CprE 450/550X
Distributed Systems and Middleware

Welcome Aboard !

Instructor: Yong Guan
3216 Coover
Tel: (515) 294-8378
Email: guan@ee.iastate.edu

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Course Description

- Fundamentals of distributed computing
- Software agents
- Naming services
- Distributed transactions
- Security management
- Distributed object-based systems
- Middleware-based application design and development
- Case studies of middleware.

Course Objectives

This new CprE 450/550X will

- give the undergraduate and graduate students both the fundamental knowledge and hands-on practice
- prepare the students for active research at the forefront of the areas of distributed systems

Course Prerequisite

- Familiarity with
  - Basic concepts of O.S and computer networking

- Some necessary background information will be discussed in class. Suggestions?

Course Materials

- Required Textbook:
  - Distributed Systems: Principles and Paradigms
- Reference Books:
  - Understanding CORBA
  - Distributed Systems: Concepts and Design
  - Security Engineering: A Guide to Building Dependable Distributed Systems
- Selected papers on each topic will be provided.

  Reading list will be given on my course page

Course Outline

- See your syllabus

Course Assignment

- Three programming projects (i.e., machine problems)
- Two exams (mid-term and final exams)
- One term paper
  - Undergraduate: 10-pages literature survey on a specific topic based on the reading of at least 10 papers published within the past five years.
  - Graduate: 20-pages term paper, including defining a specific problem, surveying existing work, developing a (better) solution, and evaluating your results.
- Homework, demonstration, and presentation

Grading Criteria

Total point is 100
- Mid-term & Final Exam: 30
- Course Projects: 45
- Term papers: 25
  - Vision
  - Related work
  - Critiques: identify holes/questions and potential improvements of existing work
  - Depth and breadth of knowledge to the materials

Course Coordinates

- Place: Sweeney 1126
- Time: Tuesday & Thursday 3:30pm-5:00pm
- Office hours: Tuesday & Thursday 2:30pm-3:30pm, at Coover 3216. Please drop by my office any time you like.

Course Rules

- Attending class is a must.
  - Please send me email/or call me at (515) 294-8378 beforehand in case that you cannot come (e.g., medical reason), and bring me a proof later.
  - I will meet you at a later time if this is the case.
- Due date for term papers and course projects is *hard* (no late hand-in will be accepted.) except that you have reasonable reason.
- However, for the whole semester, you can have *at most one time* one-day extension.

Any Questions?

Then we will have a preliminary test. It's not for grading purpose.