CSC/CPE 564 Computer Networks

1. CSC/CPE 564 Computer Networks

2. credit units  4  contact hours  6

3. Course Coordinator: John Bellardo

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

5. a. Course Description: Exploration of advanced topics in emerging computer networking technologies; focus on leading edge computer network research topics. 3 lectures, 1 laboratory. Crosslisted as CPE/CSC 564.

   b. Prerequisite: CSC/CPE 464

   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:
   • The student will study current research papers on different topics concerning computer networks. The student will improve his/her ability to read and understand papers on advanced networking topics, and will practice presenting such material to an audience of peers. The student will apply their systems knowledge by designing and implementing a quarter-long project accompanied with a conference-style paper describing their work.

   The student will be able to:
   • Critique current research papers on different topics concerning computer networks.
   • Present current research on advanced networking topics to an audience of peers.
   • Apply systems knowledge to the design and implementation of a networks system, protocol, or feature.
     o Design and implement a quarter-long project.
     o 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 networking related research, Introduction to advanced topics in networking, assignment of a course long research project, and assignment of a mid-course presentation on an advanced networking topic.

- **Week 2:** Continued overview of advanced topics needed for projects, student presentations, and written paper evaluations.

- **Week 3 assignment:** summary of three peer reviewed articles in support of research project.

- **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.