**CS 33211: Operating Systems**

**Fall 2009**

**Instructor**

Dr. Johnnie Baker MSB 260, (330) 672-9061

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http://www.cs.kent.edu/~jbaker

**Teaching Assistant**

*to be determined…*

**Course Prerequisites**

The *Undergraduate Catalog* lists the prerequisites for this course as *CS 35101 Computer Architecture*

and a grade of “C” or better in CS *33001 CSII: Data Structures*. Equivalent courses taken elsewhere

are also acceptable.

**Course Overview**

The goal of this course is to provide an introduction to the internal operation of modern operating

systems. In particular, the course will cover processes and threads, mutual exclusion, CPU

scheduling, deadlock, memory management, and file systems. If time permits, we may briefly

examine networking and distributed computing or other topics related to operating systems theory.

**Textbook**

The required textbook for this course is:

*Operating Systems Concepts, 8th Edition*,

Silberschatz, Galvin, and Gagne, Wiley, 2009, ISBN: 978-0-470-12872-5

You should purchase a copy of this textbook and keep up to date in reading the material assigned at

each lecture. Saving some money by ignoring the textbook and concentrating solely on the lecture

notes would not be a wise idea.

**Class Web Page**

The web page for this class is **http://www.cs.kent.edu/~jbaker/OS-F09** (a link to this page will be put on my home page).

The class web page will contain links to the current class syllabus and schedule, lecture notes,

homework assignments, exams, etc. You should check the web page on a regular basis to see the slides posted. It may also be useful to check website for further information when a homework assignment is outstanding or an exam is eminent.

**Lectures**

Students are expected to attend each lecture. I will often take attendance. While I understand that it may occasionally be necessary to miss a class, in general I expect you to attend each lecture and to be in the classroom when I start my lecture. If too many students start skipping class, or coming to class late, I reserve the right to give a “pop quiz” at the beginning of class that will count as a homework assignment in determining your course grade.

I will post all of my slides online on the class web page. You should ***not*** consider skimming these slides to be an adequate substitute for attending the lecture, as my lectures consist of more than me simply reading my slides to the class.

In my lectures, I will use both the “official” slides provided by the textbook authors, as well as some slides of my own. My slides are drawn from a variety of sources. The required text provides much of the material, although some material may be drawn from other books on operating systems. I have also used lecture note material from other professors as source material, in particular the slides of Robert Walker (which in turn are based in part on earlier teaching notes by John Ousterhout (as modified by Kathryn McKinley, Bradley Chen, Mendel Rosenblum, and Tom Anderson), Divyakant Agrawal, Steve Chapin, Paul Farrell, and Mikhail Nesterenko.

**Homework Assignments**

There will probably be one homework assignment per chapter during the semester. Assignments and due

dates will be announced as the semester progresses.

***No*** late homework submissions will be accepted unless you make *prior* arrangements with me, or

have a *documented* illness (in which case I expect you to contact me as soon as possible).

**Exams**

There will be one or two midterm exams (held during class) and a final exam (held during finals week). Each of the exams will have equal weight. Exam dates will be announced as the semester progresses.

All exams are closed book and closed notes, and must be individual work. It is expected that you will take each exam at the scheduled time or have a *documented* illness (in which case I expect you to contact me as soon as possible).

**Grades**

Your final course grade will be broken down as follows:

* Homework assignments (probably 3-5) 40%
* 1-2 midterm exams and final exam 60%

The final course grade will be determined with 100-93 A, 92-90 A–, 89-87 B+, 86-83 B, 82-80 B–, 79-77 C+, 76-73 C, 72-70 C–, 69-67 D+, 66-60 D, 59-0 F.

**Instructor Absences**

Over the course of the semester, I may miss a few classes to attend a conference or other professional meeting. This is a normal occurrence at research-oriented university with a flourishing graduate program, where professors are expected to regularly attend conferences and professional meetings to remain current in their fields. They then bring their insights from those events into the classroom, which benefits you as a student. Further, by attending those meetings, they make other professionals aware of Kent State, which increases your visibility and the value of your degree.

I will make every effort to arrange for my class to be covered during my absence in such a way as to avoid disrupting the flow of the class. When this is not possible, it may occasionally be necessary for me to cancel a class, or to schedule a makeup class at some other time, but such occurrences are usually rare.

**Students with Disabilities (*added at the request of the College of Arts & Sciences*)**

University Policy 3342-3-01.3 requires that students with disabilities be provided reasonable accommodations to ensure their equal access to course content. If you have a documented disability and require accommodations, please contact the instructor at the beginning of the semester to make arrangements for necessary classroom adjustments. Please note, you must first verify your eligibility for these through Student Accessibility Services (contact 330-672-3391 or visit [www.kent.edu/sas](http://www.kent.edu/sas) for more information on registration procedures).

**Registration Requirement (*added at the request of the College of Arts & Sciences*)**

The official registration deadline for this course is 9/13/2009. University policy requires all students to be officially registered in each class they are attending. Students who are not officially registered for a course by published deadlines should not be attending classes and will not receive credit or a grade for the course. Each student must confirm enrollment by checking his/her class schedule (using Student Tools in FlashFast) prior to the deadline indicated. Registration errors must be corrected prior to the deadline. The last day to withdraw is 11/08/2009.   
<http://www.registrars.kent.edu/home/CLASSES/sessdatesrch.cfm>

**Academic Integrity**

Student-teacher relationships are built on trust. Students must trust that teachers have made appropriate decisions about the structure and content of the courses they teach, and teachers must trust that the materials that students turn in are their own. Acts that violate this trust undermine the educational process. In this course, the penalty for ***any*** act of academic dishonesty is a final course grade of F.

**Student Cheating & Plagiarism: (Condensed Version)**

(*added at the request of the College of Arts & Sciences*)

*For the complete policy and procedure, go to www.kent.edu/policyregister and search for*

*3342-3-01.8, or visit* [*http://www.kent.edu/policyreg/chap3/3-01-8.cfm*](http://www.kent.edu/policyreg/chap3/3-01-8.cfm) *or* [*http://www.kent.edu/policyreg/chap3/upload/3342.3.01.8.pdf*](http://www.kent.edu/policyreg/chap3/upload/3342.3.01.8.pdf)

**"Cheat" means to intentionally misrepresent the source, nature, or other conditions of aca­demic work so as to accrue undeserved credit, or to cooperate with someone else in such mis­representation. Cheating includes, but is not limited to:**

1. Obtaining or retaining partial or whole copies of examinations, tests or quizzes before these are distributed for student use;
2. Using notes, textbooks or other information in examinations, tests and quizzes, except as expressly permitted;
3. Obtaining confidential information about examinations, tests or quizzes other than that released by the instructor;
4. Securing, giving or exchanging information during examinations;
5. Presenting data or other material gathered by another person or group as one's own;
6. Falsifying experimental data or information;
7. Having another person take one's place for any academic performance without the specific knowledge and permission of the instructor;
8. Cooperating with another to do one or more of the above;
9. Using a substantial portion of a piece of work previously submitted for another course or program to meet the requirements of the present course or program without notifying the instructor to whom the work is presented; and
10. Presenting falsified information in order to postpone or avoid examinations, tests, quizzes, or other academic work.

**“Plagiarize” means to take and present as one’s own a material portion of the ideas or words of another or to present as one’s own an idea or work derived from an existing source without full and proper credit to the source of the ideas, words, or works. As defined, plagiarize includes, but is not limited to:**

1. The copying of words, sentences and paragraphs directly from the work of another without proper credit;
2. The copying of illustrations, figures, photographs, drawings, models, or other visual and nonverbal materials, including recordings of another without proper credit; and
3. The presentation of work prepared by another in final or draft form as one's own without citing the source, such as the use of purchased research papers.

**Academic Sanctions, From Section D**

The following academic sanctions are provided by this rule for offenses of cheating or plagia­rism. Kent campus instructors shall notify the department chairperson and the student conduct office each time a sanction is imposed. Regional campus instructors shall notify the regional campus dean and the student conduct officer each time a sanction is imposed. Regional campus student conduct officer shall notify the Kent student conduct office each time a sanction is im­posed by a regional campus Instructor. The following academic sanctions are provided by this rule for offenses of cheating or plagiarism. In those cases the instructor may:

1. Refuse to accept the work for credit; or
2. Assign a grade of "F" or zero for the project, test, paper, examination or other work in which the cheating or plagiarism took place; or
3. Assign a grade of "F" for the course in which the cheating or plagiarism took place; and/or;
4. Recommend to the department chair or regional campus dean that further action specified in the rule be taken. The department chairperson or regional campus dean shall determine whether or not to forward to the academic dean or to the vice president for the extended university a recommendation for further sanction under this rule.

**Procedures for invoking sanctions. (From Section E)**

(1)       Academic administrative procedures pertaining to paragraph (D)(1)(a) of this rule. In the event that an instructor determines that it is more probable than not that a student in a course or program under the instructor's supervision has presented work for university credit which involves an act of cheating, plagiarism or cooperation in either, then the instructor shall:

(a)       Inform the student as soon as is practical, in person or by mail, of the belief that an act of cheating or plagiarism has occurred. If the student cannot be reached in a reasonable period of time, the instructor may proceed with sanctions, notifying the student in writing as promptly as possible of the belief and the procedural steps the instructor has taken.

(b)       Provide the student an opportunity to explain orally, in writing, or both, why the student believes the evaluation of the facts is erroneous.

(c)        If the explanation is deemed by the instructor to be inadequate or if no explanation is offered, the instructor may impose one of the academic sanctions listed in paragraph (D)(1)(a) of this rule. Where appropriate, the instructor may recommend the imposition of academic sanctions listed in paragraph (D)(1)(b) of this rule. In addition, the instructor may refer the matter to the dean of the college, campus, or school in which the student is enrolled for imposition of academic sanctions listed in paragraph (D)(1)(b) of this rule.

(d)       The instructor shall notify the office of judicial affairs of the circumstances and action taken. Such notification will be used as background information in the event that formal conduct charges are initiated against the student.

(e)       The instructor shall inform the student in writing of the right to appeal, and the procedure to follow.

(f)         The instructor shall keep the evidence of cheating or plagiarism in a secure place and provide it upon request to any appeals officer or the conduct officer. The instructor shall provide copies on request to the student at the student's expense.

(g)       The instructor shall cooperate with academic and student conduct personnel in any appeal of the decision, and/or in adjudication of any disciplinary proceedings.