LA SIERRA UNIVERSITY

COMPUTER SCIENCE

B.S. Degree

2006-2007 SAMPLE CURRICULUM: It may not be necessary to take these courses in the order given; please consult your advsor.

		FALL	WINTER	SPRING
FIRST YEAR	Orientation Seminar (UNST 101)	1	–	–
	College Writing (ENGL 111, 112, 113)	3	3	3
	Growing Up in America (SSCI 104) OR Identity in Society (SSCI 105) OR Childhood in Global Perspective (SSCI 106)	–	–	4
	THEME IIA: Arts Appreciation or History	–	4	–
	THEME III: Religious Beliefs & Practice	4	–	–
	Lifetime Fitness (PEAC 120)	–	2	–
★	Introduction to Computer Science (CPTG 121, 122)	4	4	–
★	Data Structures (CPTG 244)	–	–	4
★	Calculus I, II, III (MATH 131, 132, 133)	4	4	4
		16.0	17.0	15.0
SECOND YEAR	★ Computer Organization and Assembly Language Programming (CPTG 245)	–	–	4
★	Intro. to Linear Algebra & Discrete Mathematics (MATH 231)	4	–	–
★	Systems and Network Programming (CPTG 255)	–	4	–
★	Discrete Mathematics (MATH 276)	–	4	–
★★	General Physics (PHYS 231, 232 & Labs)	5	5	–
	Exploring American Culture through Literature (HUMN 204) OR Expl. Amer. Culture through Visual & Perf. Arts (HUMN 205)	–	–	4
	Modern Language through Intermediate Level (101, 102, 103)	4	4	4
	THEME IVA: Life Science	4	–	4
		17.0	17.0	16.0
THIRD YEAR	★ Programming Languages (CPTG 324)	4	–	–
★	Computer Architecture (CPTG 445)	–	–	4
★	Mathematics Seminar (MATH 485) OR (CPTG 485) [2 units required]	0.5	–	0.5
★	Digital Logic Design (CPTG 345)	–	4	–
★	Operating Systems (CPTG 434)	–	4	–
★	Software Engineering (CPTG 455)	–	–	4
★	Major Courses: Select 16 additional units (at most 8 from MATH) from CPTG 334, 364, 424, 454, 486, 494, 499; MATH 361, 362, 461, 462	–	4	4
	THEME IA: Understanding Human Beings OR National & Global Citizenship	4	–	–
	Adventism in a Global Perspective (RLGN 304) OR The Experience of Religion in Three Cultures (RLGN 305)	–	–	4
	THEME III: Religious Beliefs & Practice	4	–	–
	Upper Division Rhetorical Course (requirement met by CPTG 334 and 455)	–	4	–
	Modern Language through Intermediate Level (201)	4	–	–
		16.5	16.0	16.5
FOURTH YEAR	★ Major Courses to complete 16 additional units *(see above)*	4	4	–
★	Mathematics Seminar (MATH 485) OR (CPTG 485) [2 units required]	0.5	–	0.5
	THEME IIB: Historical or Contemporary Culture & Context	–	–	4
	THEME III: Religious Beliefs & Practice	–	–	4
	Scientific Foundations: Choose one course from the following: NSCI 404, 405, 406, 407	4	–	–
	Religious, Moral, & Social Aspects of Math & Computing (UNST 404)	–	4	–
	Electives	8	8	8
		16.5	16.0	16.5

★ Major Requirements ★★ Cognate Requirements

COMPUTER SCIENCE

B.S. Degree

The department provides a curriculum in mathematics and computing sciences as a cultural study for all liberal arts students, as a basic tool for the scientist, and as a preparation for graduate study and teaching.

CAREER OPPORTUNITIES AND RELATED OCCUPATIONS: Computer Science graduates may find jobs in almost any major industry or scientific occupation. Such persons may become involved in systems operation in the analysis of technical methods. Other areas are system analysis, computer hardware and software design development and manufacture, and statistical and numerical analysis, as well as network engineer, website designer, web master, and web editor.

EDUCATIONAL QUALIFICATIONS: A Bachelor's degree is sufficient for entry level technical jobs and some systems analysis jobs. However, many professionals find an advanced degree facilitates advancement in research and development and is essential for the growing demand in academia.

DENOMINATIONAL OPPORTUNITIES: Currently there are job opportunities in the medical and educational fields.

JOB OUTLOOK: Employment of computer systems analysts is expected to grow much faster than the average for all occupations through the year 2014 as organizations continue to adopt and integrate increasingly sophisticated technologies. Job increases will be driven by very rapid growth in computer system design and related services, which is projected to be among the fastest-growing industries in the U.S. economy. In addition, many job openings will arise annually from the need to replace workers who move into managerial positions or other occupations or who leave the labor force.

ENTERING SALARY: The National Association of Colleges and Employers reports that for Spring 2006, the national wage level average for those with a Bachelor's degree in Computer Science was **$50,892** per year.

SOURCES OF ADDITIONAL INFORMATION

Websites:

La Sierra University
http://www.lasierra.edu/

Mathematics & Computing
http://cs.lasierra.edu/

Department Contacts:

Chairperson:
Vernon Howe

Advisors:
Wilton Clarke
Enoch Hwang

Location:
Ambs Hall
951-785-2197

Professional Organizations:

Assoc. for Computing Machinery
1515 Broadway
New York, NY 10036
http://www.acm.org

Data Processing Management Assoc.
505 Busse Highway
Park Ridge, IL 60068

Institute of Electrical and Electronics Engineers-United States of America
1828 L Street, NW., Suite 1202
Washington, D.C. 20036
http://www.ieee.org

Institute of Certification of Computing Professionals (ICCP)
2200 East Devon Ave. Ste. 268
Orlando, FL 32819
http://www.qai.org

Academic Advising
Administration Building
Room 206
(951) 785-2951

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