

**California State University Channel Islands
New Course Proposal**

Program Area: Computer Science

1. Catalog Description of the Course.

IT 262 COMPUTER ORGANIZATION AND ARCHITECTURE FOR IT (3)

Three hours of lecture per week

Prerequisites: COMP 162

Overview of main system components: CPU, main memory, secondary memory, input/output. Data representation. Digital logic. PC Architecture. CISC and RISC. RAM and cache memories. Disks and RAID. Instruction set design. Input/Output and bus technology. Other architectures. Benchmarking. Trends in computer architecture.

2. Mode of Instruction.

	<u>Units</u>	<u>Hours per Unit</u>	<u>Benchmark Enrollment</u>
Lecture	3	1	24
Seminar	0	0	0
Laboratory	0	0	0
Activity	0	0	0

3. Justification and Learning Objectives.

Justification: BSIT required course.

Learning Objectives:

Students who successfully complete this course will be able to:

1. Organize and express ideas clearly and convincingly in oral and written forms
2. Evaluate the architecture of a computer system
3. Compare and contrast computer architectures
4. Design circuits at the gate-level using and/or/not/multiplexors/decoders/encoders
5. Use benchmarking tools to measure computer system performance

4. Is this a General Education Course?

No.

5. Course Content in Outline Form.

Topics:

1. Components of a typical computer system
2. Instruction level architecture
3. Data representation
4. Digital logic
5. PC Architecture
6. RISC and CISC architectures
7. Benchmarking
8. Non von Neumann architectures

6. Cross-listed Courses.

None.

7. References.

<u>Title</u>	<u>Author</u>	<u>Publisher</u>	<u>Year</u> <u>ISBN</u>
1. Essentials of Computer Organization and Architecture	Null & Lobur	Jones and Bartlett	2003 076370444X

8. Faculty Qualified to Teach This Course.

Qualified Faculty: Smith, Wolfe

9. Frequency.

Projected semesters to be offered: Fall, Spring

10. New Resources Required.

- a. New Equipment needs: Use of existing computer lab.
- b. New Library needs: none
- c. New Space/Facilities needs: none

11. Program Modifications.

None.

12. Proposer of Course.

Proposer: Smith, Wolfe Date: 7/13/2004