

Tentative Syllabus

COP 5615 Distributed Operating System Principles, Spring 2012

1. **Catalog description** – The concepts and techniques for efficient management of computer and network system resources (3 credit hours).
2. **Pre-requisites** – COP 4600 Operating Systems
3. **Course objectives** – Study of the design and implementation issues for distributed systems and applications in networked environment
4. **Instructor** – Professor Randy Chow, Room: CSE 348, Phone: 505-1582, e-mail: chow@cise.ufl.edu, SAKAI: <https://lss.at.ufl.edu> , office hours: 1:00pm – 3:00pm, Tuesday and Thursday, or by appointment.
5. **Teaching Assistants** – TBA
6. **Class Time and location** – 3rd period (9:35 – 10:25am) on Monday, Wednesday, and Friday, Room NEB 100.
7. **Textbooks**
Distributed Operating Systems and Algorithms by Randy Chow and Theodore Johnson, Addison-Wesley.
8. **Course Outline (To be updated)**
 - a. (4 classes) Definitions, goals, and examples of distributed systems
 - b. (2 classes) System architectures, vertical and horizontal distribution, more structured and unstructured overlay network discussed later in class.
 - c. (5 classes) Threads, virtualization, client and server architecture, remote execution and code migration.
 - d. (5 classes) Process communication, message/stream-oriented communication, remote procedure call, multicast communication
 - e. (4 classes) Naming, name resolution, directory services
 - f. (5 classes) Synchronization, logical clock, distributed mutual exclusion and leader election algorithms
 - g. (5 classes) Consistency and replication, protocols and management
 - h. (5 classes) Fault tolerance, reliable RPC and group communication, two –phase commit
 - i. (5 classes) network security, cryptography, access control, mutual authentication, key management
 - j. (3-4 classes) case studies and misc topics
9. **Grading**
 - Midterm exam 1 (TBA) – 20%
 - Midterm exam 2 (TBA) – 20%
 - Final exam (May 3rd, Thursday, 7:30am -9:30am) – 30%
 - 5 programming projects – 30%
10. **Grading Scale** – grades are to be curved.
11. **Project submission and late policies** – see project description.
12. **Honesty Policy** – All students admitted to the University of Florida have signed a statement of academic honesty committing them to be honest in all academic work and understanding that failure to comply with this commitment will result in disciplinary action. This statement is a reminder to uphold your obligation as a UF student and to be honest in all work submitted and exams taken in this course and all others.

13. Accommodation for Students with Disabilities – Students requesting classroom accommodation must first register with the Dean of Students Office. That office will provide the student with documentation that he/she must provide to the course instructor when requesting accommodation.

14. UF Counseling Services – Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:

- University Counseling Center, 301 Peabody Hall, 392-1575, Personal and Career Counseling.
- SHCC mental Health, Student Health Care Center, 392-1171, Personal and Counseling.
- Center for Sexual Assault/Abuse Recovery and Education (CARE), Student Health Care Center, 392-1161, sexual assault counseling.
- Career Resource Center, Reitz Union, 392-1601, career development assistance and counseling.

15. Software Use – All faculty, staff and student of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.