

MSE492 / CHEM494 – Lab Safety Fundamentals

Spring 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

Phone: 217-300-3906

Email: gabrilsn@illinois.edu

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.

Website:

<https://canvas.illinois.edu>

Meetings and Topics:

Class meets Mondays and Wednesdays in 100 Noyes Laboratory from Monday, March 23 through Monday, April 6. 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 |
|---------------------|----------------------------------|
| Monday, March 23 | General Laboratory Safety |
| Wednesday, March 25 | Risk Assessment |
| Monday, March 30 | Chemical Safety |
| Wednesday, April 1 | Biological Safety |
| Monday, April 6 | Laser Safety + Research Security |

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

| Date | Time | Location | Signup Link |
|--------------------|---------------|------------------------|---|
| Wednesday, Jan. 28 | 10:00-10:50AM | 103 Bevier Hall | https://forms.illinois.edu/sec/1356734876 |
| Tuesday, Feb. 10 | 2:00-2:50PM | 2079 Natural History | https://forms.illinois.edu/sec/252426134 |
| Friday, Feb. 27 | 9:00-9:50AM | 101 Temple Hoyne Buell | https://forms.illinois.edu/sec/1219762228 |
| Thursday, Mar. 12 | 2:00-2:50PM | 386 Armory | https://forms.illinois.edu/sec/1647330548 |
| Thursday, Mar. 12 | 3:00-3:50PM | 386 Armory | https://forms.illinois.edu/sec/460713524 |
| Wednesday, Mar. 25 | 2:00-2:50PM | 106B3 Engineering Hall | https://forms.illinois.edu/sec/1998942518 |
| Wednesday, Mar. 25 | 3:00-3:50PM | 106B3 Engineering Hall | https://forms.illinois.edu/sec/970178461 |
| Tuesday, Apr. 7 | 9:00-9:50AM | 158 Loomis Lab | https://forms.illinois.edu/sec/2120521918 |
| Tuesday, Apr. 7 | 10:00-10:50AM | 158 Loomis Lab | https://forms.illinois.edu/sec/557122766 |
| Monday, Apr. 20 | 9:00-9:50AM | 325 David Kinley Hall | https://forms.illinois.edu/sec/232597194 |
| Monday, Apr. 20 | 10:00-10:50AM | 325 David Kinley Hall | https://forms.illinois.edu/sec/1204630313 |
| Wednesday, May 6 | 2:00-2:50PM | 1065 Lincoln Hall | https://forms.illinois.edu/sec/1266997010 |

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, March 29 @ 11:59PM |
| Risk Assessment for Research Procedures | Sunday, March 29 @ 11:59PM |
| Chemical Safety: An Introduction | Sunday, April 5 @ 11:59PM |
| Understanding Biosafety | Sunday, April 5 @ 11:59PM |
| Laser Safety | Sunday, April 12 @ 11:59PM |
| Consolidated Research Security | Sunday, April 12 @ 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>.

March 2026

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|---|---------------------------------|---------|--|----------|--------|----------|
| 22 | 23 General Laboratory Safety | 24 | 25 Risk Assessment *Fire Extinguisher Training | 26 | 27 | 28 |
| 29 Laboratory Safety & Risk Assessment DRS Modules Due @ 11:59PM | 30 Chemical Safety | 31 | | | | |

April 2026

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--|---------------------------------------|----------------------------------|------------------------|----------|--------|----------|
| | | | 1 Biological Safety | 2 | 3 | 4 |
| 5 Chemical Safety & Biosafety DRS Modules Due @ 11:59PM | 6 Laser Safety & Research Security | 7 *Fire Extinguisher Training | 8 | 9 | 10 | 11 |
| 12 Laser Safety & Research Security DRS Modules Due @ 11:59PM | 13 | 14 | 15 | 16 | 17 | 18 |

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