1 Course description

This course is an introduction to parallel and distributed processing, including both the theory and the application of parallel-processing concepts. Course content will include discussions of different types of parallel machines and machine models, the design and analysis of parallel algorithms, and the development of parallel programs.

The objectives of this course include, but are not limited to, the following:

- Learning fundamental parallel processing concepts.
- Learning parallel algorithm design.
- Learning parallel machine structure.
- Mapping theoretical problem solutions to physical hardware.
- Programming using message-passing (e.g., using MPI).
- Programming using threads (e.g., using Java).

2 Basic information

Class meeting times and location:
TR 12:45pm – 2:00pm, Halsell 228

Prerequisites:
CSCI 2320, or consent of instructor

Instructor:
Dr. Berna Massingill
Office: Halsell 201L
Office phone: (210) 999-8138
Web page: http://www.cs.trinity.edu/~bmassing
E-mail: bmassing@cs.trinity.edu
Office hours: MW 12:30pm – 3:30pm, TR 2:00pm – 4:00pm, and by appointment
3 Course materials

Textbook:


Web page:

Most course-related information (this syllabus, homework and reading assignments, etc.) will be made available via the World Wide Web. The home page for the course is not only a starting point for Web-accessible course material but will also be used for course-related announcements. Please plan to check it frequently. You can find it linked from my home page (http://www.cs.trinity.edu/~bmassing) or directly at http://www.cs.trinity.edu/~bmassing/CS3366_2001spring/.

Other references:


4 Course requirements

Grading:

Grades in this course will be determined by the results of two major exams, several homework assignments, and a course project. The two exams will be equally weighted; weights for
homework assignments and the course project will vary with the difficulty of the assignment. Numeric grades will be calculated as a simple percentage, by dividing points earned (on homework assignments and exams) by points possible. These numeric grades will then be converted to letter grades based on a curve, but in no case will the resulting letter grades be worse than students would receive based on the following scheme:

<table>
<thead>
<tr>
<th>Numeric grade</th>
<th>Letter grade</th>
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<tbody>
<tr>
<td>90 – 100</td>
<td>A</td>
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<tr>
<td>80 – 89</td>
<td>B</td>
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<tr>
<td>70 – 79</td>
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<td>60 – 69</td>
<td>D</td>
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<td>0 – 59</td>
<td>F</td>
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Exams:
Exams are comprehensive but will emphasize the most recent material. They are scheduled as follows. Please plan accordingly. Note that there is no final exam as such, but the date and time reserved for the course’s final will be used for project presentations.

- Exam 1: February 15, in class. Changed to: February 22, in class.
- Exam 2: April 12, in class. Changed to: April 26, in class.
- Final exam period (to be used for project presentations): May 8, 2:00pm.

Homework assignments:
Several homework assignments, including programming problems, will be required for successful completion of this course. Detailed requirements, including due dates and times, will be provided as part of each assignment. Programming problems will be coded using suitable parallel languages or libraries (e.g., Java or MPI) as specified in individual assignments.

Course project:
As part of the course, students must also complete a significant project approved by the instructor and present it to the class; students may work individually or in groups of two. Detailed requirements for the project will be described separately and will include program code, a short written report, and a presentation to the class, made during the time scheduled for the course’s final exam.

Attendance:
Regular class attendance is strongly encouraged.

Late and missed work:
Exams and project presentations can be made up only in cases of documented conflict with a university-sponsored activity or documented medical emergency.
Homework will normally be accepted up to one class period late, but no more, at a penalty of 10 percent off per working day. This penalty may be waived or additional time allowed at the instructor’s discretion in cases of illness or conflict with a university-sponsored activity. If you have unusual circumstances (as we all sometimes do), please discuss these with the instructor in advance.
Collaboration and academic integrity:

Unless otherwise specified, all work submitted for a grade (homework assignments and exams) must represent the student’s own individual effort. Discussion of homework assignments among students is encouraged, but not to the point where detailed answers are being written collectively. Answers that are identical beyond coincidence are in violation of Trinity’s Academic Integrity Policy and will result in disciplinary action, including, but not limited to, a failing grade on that assignment for all parties involved. You are responsible for the security of your work, both electronic and hard copy.
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