

Master Syllabus for TCSS422
Version: September 2009

Educational Objectives:

As the capstone course in the systems area, this course has several objectives and they include:

- teaching students what the components make up a typical operating system,
- showing how the OS provides an interface between application programmers and the hardware
- showing how the OS works with specific features in the hardware
- giving students experience modifying OS components.

Educational Outcomes:

Upon successful completion of this course a student should be able to:

- explain how operating systems are structured, what functions they perform, and how they are useful to programmers as well as end users
- describe how processes are managed including such topics as CPU scheduling, process synchronization and deadlocks
- explain physical and virtual memory is managed
- explain how file storage systems are implemented on local and distributed computers
- describe how input/output devices are managed
- describe typical threats security to computer systems and how they can be avoided
- write or modify systems programs.