

## Syllabus

### Instructor

Dr. Kostas Kalpakis  
Computer Science & Electrical Engineering Department  
Office: ITE 348  
Phone: (410) 455-3143  
Email: kalpakis@csee.umbc.edu  
Class homepage: <http://www.csee.umbc.edu/~kalpakis/Courses/621/>  
Office Hours: Monday and Wednesday 2:30pm-3:30pm, and by appointment.

### Meeting Time and Place

Monday and Wednesday 5:30pm-6:45pm  
Room ITE 227

**Assistant:** Vasundhara Puttagunta, Room ITE 344  
Phone: 410-455-8864, Email: vputta1@csee.umbc.edu.  
Office hours: Monday and Wednesday 4:00pm-5:00pm.

### Important Dates

- Midterm Exam, October 22, 2003, 5:30pm-6:45pm.
- Final Exam, December 15, 2003, 6:00pm-8:00pm.
- Projects due, December 8, 2003, 11:59pm.

**Prerequisites** CMSC-421 or permission of the instructor.

**Texts.** The required text is: Mukesh Singhal and Niranjana G. Shivaratri, "Advanced Concepts in Operating Systems: Distributed, Database, and Multiprocessor Operating Systems", McGraw-Hill 1994. In addition, a number of articles and notes will be made available by the instructor.

### Tentative List of Topics.

- Process Synchronization
- Process Deadlocks

- Architectures of Distributed Operating Systems
- Theoretical Foundations of Distributed Operating Systems
- Distributed Mutual Exclusion
- Distributed Deadlock Detection
- Distributed File Systems
- Distributed Shared Memory
- Distributed Scheduling
- Multiprocessor Operating Systems
- Resource Security and Protection, and Data Security
- Queuing Theory and Performance Modeling
- Selected topics.

### **Required Work**

Required work consists of (1) taking the midterm and final exams, (2) homework assignments, (3) carrying out a project. Further, you are expected to actively participate in class discussions.

There will be a number of homework assignments. Some may require use of computer systems. Homework assignments are to be done individually by each student. Each homework assignment will be due at the beginning of class on the date specified. No late homeworks will be accepted, unless University Policy states otherwise.

In addition to homework assignments, there will be a project requiring substantial amount of work. It will involve both theoretical and practical issues in modern operating systems. The project must be carried out by a small team (3-4) students. No late projects will be accepted, unless University Policy states otherwise. Students will give short presentations on their projects during the last week of classes. You will have at least eight weeks to work on your project. Additional details regarding projects will be provided by the instructor within the first three weeks of classes.

There will be a midterm exam and a comprehensive final exam. All the exams will take place in class and will be closed-books.

**Facilities.** You will have access to the facilities and software available in the CSEE department. All computer work will be done on the UMBC Unix-based (or where available Windows NT) computers.

Activity	Weight
Project	20%
Homework	5%
Midterm Exam	30%
Final Exam	45%
Total	100%

Table 1: Course Activities and their relative weights.

### Grading Policy

The course grades will be determined as follows. For each course activity in Table 1, each student will receive an activity score, which will be the average of the student's scores on the assignments for that activity. An activity score is a number in the range  $0 \dots 100$ . A term score will be computed by taking the weighted sum of the activity scores, using the relative weights given in Table 1. The instructor will convert term scores into letter grades by using the following mapping:  $[90, 100] \Rightarrow A$ ,  $[80, 90) \Rightarrow B$ ,  $[70, 80) \Rightarrow C$ ,  $[60, 70) \Rightarrow D$ ,  $[60, 100] \Rightarrow P$ ,  $[0, 60) \Rightarrow F$ .

Make-up exams are possible only under University Policy. You should make prior arrangements with the instructor if you expect to miss an exam. Incomplete grades will issued only under those extreme situations described by University Policy for granting incompletes. Failure to complete assignments on time is not a sufficient reason for an incomplete. **Necessary but not sufficient conditions to pass the course are as follows: you must have a project and homework activity score of at least 50 points, and at least 30 points for each exam, including the final exam.**

### Academic Integrity Policy

By enrolling in this course, each student assumes the responsibilities of an active participant in UMBC's scholarly community in which everyone's academic work and behavior are held to the highest standards of honesty. Cheating, fabrication, plagiarism, and helping others to commit these acts are all forms of academic dishonesty, and they are wrong. Academic misconduct could result in disciplinary action that may include, **but is not limited to**, suspension or dismissal. To read the full Student Academic Conduct Policy, consult the UMBC Student Handbook, the Faculty Handbook, or the UMBC Policies section of the UMBC Directory.

**There is no tolerance for academic dishonesty in this course. Any and all academic dishonesty acts will be treated severely, as prescribed in the UMBC's Student Academic Conduct Policy.**