CSC 550 Operating Systems

1. CSC 550 Operating Systems

2. credit units 4        contact hours 4

3. Course Coordinator: John Bellardo

4. Textbook (or other required material): Reprints of research papers and online resources are used

5. a. Course Description: General concepts of computer architecture and operating systems. Design features of advanced computers, general time-sharing systems and schemes for dynamic memory allocation, scheduling and protection. Dynamic linkage between subroutines. Intercommunication between input/output and processors. 4 seminars

b. Prerequisite: CSC/CPE 453 and graduate standing, or consent of instructor.

c. Required/Elective/Selective Elective for CPE, CSC, EE, SE

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6. a. Course Learning Objectives
The student will be able to:
- Critique current research papers on different topics concerning operating systems.
- Present current research on advanced OS material to an audience of peers.
- Apply systems knowledge to the design and implementation of an OS subsystem.
  - Design and implement a quarter-long project.
  - Describe their work in a conference-style paper.

b. Level at which Student Outcomes are addressed
(“B” = Basic level, “I” = Intermediate level, “A” = Advanced level)

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7. Major Topics Covered: (number of lecture hours per)
The topics of this course reflect current trends. Representative course flow:
- Week 1: Overview on conducting operating systems related research, Introduction to advanced topics in operating systems, assignment of a course long research project, and
assignment of a mid-course presentation on an advanced operating systems topic.

- Week 2: Continued overview of advanced topics needed for projects, student presentations, and written paper evaluations.
- Week 3, 4, 5, 6, 7, 8, 9: Student presentations on selected advanced topics, assignments: read research papers (average 3 per week) and write a critical evaluation of each.
- Week 10: Student presentations on their research project, 10-15 page paper on the students research project, and Demo of Student project.