CS 6643 Parallel Processing Syllabus, Spring 2006

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Classroom: SB 2.02.06

Textbook
Introduction to Parallel Computing, second edition by Grama, Gupta, Karypis & Kumar.

Prereq
CS 5513 Computer Architecture & CS 5633 Analysis of Algorithms. We will be programing in a Unix environment, using ANSI C and make.

Grading
There will be 2-3 exams. The final may be comprehensive, as determined by the instructor. If the final is comprehensive, the instructor may choose to allow students whose grades are above a certain minimum to skip the comprehensive portion. The exact policy will be announced in class prior to the final exam. Exams will account for 40-60% of the students grade, with the remainder coming from assignments and class participation (class participation will not exceed 10% of grade). Students are expected to be able to fully explain the workings of their own programs, and may be called upon to do so. If they cannot, no credit will be given for that assignment.

Attendance
You are responsible for all material presented in class. Exams and due dates will be scheduled in advance. A grade of zero will be recorded for missed exams unless prior arrangements are made (only allowed in extraordinary circumstances). Assignments turned in after the due date, but before the beginning of the next scheduled class will be penalized 10%. Assignments will not be accepted that are more than one class period late (resulting in a grade of zero).

Cheating
Students are encouraged to discuss programs in a general way to gain greater insight. Copying another’s code, writing code for someone else, or allowing another to copy your code are cheating, and can result in a grade of zero for all parties. Therefore, take precautions so that your old printouts, unattended screen, etc. are not available to other students. If you are in doubt whether an activity is permitted collaboration or cheating, ask the instructor.

Decorum
Students are expected to refrain from side conversation or other distracting behavior in class. Students should arrive on time for class; if late, come in quietly with a minimum of disturbance. All cell phones/pagers/PDAs/etc. should be turned OFF before the beginning of class, and not be consulted in any way during class. During testing, any such consultation may result in a grade of zero. Violations of this policy will minimally result in expulsion
from the classroom, and repeated violation will result in expulsion from
the course.

Email Questions about lectures, homework and course organization may be sent
to the instructor or TA. We cannot guarantee an immediate response, but
will address the issue through direct response, general announcement, or
a suggestion to visit during office hours. Last minute questions (i.e. sent
the night before an assignment is due) may not be answered before class
begins, so tackling problems early is encouraged.

Regrading If you believe we have made an error in grading your exam or assignment,
you may submit the graded work along with a written request for recon-
sideration. You must explain in writing clearly and succinctly the reasons
your grade should be changed. In fairness to other students, we cannot
vary the grading criteria on an individual basis, though suggestions may
be taken into consideration for future classes.

Objectives This course will introduce students to the fundamentals of explicitly paral-
lel programming. This includes the types of explicit parallelism, the general
models used in parallelization, as well as practical usage. The course will
provide at least a basic working knowledge of the three main parallel pro-
gramming paradigms: (1) Shared memory programming with OpenMP (2)
Shared memory programming with pthreads, and (3) Distributed memory
programming with MPI.

Material We will cover material presented in Chapters 1-7 and appendix A. We may
also present some material from Chapter 8.

Disability If you have a physical, psychological, medical or learning disability that
may impact on your ability to carry out assigned course work, I would
urge that you contact University Disability Services (DS), Multidisciplinary
Studies Building, Room 2.03.18, 210-458-4157 (Voice), 210-458-4981 (TTY),
210-458-4980 (Fax), homepage: http://www.utsa.edu/disability/. Please
bring a letter to me from the DS indicating your need for academic accom-
modations within the first week of class. The syllabus and other class
materials can be made available in alternative format upon request.