CSCI 532 – Programming Non-traditional Architectures

TuTh 11:00–12:15 am (PM 203)

Instructors

John Winans
Email: jwinans@niu.edu
Web site: http://faculty.cs.niu.edu/~winans/CS532/
Office Hours: PM 562 Tuesday 9:30-10:45 & 4:00-4:45, Thursday 9:30-10:45 & 2:00-2:45 and by appointment.

Dr. Kirk Duffin
Email: kduffin@niu.edu
Web site: http://graphics.cs.niu.edu/people/duffin/
Office Hours: PM 567 Tuesday, Wednesday & Thursday 2:00-4:00

Course Description

Topics include programming hardware accelerators like general purpose graphic processing units and field programmable gate arrays with an emphasis on applying these architectures to computer applications in modeling, simulation, and computational sciences. Includes extensive programming and laboratory work.

Attendance

You are responsible for all of the material presented in class. If you miss a lecture, be sure to obtain class notes from a classmate before the next class meeting.

Exams

There will be two midterms and a cumulative final exam. You will be expected to take both exams when they are scheduled unless you are ill or an emergency arises. If you are unable to take any exam you must notify the CSCI office prior to the exam time. Note that it is the department’s policy not to allow students to take their final exam at a time other than the scheduled time. Please make any travel arrangements (flights home after finals) accordingly.

Assignments

There will be several computer assignments in the C, CUDA and OpenSPL/Java programming language. These assignments must be coded, tested, run, and debugged on the machines and handed in as specified in the assignments.

Assignments will be posted as PDF files on the course web page. Any additional information for an assignment may be posted on the course web page(s) or sent to you by e-mail. You are responsible for checking the course web page and your e-mails on a daily basis.
Grading

The maximum grade that you can receive for a late assignment will be reduced by 10% of the maximum possible points for each calendar day – including weekends and university holidays – that the assignment is late. Computer assignments will be graded using the following criteria:

- 60%: Program output and compliance with the stated objectives and specification of the assignment.
- 20%: Structure and efficiency.
- 20%: Documentation.
- Any computer assignment that is submitted for grading that contains any compile-time errors shall receive zero points.
- No assignments will be accepted more than three calendar days late.

The letter grade assigned for this course at the end of the semester will be based on a combination of homework, exams and quizzes distributed as:

| Assignments | 25% |
| Quizes | 10% |
| Midterm 1 | 20% |
| Midterm 2 | 20% |
| Final Exam | 25% |

Final letter grades will be assigned according to the following scale:

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<th>Percent</th>
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<tr>
<td>90%</td>
<td>A</td>
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<td>80%</td>
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<td>&lt; 60%</td>
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Independent Work

Everything that you do in this course must reflect your own work. If you copy all or part of another student’s work, no matter where or how you get it, it will be considered as an act of cheating. This is not to discourage discussions among classmates. However, discussions should not be as extensive and detailed as to border on collaboration. Cheating of any form cannot be tolerated. Any student caught on cheating will receive a zero on the given assignment or exam and a full letter-grade reduction for the course and possible disciplinary action from the university.

Persons with Disabilities

If you need an accommodation for this class, please contact the Disability Resource Center as soon as possible. The DRC coordinates accommodations for students with disabilities. It is located on the 4th floor of the Health Services Building, and can be reached at 815-753-1303 (V) or drc@niu.edu

Also, please contact me privately as soon as possible so we can discuss your accommodations. The sooner you let us know your needs, the sooner we can assist you in achieving your learning goals in this course.