Course Information

Description  Students in this class will study classic and advanced operating system topics, including recent developments in operating system research. Topics include virtual memory management, process and thread synchronization and communication, file systems, protection and security, operating system structure and extension techniques, and fault tolerance.

Class Meetings  This class will meet each Wednesday, from August 23 through December 6, from 5:30 PM to 8:00 PM in PKI 279. The class will not meet on November 22.

Instructor  The instructor for this class is Professor Stanley Wileman. His office is PKI 281E. His phone number is 554-3583, and the department’s telephone number is 554-2834. Electronic mail may be sent to stanw@unomaha.edu. Office hours are 10:00 AM to 12:00 PM on Tuesday and Thursday; and 3:00 PM to 5:00 PM on Wednesday. Other office hours are available by appointment. In general, anytime the instructor is in his office he is available.

Textbook  There is no textbook for this course. Instead, classic and current research papers will be read and discussed. The papers will be provided on the class web site, most in PDF format. The schedule indicating which paper (or papers) will be discussed during each class meeting will also be found on the web site, and students should have read each paper prior to the class meeting at which it is discussed. Note that it is acceptable to have some questions about the material after reading it; indeed, it is desirable to have (written) questions (and observations) about the paper(s) brought to class.

The particular set of papers to be discussed will be chosen so as to guarantee appropriate coverage of an appropriate group of operating system topics. Given this constraint, it is still possible that a paper (or papers) of particular interest to the class can be selected for discussion. Students should obviously indicate their interest in such papers as early as possible (and indicate, if possible, a reference for the paper – e.g. the journal or conference in which it appeared, date, author, title).

Class Web Site  The web pages for the class will contain copies of papers to be discussed in class and other items of interest. The home page will be found at cs.unomaha.edu/~stanw/063/8550/index.html. Refer to the web site to obtain the latest information about the class.

Grading  Grades will be based on class participation (30%), examinations (30%), and successful completion and submission for publication of a research paper (40%). Note that the acceptance of the paper is not a component of the evaluation, but evidence of submission is required. A good source for sample papers is the ACM SIGOPS newsletter Operating Systems Review. Papers must not be just a restatement of material extracted
from existing (already published) research papers (whether they were read in this course or not), but must make some contribution to the operating systems literature, even if it is a small contribution! An abstract or proposal for the paper must be prepared and distributed to the class; these will be the focus in (part of) a class meeting.

The evaluation of the research paper is not based on its acceptance, as noted previously, nor is it based on the strength of its contribution to the literature. It is, however, based on the effective use of existing research material to suggest a new problem, or a solution to a new or existing problem, or an expository paper that aids in the understanding of earlier research, and appropriate preparation of the paper (e.g. style, grammar, spelling).

The instructor will help the class identify appropriate target journals and/or conferences for their paper submissions.

**Programming Assignments**  No programming is anticipated for this course. However, the research paper requirement may necessitate some programming activity. Such work, by itself, will be evaluated only in the context of the research paper.

**Attendance Expectations**  Since a significant component of the grade for this course is based on class participation, regular attendance is expected.

**Examinations**  There will be two examinations, spaced approximately evenly throughout the course. One of these will be the final examination. The examinations will have equal weight (15% of the final grade).