# CALIFORNIA STATE UNIVERSITY, CHICO

## CSCI 620 (CSCI 380): *Computer Architecture*

### Abbreviated Syllabus for Spring Semester 2005

*Visit http://www.ecst.csuchico.edu/~juliano/csci380 for additional detail.*

### Prerequisites

- CSCI 320 (CSCI 171), *Computer Architecture*
- *Classified* graduate-level standing or permission of instructor

### Description

This graduate-level course focuses on advanced topics in the design and analysis of computer architectures. The course is designed to facilitate investigation of techniques of quantitative analysis and evaluation of modern computing systems, such as the selection of appropriate benchmarks to reveal and compare the performance of alternative design choices in system design. The emphasis is on the major component subsystems of high performance computers: pipelining, instruction-level parallelism, memory hierarchies, storage systems, and network-oriented interconnections. Issues pertaining to the architectural design of highly portable, power-limited computing systems will also be covered. Students will have an opportunity to conduct research in these and other related areas in the field of computer architecture.

**Note:** For Spring 2005, this course will count as a substitute for CSCI 280, *Digital Logic Design Theory*.

| TRACS Call # | Section | Act | Days | Time | Room | Instructor |
|---|---|---|---|---|---|---|
| 11009 | CSCI 380-01 | DIS | MW | 4:00 pm – 5:15 pm | HOLT 352 | Dr. J<br>Juliano@csuChico.edu |

### Instructor Information

Dr. Benjoe A. Juliano (*a.k.a.* Dr. J)
http://www.ecst.csuchico.edu/~juliano

Office Hours: T.B.A.
OCNL 222
Tel 530 898-4619 / 6442 (dept office)
Fax 530 898-5995
*Appointments and walk-ins welcome.*

### Required Textbook

*Computer Architecture: A Quantitative Approach, 3/e.*
J.L. Hennessy & D.A. Patterson, 2003.
Morgan Kaufmann Publishers, San Francisco, CA.
ISBN 1-55860-596-7

### Additional Requirements

1. Students are expected to open and maintain a Chico State Connection (CSC) Portal (see http://portal.csuchico.edu) account in order to access up-to-date on-line calendar of events, current scores, discussion board, etc.
2. Students are responsible for checking out the on-line reading list (URL: /~juliano/csci380/ReadingList.html) for additional required reading for this course. (Note: The reading list includes seminal computer architecture papers that may be referred to in the department's Master's examination.)

### Grade Evaluation

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|---|---|
| **Theoretical Component (50%)** | |
| 40% | Midterm, Wed, March 9, 4:00 pm – 5:15 pm |
| 60% | Finals, Monday, May 16, 6:00 pm – 7:50 pm |
| **Practical Component (50%)** | |
| 100% | Written work<br>● Critiques of 3-5 papers from the Reading List<br>● Possible peer review/evaluation of individual work<br>● Possible written homework |

*Also see the on-line syllabus for details of final grade calculation.*

### Additional Information

http://www.ecst.csuchico.edu/~juliano/csci380/
/~juliano/csci380/Slides/
/~juliano/csci380/ReadingList.html
http://portal.csuchico.edu