Fall 2012

CEG 7370-01: Distributed Computing

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CEG 7370-01 Distributed Computing

Syllabus

Fall Semester, 2012

Time/Place: Lecture: 4:40 – 6:00 PM, M/W, RC355

Instructor: Dr. Yong Pei, 489 Joshi Research Center
Tel. 937-775-5111, Email: yong.pei@wright.edu
Office Hours: 3:30-4:30 pm, M/W.

Prerequisite: Undergraduate level CEG 4350 or equivalent.
Expected background: operating system, process and thread, C/C++ and JAVA programming experience in UNIX or Linux.


Text Books: Recommended:

References:

Website: CEG 7370 in WebCT.

Grading: Project assignments – 30 %
Homework – 10%
Midterm Exam – 30%
Final – 30%
Lectures:
The following tentative schedule defines in greater details what material is covered in the course and when it is covered.

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<th>Week</th>
<th>Reading</th>
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| 1    | Chapter 1  
Chapter 2 | Welcome and introduction  
Models of distributed Systems |
| 1, 2 | Chapter 3  
Chapter 4 | Networking  
IPC |
| 3    | Chapter 5 | Remote procedure call  
Distributed objects and Remote Invocation |
| 4    | Chapter 6  
Chapter 7 | OS Supports  
Security |
| 5    | Chapter 8 | DFS  
NFS, AFS,  
Notes |
| 6    | Chapter 9 | GFS  
Name, directory & discovery services |
| 7    | Chapter 10 | Peer-to-peer systems  
Midterm Exam |
| 8    | Notes | Case Study: Pastry – a Structured DHT Overlay Network |
| 9    | Chapter 11  
Chapter 12 | Time and Global States  
Coordination and Agreement |
| 10   | Chapter 13  
Chapter 14 | Distributed Concurrency Control |
| 11   | Chapter 15 | Fault tolerant services  
Transactions with replicated data |
| 12   | Chap 16  
Notes | Mobile and Ubiquitous computing |
| 13   | Chapter 17  
Notes | Case Study: Distributed multimedia systems  
Case Study: Hadoop* |
| 14   | Notes | Case Study: Distributed sensor systems*  
Final Exam |
| 15   | | Open-Design Project Presentations |

* - if have time.