Course: **Introduction to Computer Science Education (CS 499/599 Fall 2025)**

Credits: 4

The course meets twice per week for a 110-minute lecture, but most of the course will be conducted as a practicum.

Instructor: Dr. Jennifer Parham-Mocello

Prerequisites: None

Required Materials:

The instructor will provide handouts, selected reading and notes through the Canvas LMS or online platform. No textbook is required for the course. A laptop meeting the College of Engineering (COE) requirements is required for occasional lectures.

Course Description:

CS 499/599 provides an overview of the history of computer science (CS) education and fundamental evidence-based practices for teaching and learning CS. There is a significant focus on learning theories, cognitive frameworks, and instructional design strategies. You will be able to articulate the benefits of different theories, frameworks, and strategies related to inclusive, equitable, and accessible CS curriculum for students and instructors. You will gain an understanding about evidence-based practices through hands-on experiences applied to teaching and learning specific CS concepts.

Course Learning Outcomes:

* Evaluate factors contributing to successes and failures in CS education using existing research.
* Describe how different learning theories, cognitive frameworks, and instructional design strategies apply to teaching and learning about CS.
* Demonstrate the ability to create a lesson plan with lecture material, activities, and assessments using instructional design strategies.
* Use analytical evaluations to critically assess existing CS curricula for inclusivity, equitability, and accessibility.
* Perform peer-evaluations with respect to evidence-based practices for improving instruction.
* Implement an effective instructional strategy to teach a specific CS concept.

Additional Graduate Course Learning Outcomes:

* Design a CS education research study including a literature review, hypothesis, and research method.

Grading Distribution:

Assignments 30%

Group Projects 30%

Midterm Exam 25%

In-Class Participation 15%

Grading Scale:

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| --- | --- | --- | --- |
| A | 93-100% | C | 73-76% |
| A- | 90-92% | C- | 70-72% |
| B+ | 87-89% | D+ | 67-69% |
| B | 83-86% | D | 63-66% |
| B- | 80-82% | D- | 60-62% |
| C+ | 77-79% | F | Below 60% |

Academic Calendar:

All students are subject to the registration and refund deadlines as stated in the Academic Calendar: <https://registrar.oregonstate.edu/osu-academic-calendar>

Student Bill of Right:

OSU has twelve established student rights. They include due process in all university disciplinary processes, an equal opportunity to learn, and grading in accordance with the course syllabus: <https://asosu.oregonstate.edu/advocacy/rights>

Equity, Diversity, and Inclusion Statement:

The university and its members strive to create an equitable and inclusive community in which all members are welcome, heard, and treated with respect. We uphold these values and take the opportunity to learn from each other. Our greatest strengths and most innovative ideas come from disagreements and collaborations among people with diverse perspectives, lived experiences, and expertise.

Statement of Non-Discrimination:

Oregon State University prohibits discrimination in all its programs, services, activities, and materials on the basis of race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, familial/parental status, income derived from a public assistance program, political beliefs, genetic information, veteran status, reprisal or retaliation for prior civil rights activity.

Discrimination whether overt or covert will not be tolerated in this course or the classroom. Acts of discrimination will be reported to the OSU Office of Equal Opportunity and Access (OEOA). All members of the university community may raise complaints of discrimination, harassment, and bullying with the OEOA. Individuals who feel they are being treated unfairly because of a protected status or in retaliation for engaging in a protected activity, or individuals who believe they are subjected to behavior that rises to the level of bullying should go to the Office of Equal Opportunity and Access to talk through the situation and may do so without entering into the complaint process. For more information, visit the OEOA website: <http://eoa.oregonstate.edu/complaints>.

Students with Disabilities:

Accommodations for students with disabilities are determined and approved by Disability Access Services (DAS). If you, as a student, believe you are eligible for accommodations but have not obtained approval please contact DAS immediately at 541-737-4098 or at [http://ds.oregonstate.edu](http://ds.oregonstate.edu/) . DAS notifies students and faculty members of approved academic accommodations and coordinates implementation of those accommodations. While not required, students and faculty members are encouraged to discuss details of the implementation of individual accommodations.

OSU Basic Needs Statement:

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the Human Services Resource Center (HSRC) for support hsrc@oregonstate.edu , 541-737-3747). The HSRC has a [food pantry (https://studentlife.oregonstate.edu/hsrc/food-](https://studentlife.oregonstate.edu/hsrc/food-security/hsrc-food-pantry) [security /hsrc-food-pantry)](https://studentlife.oregonstate.edu/hsrc/food-security/hsrc-food-pantry) , a [textbook lending program (https://studentlife.oregonstate.edu/hsrc/textbooks)](https://studentlife.oregonstate.edu/hsrc/textbooks) and other resources to help. Furthermore, please notify the professor if you are comfortable in doing so. This will enable them to provide any resources that they may possess.

Reach Out for Success:

University students encounter setbacks from time to time. If you encounter difficulties and need assistance, it’s important to reach out. Consider discussing the situation with an instructor or academic advisor. Learn about resources that assist with wellness and academic success at [http://oregonstate.edu/ReachOut.](http://oregonstate.edu/ReachOut) If you are in immediate crisis, please contact the Crisis Text Line by texting OREGON to 741-741 or call the National Suicide Prevention Lifeline at 1-800-273-TALK (8255).

Religious Accommodation:

Oregon State University is required to provide reasonable accommodations for employee and student sincerely held religious beliefs. It is incumbent on the student making the request to make the faculty member aware of the request as soon as possible prior to the need for the accommodation. See the [Religious Accommodation Process for Students (http://eoa.oregonstate.edu/religious-accommodation-policy)](http://eoa.oregonstate.edu/religious-accommodation-policy) .

Expectations for Student Conduct:

Student conduct is governed by the university’s policies, as explained in the Student Conduct Code ([https://beav.es/codeofconduct (https://beav.es/codeofconduct)](https://beav.es/codeofconduct) ). Students are expected to conduct themselves in the course (e.g., on discussion boards, email postings) in compliance with the university's regulations regarding civility.

Academic Integrity:

Integrity is a character-driven commitment to honesty, doing what is right, and guiding others to do what is right. Oregon State University students and faculty have a responsibility to act with integrity in all of our educational work, and that integrity enables this community of learners to interact in the spirit of trust, honesty, and fairness across the globe. Academic misconduct, or violations of academic integrity, can fall into seven broad areas, including but not limited to: cheating; plagiarism; falsification; assisting; tampering; multiple submissions of work; and unauthorized recording and use.

It is important that you understand what student actions are defined as academic misconduct at Oregon State University. The OSU Libraries offer a [*tutorial on academic misconduct* (https://guides.library.oregonstate.edu/c.php?g=286121&p=3896378)](https://guides.library.oregonstate.edu/c.php?g=286121&amp;p=3896378) , and you can also refer to the [*OSU Student Code of Conduct* (https://beav.es/codeofconduct)](https://beav.es/codeofconduct) and [*the Office of Student Conduct and Community Standard’s website*](https://studentlife.oregonstate.edu/studentconduct/student-info)[(https://studentlife.oregonstate.edu/studentconduct/student-info)](https://studentlife.oregonstate.edu/studentconduct/student-info) for more information. More importantly, if you are unsure if something will violate our academic integrity policy, ask your professors, GTA/ULAs, academic advisors, or academic integrity officers.

Student Evaluation of Courses:

During Fall, Winter, and Spring term the online Student Learning Experience surveys open to students the Wednesday of week 9 and close the Sunday before Finals Week. Students will receive notification, instructions, and the link through their ONID email. They may also log into the survey via MyOregonState or directly at <https://beav.es/Student-Learning-Survey>. Survey results are extremely important and are used to help improve courses and the learning experience of future students. Responses are anonymous (unless a student chooses to “sign” their comments, agreeing to relinquish anonymity of written comments) and are not available to instructors until after grades have been posted. The results of scaled questions and signed comments go to both the instructor and their unit head/supervisor. Anonymous (unsigned) comments go to the instructor only.