you know experiences any of the above mental health concerns, it is strongly encouraged to contact or visit any of the University's resources provided below. Getting help is a smart and courageous thing to do for yourself and for those who care about you.

Counseling Center (217) 333-3704

McKinley Health Center (217) 333-2700

National Suicide Prevention Lifeline (800) 273-8255

Rosecrance Crisis Line (217) 359-4141 (available 24/7, 365 days a year)

If you are in immediate danger, call 911.

Disruptive Behavior:

Behavior that persistently or grossly interferes with classroom activities is considered disruptive behavior and may be subject to disciplinary action. Such behavior inhibits other students' ability to learn and an instructor's ability to teach. A student responsible for disruptive behavior may be required to leave class pending discussion and resolution of the problem and may be reported to the Office for Student Conflict Resolution (<https://conflictresolution.illinois.edu>; mconflictresolution@illinois.edu; 333-3680) for disciplinary action.

Emergency Response Recommendations:

Emergency response recommendations and campus building floor plans can be found at the following website: <https://police.illinois.edu/em/run-hide-fight/>.

Religious Observances:

Illinois law requires the University to reasonably accommodate its students' religious beliefs, observances, and practices in regard to admissions, class attendance, and the scheduling of examinations and work requirements. Students should complete the Request for Accommodation for Religious Observances form should any instructors require an absence letter in order to manage the absence. In order to best facilitate planning and communication between students and faculty, students should make requests for absence letters as early as possible in the semester in which the request applies.

Sexual Misconduct Reporting Obligation:

The University of Illinois is committed to combating sexual misconduct. Faculty and staff members are required to report any instances of sexual misconduct to the University's Title IX and Disability Office. In turn, an individual with the Title IX and Disability Office will provide information about rights and options, including accommodations, support services, the campus disciplinary process, and law enforcement options.

A list of the designated University employees who, as counselors, confidential advisors, and medical professionals, do not have this reporting responsibility and can maintain confidentiality, can be found at

<http://wecare.illinois.edu/resources/students/#confidential>.

Other information about resources and reporting is available at <http://wecare.illinois.edu>.

September 2026

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
6	7	8	9 General Laboratory Safety	10	11	12
13 Laboratory Safety Training DRS Module Due @ 11:59PM	14 Risk Assessment	15	16 Chemical Safety	17	18	19
20 Risk Assessment & Chemical Safety DRS Modules Due at 11:59PM	21 Biological Safety	22	23 Laser Safety & Research Security	24	25	26
27 Understanding Biosafety, Laser Safety & Research Security Modules Due @ 11:59PM	28	29	30			

*Fire-Extinguisher Training Signup: See <https://fs.illinois.edu/fire-extinguisher-training/> for signup links and additional dates.