Course Information

CSE 303LR: Intermediate Experiential Learning/Research – 3 + 1 credits (Fall 2025)

- **Required lectures:** Tuesdays, 3:30 pm – 4:50 pm
    - **Location:** Clemen 217
    - There will be quizzes that count towards final grade during the lectures.
    - No lectures on Thursday and no meetings at recitation time.
        - However, your project team may have required meetings at officially scheduled times. See Course requirements.
- **Required weekly project meeting:** please check with assigned project mentor
- **Instructor:** Zhuoyue Zhao
- **Mode of instruction:** in-person
- **Important Dates:**
    - **Project preference survey due:** 8/25/2025 (please submit as early as possible)
    - **Add/drop deadline:** 9/2/2025
    - **Midterm milestone date:** 10/14/2025
    - **Last day to resign:** 11/12/2025
    - **Final presentation**: 12/3/2025, 12/9/2025
    - **Final report due:** 12/14/2025
- **Course Information:** https://cse.buffalo.edu/~zzhao35/elrr/index.html
- **Announcement and logistics Q&A:** [insert Piazza link]

Course Requirements

1. Attendance and participation in once-per-week lectures are mandatory. While we do not take attendance scores, there are required quizzes, labs, presentation and/or demonstration that will count towards your final grade.
2. Attendance and participation in regular meetings with the project team is required. Each project mentor may set the regular meeting times outside the scheduled lecture or recitation time and you are expected to communicate your availability in the first week of the semester to help finalize the meeting schedules. It is up to each team to decide the meeting schedule, but it will be no less than 1 hour in aggregate per week.

   If you're unavailable for meeting occasionally, you must seek prior approval from the project mentor and complete any required documentation or offline communication to avoid penalties to your grades.
3. As a special course focusing on conducting research, you are expected to put in additional effort in addition to lectures. The amount of work expected is at minimum 12 hours, including 1 hour for attending lectures, 1 hour for meeting, and 10 hours for independent and collaborative research effort each week.

4. There may be project-specific requirements such as participating in additional training/lectures/seminars/meetings/discussions, following project-specific coding conventions, etc. These will be provided and assessed by project mentors.
5. Each team needs to present their work through oral presentation or live demonstrations at the end of the semester. All members enrolled in the class must deliver some part of the presentation or demonstration.

Enrollment and Project Selection Process

For new students who have never been enrolled in CSE 302/303/402 Section B before: Prior to or during the open enrollment period, project mentors (CSE faculty) will post available research projects with vacancies. In addition to being officially enrolled in the course, you will need to identify one to three projects you are interested in from the list. The available projects for the next semester are listed at **[insert link here].**

Once you identify the project preferences, please fill out this questionnaire form [insert link here]. **Please fill out the survey as soon as possible, and no later than the first day of class.** You will need to answer a few questions about yourself, and the projects you'd like to apply to. The project mentors will review the information and may reach out to you through email for an informal interview. They will then recommend you for participation in projects if they believe you are a good fit on the projects. The course instructor will notify you prior to the first day of the semester for your project assignment if you are assigned by preference.

If you fail to submit project preferences or receive any project assignment prior to the first day of the semester, you may still keep enrolled in the course. You will be assigned to a project by the first day after the add/drop deadline, possibly not among your preferences.

For students who have been enrolled in CSE 302/303/402 Section B before: You only need to be enrolled in a course without filling out the survey. You'll typically be assigned to the project you were previously assigned to. However, in some rare cases, you may receive additional instructions from the instructor for project selection. You should expect an email no later than the first day of the semester.

Students who were enrolled in a different section and wishes to be enrolled in a different section of a subsequent course, may do so as long as they satisfy the posted prerequisites.

Prerequisites

CSE 302 with a B grade or higher. Bioinformatics, computer science, or computer engineering major, or permission of the department. Students must complete a mandatory advisement session with their faculty advisor.

Course Description

This course will allow you to build on the skills you gained in CSE 302, and participate at a more challenging level in the design and direction of the project. Now that you are familiar with software development or research methodologies and processes, you will need to take up additional leadership and responsibility to help facilitate communication or provide assistance for new and future members. You will also have the opportunity to see first-hand the longer-term consequences of choices you made in CSE 302 and see how your code withstands the test of time, as new features are introduced.

You should be enrolled in the corresponding section in order to participate in a specific project.

For additional information of the specific sections, please visit:
Section A: https://webdev.cse.buffalo.edu/elr/
Section B: https://cse.buffalo.edu/~zzhao35/elrr/

Course Learning Outcomes

Upon completion of the course, students should be able to do the following within the context of their assigned projects:

a) Apply workflows, methodologies and/or conventions generally applicable or specific to assigned projects.

b) Create and/or revise project requirement documentation.

c) Create and/or revise project plans.

d) Collaboratively contribute to project execution.

e) Effectively demonstrate project outcomes in written and oral form.

f) Mentor junior members and peers.

Textbook

None.

Lectuer Schedule

Course schedule will be posted on Section B website: https://cse.buffalo.edu/~zzhao35/elrr/

Assignments

There is no assignment related to context delivered in class. All assessments on lecture contents are done through in-class quizzes. There are project-specific assignments required.

Exams

There will be no exams.

Grading Policy

Each faculty project mentor will grade your performance twice each semester (by midterm and final) based on the following rubrics. Grades will not be curved/adjusted except for approved accommodation request in accordance with university policies or at the direction of the university accessibility resources office.

Requirement	Expectation	CSE 303 Weight
(a)(1) Research skill training	Participate in all required lectures and complete all in-class quizzes	5%
(a)(3) Learning project-specific background knowledge	Read and understand the required materials; perform literature survey; be prepared for research works	30%
(b) Complete assigned research works	Complete assigned research work through either demonstration of successful completion of tasks or well-reasoned and	30%

	documented effort showing infeasibility of/modification to the original tasks	
(c) Meeting, discussion & communication	Attend all required project meetings and actively engage in discussion; promptly and effectively respond to offline communications related to the projects; provide or seek assistance for team members when feasible.	15%
(d) Academic writing & documentation	Produce required documentation of meetings, research efforts and their contribution to the team; independently or collaboratively create technical reports, posters or other form of formal academic writing that well articulate the background, problem and technical solutions in the research work.	20%

Percentage	Letter Grade	Percentage	Letter Grade
[92,100]	A	[66, 72)	C+
[86, 92)	A-	[60, 66)	C
[80, 86)	B+	[50, 60)	C-
[75, 80)	B	[66, 72)	D
[70, 75)	B-	[0, 66)	F

Incomplete (I) grades

A grade of incomplete ("I") indicates that additional coursework is required to fulfill the requirements of a given course. Students may only be given an "I" grade if they have a passing average in coursework that has been completed and have well-defined parameters to complete the course requirements that could result in a grade better than the default grade. An "I" grade may not be assigned to a student who did not attend the course.

Prior to the end of the semester, students must initiate the request for an "I" grade and receive the instructor's and project mentor's approvals. Assignment of an "I" grade is at the discretion of the instructor and the project mentor. The last day to resign the course is **Nov 13, 2025**.

Computing Resources

You may use a combination of shared CSE student servers, workstations, laptops, shared computational resources or publicly available computations resources or dedicated project-specific resources. Course logistics and lecture related communications should be through the

Piazza forum linked through the course website. Each project may have project-specific communication tools. All communications with course staff are expected to be professional.

ABET Student Learning Outcomes, Mapping and Levels of Support

SO1. analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.

SO2. design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.

SO3. communicate effectively in a variety of professional contexts.

SO5. function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.

Student outcomes	SO1	SO2	SO3	SO4	SO5	SO6
Assessed Requirements (see Grading Policy)	(b)	(b), (c)	(c), (d)	N/A	(c)	N/A
Support level	2 - practice	2 - practice	2 - practice	0 – not supported	2 - practice	0 – not supported

Academic Integrity

Academic integrity is a fundamental university value. Through the honest completion of academic work, students sustain the integrity of the university while facilitating the university's imperative for the transmission of knowledge and culture based upon the generation of new and innovative ideas. Please refer to the university Undergraduate Academic Integrity Policy (https://catalogs.buffalo.edu/content.php?catoid=17&navoid=863#academic-integrity) for additional information.

As an engineer or computer scientist, you have special ethical obligations. As per the NSPE Code of Ethics, "engineers shall avoid deceptive acts" and "shall conduct themselves honorably, responsibly, ethically, and lawfully so as to enhance the honor, reputation, and usefulness of the profession (https://www.nspe.org/resources/ethics/code-ethics). Similar sentiments of honesty, integrity, fairness, and responsibility are fundamental to the ACM Code of Ethics (https://www.acm.org/code-of-ethics).

A violation in this class generally results in an F for the entire course. The Computer Science and Engineering department's policy on academic integrity can be found here:

https://engineering.buffalo.edu/computer-science-engineering/information-for-students/undergraduate-program/cse-undergraduate-academic-policies/cse-academic-integrity-policy.html

What Constitutes a Violation of Academic Integrity?

These bullets should be obvious things not to do (but commonly occur):

- Not appropriately citing, or misrepresenting as your own work, others' work referred to in your work, especially publications, code bases, datasets.
- Disclosing your project code to a third party without permission of the project mentor. It is important to keep your project materials confidential before your team decides to submit the work to a conference/journal/pre-print service and it gets accepted.

Other violations that may not be as obvious:

- Working with a tutor/someone outside your project team who solves the assignment with you.
- Sending your code to a friend to help them. If another student uses/submits your code, you are also liable and will be punished.
- Joining a chatroom for the course where someone posts their code once they finish, with the honor code that everyone needs to change it, in order to use it.
- Using generative AI software (e.g., ChatGPT) to obtain assistance or to directly obtain solutions unless your project mentor agrees it is ok. Answers produced by generative AI are based on its training data collected from a variety of sources, so it is hard to determine whether it is an allowed resource and provide correct attribution/citation.

What Collaboration is Allowed?

Collaboration within the project team is allowed. Collaboration outside the team requires permission from the project mentor.

What Resources are Allowed?

With all of this said, please feel free to use any files/examples/tutorials that project mentors/course instructors directly in your code (with proper attribution for resources external to the project). Feel free to use search online or use chatbot to help you understand a large code base or a complex algorithm, but you must appropriately cite any source that you referred to.

Your project mentor may have additional restrictions on whether you may reuse existing code or libraries, because they may result in future problems (e.g., broken dependencies for long-term project). If you have to reuse existing library or code, please pay attention to what restrictions your project has, and whether there are any licenses that would legally prevent you from reusing that code (e.g., non-open-source license), or forcing you to prematurely open source your codebase when the team prefers not to (e.g., GPL).

Omitting citation/attribution will result in an AI violation (and lawsuits later in life at your job). This is true even if you are using the resources provided.

When in doubt, always discuss the issues with your team and project mentor.

Critical Campus Resources

Accessibility Resources

If you have any disability which requires reasonable accommodations to enable you to participate in this course, please contact the Office of Accessibility Resources in 60 Capen Hall, 716-645-2608 and also the instructor of this course during the first week of class. The office will provide you with information and review appropriate arrangements for reasonable accommodations, which can be found on the web at: http://www.buffalo.edu/studentlife/who-we-are/departments/accessibility.html.

Sexual Violence

UB is committed to providing a safe learning environment free of all forms of discrimination and sexual harassment, including sexual assault, domestic and dating violence and stalking. If

you have experienced gender-based violence (intimate partner violence, attempted or completed sexual assault, harassment, coercion, stalking, etc.), UB has resources to help. This includes academic accommodations, health and counseling services, housing accommodations, helping with legal protective orders, and assistance with reporting the incident to police or other UB officials if you so choose. Please contact UB's Title IX Coordinator at 716-645-2266 for more information. For confidential assistance, you may also contact a Crisis Services Campus Advocate at 716-796-4399.

Mental Health

As a student you may experience a range of issues that can cause barriers to learning or reduce your ability to participate in daily activities. These might include strained relationships, anxiety, high levels of stress, alcohol/drug problems, feeling down, health concerns, or unwanted sexual experiences. Counseling, Health Services, and Health Promotion are here to help with these or other issues you may experience. You can learn more about these programs and services by contacting:

Counseling Services:

- 120 Richmond Quad (North Campus), 716-645-2720
- 202 Michael Hall (South Campus), 716-829-5800

Health Services:

- 4350 Maple Rd, Amherst, NY 14226, 716-829-3316

Health Promotion:

- 114 Student Union (North Campus), 716-645-2837

Diversity

The UB School of Engineering and Applied Sciences considers the diversity of its students, faculty, and staff to be a strength, critical to our success. We are committed to providing a safe space and a culture of mutual respect and inclusiveness for all. We believe a community of faculty, students, and staff who bring diverse life experiences and perspectives leads to a superior working environment, and we welcome differences in race, ethnicity, gender, age, religion, language, intellectual and physical ability, sexual orientation, gender identity, socioeconomic status, and veteran status.