

# Bemidji State University

## CS 4840: Operating Systems

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: \*.\*

Lab Hours/Week: \*.\*

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

Fundamentals of operating system design with emphasis on at least one modern operating system. Topics include scheduling, memory management, paging, file management, and mutual exclusion. Required work will include programming investigations. Prerequisites: CS 2322 and CS 2810.

**B. COURSE EFFECTIVE DATES:** 08/20/1997 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Interprocess communication
2. Processes
3. Interprocess synchronization
4. Memory allocation
5. Segmentation
6. Paging
7. Resource allocation
8. Scheduling
9. Performance evaluation
10. File systems
11. Storage devices
12. I/O systems
13. Protection
14. Security and privacy

### D. LEARNING OUTCOMES (General)

1. Understand design principles of operating systems and concurrency.
2. Understand issues and problems that concurrent events generate.
3. Develop solutions to issues and problems of concurrent events.

### E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

**G. SPECIAL INFORMATION**

None noted