

course syllabus

Course # LAI 605 Critical Computational Literacies

Instructor Name: Dr. Chris Proctor
Class Times: Asynchronous
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Office Location: Foster 361b
Office Hours: By appointment
Credits: 3



Course Description

This course centers *critical computational literacies* as a framework for thinking about how and why we might integrate computing into K12 education, including Computer Science (CS) and artificial intelligence (AI). We explore these questions at multiple scales, ranging from individual classrooms, to the breadth and length of a student's experience in school, to how schooling is shaped by and shapes our society. At each scale, the course is designed to encourage students to reflect on their own experiences and identities, to understand their relationship to broader structures and forces, and finally to articulate their own stance as educators.

Learning Outcome and Program Goals

Course learning outcomes

- **Computational literacies:** Understand, participate in, and critique the multiple ways CS can be defined as a K12 disciplinary subject and the consequences of these definitions for teaching and learning.
- **Computational culture:** Understand the relationship between disciplinary learning goals and broader educational priorities such as culturally-sustaining pedagogy and interdisciplinary computational literacy.

- **Computational identities:** Understand the needs and perspectives of diverse Computer Science learners, including specific factors within Computer Science which have historically marginalized students and how they can be mitigated.
- **Literacy-based CS education:** Own your own stance as a teacher, and know how you intend to put your beliefs into practice.

Program Goals

Critical Computational Literacies is part of all of UB's CS Teacher Preparation tracks, described in greater detail in the [CS Education Handbook](#). Figure 1 shows the relationship between program outcomes, course outcomes, and assessments.

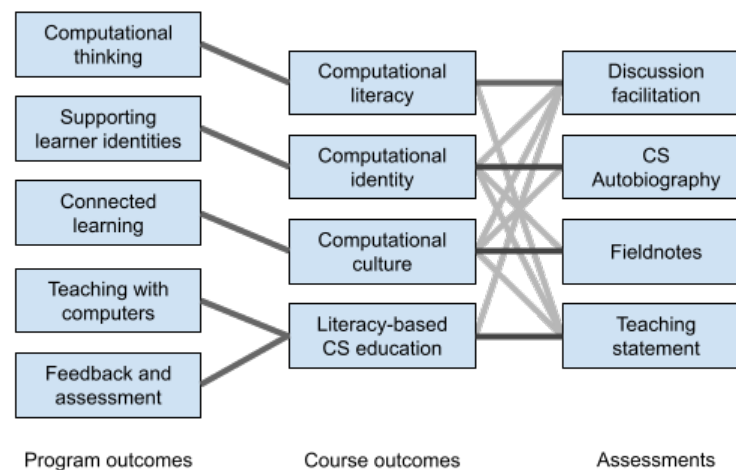


Figure 1. Alignment of program outcomes, course outcomes, and assessments.

Mode of Instruction

Critical Computational Literacies is an asynchronous online course with online or in-person synchronous discussion group meetings scheduled at the convenience of students. Regular attendance, preparation, and participation in discussion group meetings is essential and required.

In the first week of the course, students will be assigned to a discussion group based on regular weekly availability. Students are expected to attend this discussion group regularly. Each student will facilitate the discussion group on a rotating schedule. Facilitation involves completing the readings ahead of time, preparing questions or quotations to lead the discussion, and writing up a brief discussion report, to be submitted no later than Saturday night each week (see expected format below).

Each Monday, the instructor will post a ~30-minute video introducing the week's topic and readings, and synthesizing and responding to the discussion reports from the previous week.

Required Text and Materials

There are no texts required to be purchased for this course. All readings are accessible from the course website or through UB's institutional journal subscriptions. You will need regular access to a computer and a stable Internet connection.

Course Assignments

There are three assignments in the course in addition to regular participation in discussion groups. Each is described below; more specific guidelines and examples will be distributed as they become relevant. Figure 1 (above) shows each assessment's relationship to the course learning goals and to broader program goals.

Discussion group facilitation (20%)

Regularly complete the readings ahead of your discussion group's weekly meeting, participate in the meeting, and facilitate when it is your turn. After you facilitate your group's weekly discussion meeting, submit a discussion report no later than Saturday night of the same week. The instructor will synthesize and respond to discussion reports in each weekly video.

Discussion report format:

- Should be 1-2 pages, single spaced.
- Label each report with the group members in attendance (with facilitator noted), the date of the meeting, and the readings discussed.
- Include the questions, themes, quotations, or any other preparation made by the facilitator. (Up to ½ page).
- Include notes on the content of the discussion. These might include: big ideas, issues that felt important, unanswered questions, etc. The primary audience of discussion reports is the instructor, who will use them as the basis for comments in the following course video. Attribution of comments to individuals is encouraged, but keep in mind that reports will also be public to other members of the course, so if anything sensitive is shared in discussion which you do not wish to share with the broader course, do not include them in reports.

Assessment criteria

- *Regular preparation, participation, and facilitation*, as described above.
- *Engagement with readings*. Substantial and specific reference to ideas in each week's readings, generally including specific quotations. It is not necessary to summarize readings or respond to every ideas, but the ideas you take up should

be put in accurate context of the text and of other relevant texts exploring those ideas.

Computer Science Autobiography (20%)

Write your autobiography as a computer scientist or as a computer science learner, reflecting on how you understand your identities with respect to CS and how these understandings have developed through past experiences.

Assessment criteria

- *Theorizing experience.* Your autobiography should engage with both specific details of your lived experience and abstract interpretation of this experience, drawing on ideas from the course.
- *Voice.* The speaking voice has a considered relationship to what is related, creating an occasion for reflection, positionality, and the authorship of a chosen identity.

Ethnographic Fieldnotes (20%)

Visit a Computer Science learning environment (broadly understood), jot fieldnotes, and process them into observations and interpretations of the Computer Science learning which took place. Rather than writing these up as a formal report, please submit your (cleaned-up) fieldnotes in a format which distinguishes between observations and interpretations. Additionally, prepare a five-minute slide presentation sharing several interpretive findings along with the observations they were based on. Sketches and photos are great to include if possible.

Assessment criteria

- *Observations.* Clear, detailed observations which "get close" to the activities being observed.
- *Interpretation.* Your assumptions, questions, responses, and reactions to observations, informed by ideas from the course and aware of how your positionality affects your experience.

Teaching statement (40%)

Define your stance as a computing educator, including your working definition of K-12 computing education and your understanding of the relationship between disciplinary content knowledge and broader goals such as culturally-sustaining pedagogy and interdisciplinary computational literacies. Describe the context in which you expect to teach computing and articulate a vision for how computing might contribute to the broader learning ecology.

Assessment criteria

- *Synthesis of course ideas.* Your teaching statement is grounded in the broad themes of the course and makes specific reference to a broad range of course readings.
- *Vision.* You develop a coherent vision for how CS might contribute to or transform your local learning ecology, connecting ideas from the course to specific details of your teaching context and your identities.

Grading

Each of the major course assignments will receive a holistic grade and qualitative feedback. One round of resubmission is available for all assignments (time permitting), to be submitted within two weeks of receiving feedback and in all cases no later than two weeks before the end of the course. When resubmitting, students should include a revision note (one page, double-spaced) responding to the feedback and explaining what has been changed.

Attendance and participation are expected but are not graded. Similarly, you are expected to complete work on time but there is no grade penalty for lateness. If grades are meant to be a measure of learning or of work quality, I cannot see a justification for lowering grades due to missing class or turning work in late. Instead, I interpret these behaviors as signals that you may be having difficulty in the class, and will check in to see if there is a way I can better support you.

Department-wide policies

Accessibility Services and Student Resources

If you have a disability and may require some type of instructional and/or examination accommodation, please inform me early in the semester so that we can coordinate the accommodations you may need. If you have not already done so, please contact the Office of Accessibility Services (formerly the Office of Disability Services) University at Buffalo, 60 Capen Hall, Buffalo, NY 14260-1632; email: stu-accessibility@buffalo.edu Phone: 716-645-2608 (voice); 716-645-2616 (TTY); Fax: 716-645-3116; and on the web at <http://www.buffalo.edu/studentlife/who-we-are/departments/accessibility.html>. All information and documentation is confidential.

The University at Buffalo and the Graduate School of Education are committed to ensuring equal opportunity for persons with special needs to participate in and benefit from all of its programs, services and activities.

Academic Integrity

It is expected that you will behave in an honorable and respectful way as you learn and share ideas. Therefore, *recycled papers, work submitted to other courses, and major assistance in preparation of assignments without identifying and acknowledging such assistance* are not acceptable. All work for this class must be original for this class. Please be familiar with the University and the School policies regarding plagiarism. Read the [Academic Integrity Policy and Procedure](#) for more information. Visit The Graduate School Policies & Procedures page (<http://grad.buffalo.edu/succeed/current-students/policy-library.html>) for the latest information.

Course Evaluations

You will have two opportunities to provide anonymous feedback about the course. In the middle of the semester, I will send you a brief questionnaire asking about what activities are contributing to your learning and what might be done to improve your learning. At the conclusion of the semester you will receive an email reminder requesting your participation in the Course Evaluation process. Please provide your honest feedback; it is important to the improvement and development of this course. Feedback received is anonymous and I do not receive copies of the Evaluations until after grades have been submitted for the semester.

Counseling Service

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 program and services by contacting:

Counseling Services

120 Richmond Quad (North Campus), 716-645-2720

202 Michael Hall (South Campus), 716-829-5900

<https://www.buffalo.edu/studentlife/who-we-are/departments/counseling.html>

Health Services

Michael Hall (South Campus), 716-829-3316

<https://www.buffalo.edu/studentlife/who-we-are/departments/health.html>

Office of Health Promotion

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

<https://www.buffalo.edu/studentlife/who-we-are/departments/health-promotion.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 Service Campus Advocate at 716-796-4399.

Please be aware UB faculty are mandated to report violence or harassment on the basis of sex or gender. This means that if you tell me about a situation, I will need to report it to the Office of Equity, Diversity and Inclusion. You will still have options about how the situation will be handled, including whether or not you wish to pursue a formal complaint. Please know that if you not wish to have UB proceed with an investigation, your request will be honored unless UB's failure to act does not adequately mitigate the risk of harm to you or other members of the university community. You also have the option of speaking with trained counselors who can maintain confidentiality. [UB's Options for Confidentiality Disclosing Sexual Violence](#) provides a full explanation of the resources available, as well as contact information. You may call UB's Office of Equity, Diversity and Inclusion at 716-645-2266 for more information, and you have the option of calling that office anonymously if you would prefer not to disclose your identity.