CS 5740 High Performance Computing

Instructor	Sanjiv K. Bhatia
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e-mail	sanjiv@acm.org
url	http://www.cs.umsl.edu/~sanjiv/classes/cs5740
Office Hrs	T Th 3:30pm – 5:30pm
	Any other time by appointment
Prerequisites	Consent of instructor
Textbooks	Peter Pacheco. *An Introduction to Parallel Programming*. Morgan Kaufmann
	David Kirk and Wen-mei Hwu. *Programming Massively Parallel Processors*. Morgan Kaufmann.

/objectives

- History, supercomputers, clusters, and parallel architectures
- MPI
- Parallel algorithm design
- Monte Carlo methods
- Parallel programming on hybrid systems – OpenMP
- CUDA

/etc/policy I'll expect you to be present in most of the classes. I will not be taking attendance but if you start missing too many classes, please take responsibility for your absence, specially when it concerns tests and homeworks. When you come to class, you must change your cell phones to silent mode. In the tests, the cell phones must be completely switched off.

The grade will be based on programming assignments and two tests. All tests will be open book and open notes but no electronic devices will be permitted. Each assignment must be meticulously documented and clearly identify its purpose, author, and date. If you miss any test or assignment without making prior arrangements, you will have a zero. I will not give any make up tests. The distribution of grades will be as follows:

Programming Assignments and Projects	60%
Two non-comprehensive tests	20% each

/etc/exam_dates

Test 1	October 13, 2011
Test 2	December 08, 2011

There is no final exam. In case of class cancellation due to weather-related or other campus emergency, the test will be held in the following class period. For the second test, if the campus is closed on December 08, 2011, the alternative date will be December 09, 2011, possibly in the conference room of the department.

/etc Failure to hand in any assignment will result in an automatic zero for that assignment. If some student is unable to hand in an assignment by the deadline, he/she must discuss it with me *before* the deadline. I'll encourage you to talk to other students regarding homework but you should not collaborate to the extent that two submissions are copies of each other. If you are found copying an assignment (from another student or internet), or if your submission has *unreasonable similarity* to another submission, you get a zero for that assignment automatically. A second offense will be reported to the University officials and students involved will face serious consequences. I may ask you to come to my office and explain your code to me; in case you are not able to explain the code to my satisfaction, I'll assign you a zero in that project.

If you have any disability that requires an accommodation (as per UMSL policy), you must notify me in advance. If you cannot attend a class due to a religious holiday or a university-sanctioned event, please let me know in advance as well. In case you are down with the flu, especially H1N1, please stay absent from the class till you recover, and contact me via phone or email. I'll try my best to make accommodation for you in that case.

`/etc/notes` You will have an account on the Linux cluster `stovokor.dhcp.umsl.edu` (134.124.101.20) and on the TESLA-based machine `gpu.umsl.edu`; you should use those for all assignments. All programs must be done in `C`. The class notes are available on the class web page in PDF format. Please use the class email list on MyGateway for communications.

Any unsigned email and email not in plain text will go unanswered by me. Please do not send me any attachments without talking to me first.

Anyone desiring an EXC grade after October 31, 2011 must be passing the course at that point to get EXC.