

# CS 591 CAP / ECE 590 CAP Fall 2024

## *Architecture/Compilers/Parallel Computing Seminar*



### **Instructor**

Prof. Saugata Ghose  
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4120 Siebel Center for Computer Science

### **Class Times**

Tuesdays  
4:00 PM – 4:50 PM Central  
2405 Siebel Center for Computer Sci

### **Course Website**

<https://capseminar.cs.illinois.edu/>

### **Sections**

- CS 591 CAP (1 hr, CRN 35945)
- ECE 590 CAP (1 hr, CRN 37015)

### **Course Description**

Advanced seminar covering a variety of topics in the areas of computer architecture, compilers, and parallel computing. Note that there is a separate seminar on advanced compilers (CS 591 ACT), so this seminar will focus on architecture and parallel computing, but will include compiler content relevant to a broader audience. Consists of a combination of internal presentations, external speakers, and paper readings.

### **Textbooks**

None

### **Prerequisites**

None

### **Format**

- Presentations from internal and external speakers
- Paper discussions

### **Grading Breakdown**

- 40%: Presentation
- 30%: Attendance
- 30%: Discussion (participation and/or formal questions)

### **Grading Policies**

Course graded as S/U only. **Must receive at least 80% to get an S.** Students will receive full credit for participation and attendance if they have no more than 2 unexcused absences and have actively participated (e.g., discussed opinions, asked questions) in a majority of seminar sessions. Students can skip up to one discussion question submission.

## Academic Integrity

The University of Illinois Urbana-Champaign Student Code should also be considered as a part of this syllabus. Students should pay particular attention to Article 1, Part 4: Academic Integrity. Read the Code at the following URL: <https://studentcode.illinois.edu/>

Every student is expected to review and abide by the Academic Integrity Policy as defined in the Student Code (<https://studentcode.illinois.edu/article1/part4/1-401/>). Academic dishonesty will result in a sanction proportionate to the severity of the infraction, with possible sanctions described in 1-404 of the Student Code (<https://studentcode.illinois.edu/article1/part4/1-404/>). As a student it is your responsibility to refrain from infractions of academic integrity and from conduct that aids others in such infractions. A short guide to academic integrity issues may be found on the provost's website (<https://provost.illinois.edu/policies/policies/academic-integrity/students-quick-reference-guide-to-academic-integrity/>). Ignorance of these policies 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 the instructor(s) if you are ever in doubt about what constitutes plagiarism, cheating, or any other breach of academic integrity.

## Mental Health

Diminished mental health, including significant stress, mood changes, excessive worry, substance/alcohol abuse, or problems with eating and/or sleeping can interfere with optimal academic performance, social development, and emotional well-being. The University of Illinois offers a variety of confidential services including individual and group counseling, crisis intervention, psychiatric services, and specialized screenings at no additional cost. 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: +1 (217) 333-3704, 610 East John Street Champaign, IL 61820
- McKinley Health Center: +1 (217) 333-2700, 1109 South Lincoln Avenue, Urbana, IL 61801
- University Wellness Center: <https://wellness.illinois.edu/>

## CS CARES, CS Values, and Code of Conduct

All members of the Illinois Computer Science department – faculty, staff, and students – are expected to adhere to the CS Values and Code of Conduct (<https://cs.illinois.edu/about/values>). The CS CARES Committee (<https://cs.illinois.edu/about/cs-cares/>) is available to serve as a resource to help people who are concerned about or experience a potential violation of the code. If you experience such issues, please contact the CS CARES Committee (<https://cs.illinois.edu/about/cs-cares/contact>). The instructor of this course is also available for issues related to this class.

### **Anti-Racism and Inclusivity Statement**

The Grainger College of Engineering is committed to the creation of an anti-racist, inclusive community that welcomes diversity along a number of dimensions, including, but not limited to, race, ethnicity and national origins, gender and gender identity, sexuality, disability status, class, age, or religious beliefs. The college recognizes that we are learning together in the midst of the Black Lives Matter movement, that Black, Hispanic, and Indigenous voices and contributions have largely either been excluded from, or not recognized in, science and engineering, and that both overt racism and micro-aggressions threaten the well-being of our students and our university community.

The effectiveness of this course is dependent upon each of us to create a safe and encouraging learning environment that allows for the open exchange of ideas while also ensuring equitable opportunities and respect for all of us. Everyone is expected to help establish and maintain an environment where students, staff, and faculty can contribute without fear of personal ridicule, or intolerant or offensive language. If you witness or experience racism, discrimination, micro-aggressions, or other offensive behavior, you are encouraged to bring this to the attention of the course director if you feel comfortable. You can also report these behaviors to the Bias Assessment and Response Team (BART; <https://bart.illinois.edu/>). Based on your report, BART members will follow up and reach out to students to make sure they have the support they need to be healthy and safe. If the reported behavior also violates university policy, staff in the Office for Student Conflict Resolution may respond as well and will take appropriate action.

### **Disability-Related Accommodations**

To obtain disability-related academic adjustments and/or auxiliary aids, students with disabilities must contact the course instructor and the Disability Resources and Educational Services (DRES) as soon as possible. To contact DRES, you may visit 1207 S. Oak St., Champaign, call +1 (217) 333-4603, e-mail [disability@illinois.edu](mailto:disability@illinois.edu), or go to <https://www.disability.illinois.edu/>. If you are concerned you have a disability-related condition that is impacting your academic progress, there are academic screening appointments available that can help diagnosis a previously undiagnosed disability. You may access these by visiting the DRES website and selecting “Request an Academic Screening” at the bottom of the page.

### **Family Educational Rights and Privacy Act (FERPA)**

Any student who has suppressed their directory information pursuant to the Family Educational Rights and Privacy Act (FERPA) should self-identify to the instructor to ensure protection of the privacy of their attendance in this course. See <https://registrar.illinois.edu/academic-records/ferpa/> for more information on FERPA.

### **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. You should examine this syllabus at the beginning of the semester for potential conflicts between course deadlines and any of your religious observances. If a

conflict exists, you should notify your instructor of the conflict and follow the procedure at <https://odos.illinois.edu/community-of-care/resources/students/religious-observances/> to request appropriate accommodations. This should be done in the first two weeks of classes.

### **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 Office. In turn, an individual with the Title IX 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 <https://wecare.illinois.edu/resources/students/#confidential>

Other information about resources and reporting is available at <https://wecare.illinois.edu/>