## CSCI 4350 Section 001 — Distributed Software Engineering Spring 2002

**Catalogue Description:**

Introduction to software engineering issues for applications developed using component software via a network; includes discussion on concurrency, applications formed via heterogeneous components, data persistency. Introduction to basic concurrent and network programming.

**Prerequisites:**

Computer Science 2125, Computer Science 3401 or consent of the department.

Strongly recommended: Computer Science 4401, Computer Science 4311 recommended at least to be taken concurrently.

**Text:**

Required:

*Taming Java Threads. Allen Holub. APress.*

*A networks book will be recommended by the middle of the semester.*

Optional:

*Concurrent Programming in Java. Doug Lea, Addison Wesley. 2nd Ed.*

**Warning**: there are lots of trade programming books out there on threads as well as on networking; for the most part those books do a very poor job presenting the issues and extremely poor job on the programming examples provided. Beware. (This is the reason why I have had a hard time finding adequate books for this course.)

**Organization:**

This is a programming course focused on the programming techniques to correctly develop distributed applications in Java. Software engineering issues will be presented along with the fundamental issues in the lectures. The two fundamental programming topics to study are threads and networking in Java. This is a programming course, and as such you will be assigned several programming assignments of increasing difficulty.

**Topics:**

- A review of Object Oriented design principles for sequential programming.
- Static fields and methods, exceptions, I/O streams, object serialization and object I/O.
- Introductory concepts on threads.
- Designing applications with threads.
- Introduction to distributed computing.
- Introductory concepts on networking.
- Distributed paradigms.
- Designing network applications.
- Broker pattern implementations: RMI, IIOP-RMI, CORBA.
- Database servers and connectivity.
- Security.
- Transactions.

**Office Hours:**

My office is MATH 340. I will generally be available the hour before class (2:00-2:50 M-Thurs.), make an appointment if you cannot come at that time. *Phone*: 280-7362, 280-6594. *E-mail*: jaime@cs.uno.edu

**Exams:**

Exam schedule is tentative. We will have two in-class tests. They are currently scheduled for march 1, and april 19. The final exam is scheduled for friday May 10, 4:00-6:00 pm. No makeup for any test given.

**Homework:**

I plan to assign a number of homework during the semester, of increasing difficulty. You are expected to use Java 1.2 or later. Assignments should be handed in to me, or at your risk, left in my mailbox in MATH 312. Assignments are due in at class time the due date.There will be a late penalty of 5% per day or fraction of day for late work. Homework will be graded and returned on time only if submitted on the due date; any homework submitted late will be grade at my own convenience resulting on having your work returned by the end of the semester. **Homework will not be accepted if it is more than one week late. No late homework is accepted during the last week of classes.**

*Homework assignments are individual projects* unless specified otherwise. Incorporation of ideas or material other than your own **must be explicitly referenced**.

**Note**: it's better to turn in an assignment and get a poor grade than not to turn it in at all and get 0.

**Grading:**

brake down:
a. *Homework*: 40%.
b. *Tests*: 30%
c. *Final*: 30%

Final letter grades will be assigned as [90 – 100] = A, [80 – 90) = B, etc. No curve given.

**Graduate Students grading:**

Programs, papers and test can have a specific session for grads.
Grading of tests, programs and papers will be much more strict
Extra reading of technical papers will be assigned as part of your grade.

**Cheating and plagiarism**

Finally, I must call your attention to the University's policies regarding academic dishonesty. (See pages 44-47 of the Student handbook.) Academic dishonesty includes cheating, plagiarism, and collusion. In particular, it includes "the unauthorized collaboration with another person in preparing an academic exercise" and "submitting as one's own any academic exercise prepared totally or in part for/by another." In the event of academic dishonesty, **the student will be assigned a grade of 0** on the exam or exercise, the student will be informed in writing of the action taken, and a copy of this letter will be sent to the Assistant Dean for Special Student Services.

## Note that April 9th is the last day to drop classes.