

## **CS 4175: Parallel Computing**

CRN: 14426

Fall 2023, 9:00-10:20 TR, BUSN 301

1 credit hour, second 8 weeks of the semester

Instructor: Shirley Moore

Office: CCSB 3.0608

Office phone: 915-747-5054

[svmoore@utep.edu](mailto:svmoore@utep.edu)

<https://www.cs.utep.edu/svmoore/>

<http://svmoore.pbworks.com/>

<https://github.com/mooresv/>

Office hours: TR 10:30-11:50am, T 1:30-2:20pm, other times by appointment

### **TEXTBOOK**

Programming on Parallel Machines: GPU, Multicore, Clusters and More, by Norm Matloff, University of California, Davis, freely available online at

<http://heather.cs.ucdavis.edu/~matloff/158/PLN/ParProcBook.pdf>

Other reading assignments will be posted on the course website.

### **GRADING**

Grading for CS 4175 will be based on 500 points.

500-450 = A, 449-400 = B, 399-350 = C, 349-300 = D, <300 = F

- 250 points: Programming assignments
- 150 points: Final exam
- 100 points: Participation

### **COMPUTER SYSTEM ACCESS**

For class activities, homework, and lab assignments that involve programming, we will use parallel computing resources available through NSF ACCESS (<https://access-ci.org>). The instructor has applied for and been granted an ACCESS education allocation. We will use the Bridges-2 supercomputer at Pittsburgh Supercomputing Center (PSC) (<https://www.psc.edu>). If you do not already have an ACCESS account, please go to <https://identity.access-ci.org/new-user> to create one or to retrieve your existing username if you have forgotten it. Please post your ACCESS username in the relevant TEAMS assignment so that the instructor can add you to the class allocation.

### **COURSE SCHEDULE**

The course schedule is posted on the course website at <http://svmoore.pbworks.com/>.

### **COURSE LEARNING OUTCOMES**

The course learning outcomes are in the separate CS 4175 ABET Outcomes document.

## **ATTENDANCE AND PARTICIPATION**

Our class meetings are in-person in BUSN 301, every Tuesday and Thursday from 9:00 to 10:20am, beginning October 24 through December 9. I will take attendance so that I know who is attending class. Attendance and participation in the class are important for your learning and success and to create a community of learners.

The class will be taught using a flipped classroom approach. Lectures will be kept to a minimum, and most of the class time will be spent working on activities and assignments in groups. You are expected to prepare for each class by doing the assigned reading and watching the assigned video lectures. When a class is designated for work on a specific homework assignment, you are expected to come prepared with initial work on the assignment, with questions about the assignment, and with the equipment required to work on the assignment during class.

Lecture portions of the class will be recorded so that you can review them later. However, viewing the lectures is not a substitute for attending class. If you have an excused absence but can be available remotely, you may join a Teams call for the class – please notify the instructor if you need to do that.

## **COURSE DROP POLICY**

According to UTEP Catalog, “At the discretion of the instructor, a student can be dropped from a course because of excessive absences or lack of effort. A grade of “W” will be assigned before the course drop deadline and a grade of “F” after the course drop deadline.” See Policies and Regulations in the UTEP Undergraduate Catalog for a list of excused absences. Therefore, if I find that, due to excessive absences or non-performance in the course, you are at risk of failing, I will drop you from the course. I will provide 24 hours advance notice via email.

## **DEADLINES, LATE WORK, AND MAKE-UP WORK**

Homework assignments will be due by 11:59pm on the due date. If a due date is changed for some reason, it will be changed for the entire class. No late work will be accepted if the reason is not considered excusable. Since I will go over homework assignments in class the day after they are due, make-up for an excusable reason will involve a different assignment.

Make-up work will be given *only* in the case of a *documented* emergency. Note that make-up work may be in a different format from the original work, may require more intensive preparation, and may be graded with penalty points. If you miss an assignment and the reason is not considered excusable, you will receive a zero. It is therefore important to reach out to me—in advance if at all possible—and explain with proper documentation why you missed a given course requirement. Once a deadline has been established for make-up work, no further extensions or exceptions will be granted.

## **ALTERNATIVE MEANS OF SUBMITTING WORK IN CASE OF TECHNICAL ISSUES**

I strongly suggest that you submit your work with plenty of time to spare in the event that you have a technical issue with Teams, GitHub, your network connection, and/or your computer. I also suggest you save and backup your work frequently. Accidentally losing your work will not

be considered an acceptable excuse for missing an assignment deadline. As a last resort, you may email me a backup copy of your work if that is the only way you can meet the deadline.

## **INCOMPLETE GRADE POLICY**

Incomplete grades may be requested only in exceptional circumstances after you have completed at least half of the course requirements. Talk to me immediately if you believe an incomplete is warranted. If granted, we will establish a contract of work to be completed with deadlines.

## **ACCOMMODATIONS POLICY**

The University is committed to providing reasonable accommodations and auxiliary services to students, staff, faculty, job applicants, applicants for admissions, and other beneficiaries of University programs, services and activities with documented disabilities in order to provide them with equal opportunities to participate in programs, services, and activities in compliance with sections 503 and 504 of the Rehabilitation Act of 1973, as amended, and the Americans with Disabilities Act (ADA) of 1990 and the Americans with Disabilities Act Amendments Act (ADAAA) of 2008. Reasonable accommodations will be made unless it is determined that doing so would cause undue hardship on the University. Students requesting an accommodation based on a disability must register with the UTEP Center for Accommodations and Support Services (CASS). Contact the Center for Accommodations and Support Services at 915-747-5148, email them at [cass@utep.edu](mailto:cass@utep.edu), or apply for accommodations online via the CASS portal.

## **SCHOLASTIC INTEGRITY**

Academic dishonesty is prohibited and is considered a violation of the UTEP Handbook of Operating Procedures. It includes, but is not limited to, cheating, plagiarism, and collusion. Cheating may involve copying from or providing information to another student, possessing unauthorized materials during a test, or falsifying research data on laboratory reports. Plagiarism occurs when someone intentionally or knowingly represents the words or ideas of another as ones' own. Collusion involves collaborating with another person to commit any academically dishonest act. Any act of academic dishonesty attempted by a UTEP student is unacceptable and will not be tolerated. All suspected violations of academic integrity at The University of Texas at El Paso must be reported to the [Office of Student Conduct and Conflict Resolution \(OSCCR\)](#) for possible disciplinary action. To learn more, please visit [HOOP: Student Conduct and Discipline](#).

The use of generative AI tools such as Chat GPT is permitted in this course for the following activities, which must be noted or cited:

- Discovering algorithms for solving problems.

However, you may not use AI tools to complete the following activities:

- Generating code for programming assignments.

Students must cite any borrowed content sources to comply with all applicable citation guidelines, copyright law, and avoid plagiarism. Instances that violate these guidelines will be referred to the Office of Student Conduct and Conflict Resolution.

## **COURSE RESOURCES:** Where you can go for assistance

UTEP provides a variety of student services and support:

### Technology Resources

- [Help Desk](#): Students experiencing technological challenges (email, Blackboard, software, etc.) can submit a ticket to the UTEP Helpdesk for assistance. Contact the Helpdesk via phone, email, chat, website, or in person if on campus.

### Academic Resources

- [UTEP Library](#): Access a wide range of resources including online, full-text access to thousands of journals and eBooks plus reference service and librarian assistance for enrolled students.
- [University Writing Center \(UWC\)](#): Submit papers here for assistance with writing style and formatting, ask a tutor for help and explore other writing resources.
- [Math Tutoring Center \(MaRCS\)](#): Ask a tutor for help and explore other available math resources.
- [History Tutoring Center \(HTC\)](#): Receive assistance with writing history papers, get help from a tutor and explore other history resources.
- [RefWorks](#): A bibliographic citation tool; check out the RefWorks tutorial and Fact Sheet and Quick-Start Guide.
- [The Miner Learning Center](#): Join peer-led study sessions in person or online to review content and discover study strategies in core curriculum courses.
- [UTEP Edge](#): UTEP's cross-campus framework for student success and empowerment – develops students' assets through high-impact experiences made possible by the expertise and dedication of faculty, staff, alumni, and community partners.

### Individual Resources

- [Student Success Help Desk \(SSHD\)](#): Students experiencing challenges or obstacles to academic success including registration, financial, food, housing, and transportation resources may submit a ticket request assistance to [studentsuccess@utep.edu](mailto:studentsuccess@utep.edu)
- [Military Student Success Center](#): Assists personnel in any branch of service to reach their educational goals.
- [Center for Accommodations and Support Services](#): Assists students with ADA-related accommodations for coursework, housing, and internships.
- [Counseling and Psychological Services](#): Provides a variety of counseling services including individual, couples, and group sessions as well as career and disability assessments.
- [UTEP Food Pantry](#): Non-perishable food items are available to students who are currently enrolled in classes. Bring a Miner Gold Card to Memorial Gym, Room 105, Monday through Friday, 10 a.m. to 2 p.m.