

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

		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 & Society (SSCI 105) OR Childhood in Global Perspective (SSCI 106)	-	-	4
	Lifetime Fitness (PEAC 120)	-	2	-
	* Introduction to Computer Science (CPTG 121)	4	-	-
	* Calculus I, II, III (MATH 131, 132, 133)	4	4	4
	** General Chemistry I, II, III (CHEM 111, 112, 113 & Labs)	5	5	5
		<u>17.0</u>	<u>14.0</u>	<u>16.0</u>
SECOND YEAR	* General Biology (BIOL 111, 112, 113 & Labs)	5	5	5
	** Organic Chemistry I (CHEM 371)	4	-	-
	THEME IA: Understanding Human Nature OR National & Global Citizenship	-	4	-
	Exploring American Culture through Literature (HUMN 204) OR Expl. Amer. Culture through Visual & Perf. Arts (HUMN 205)	-	4	-
	THEME III: Religious Beliefs & Practice	4	-	4
	Modern Language through Intermediate Level (101, 102, 103)	4	4	4
	Electives	-	-	4
		<u>17.0</u>	<u>17.0</u>	<u>17.0</u>
THIRD YEAR	*Introduction to Linear Algebra & Discrete Math., Differential Equations, Vector Calculus (MATH 231, 232, 233)	4	4	4
	* Major Electives: 12 additional units of upper division mathematics, computer science, or biology courses	4	-	4
	* Computer Science Seminar (CPTG 485) OR Mathematics Seminar (MATH 485) OR Undergraduate Seminar (BIOL 405) [2 units required]	0.5	-	0.5
	THEME IIA: Arts Appreciation or History	-	4	-
	THEME IIB: Historical or Contemporary Culture & Context	-	-	4
	THEME III: Religious Beliefs & Practice	-	4	-
	Adventism in a Global Perspective (RLGN 304) OR The Experience of Religion in Three Cultures (RLGN 305)	-	4	-
	Upper Division Rhetorical Course	-	-	4
	Modern Language through Intermediate Level (201)	4	-	-
	Electives	<u>4</u>	<u>-</u>	<u>-</u>
		<u>16.5</u>	<u>16.0</u>	<u>16.5</u>
	FOURTH YEAR	* Cellular & Molecular Biology (BIOL 301 & Lab)	-	5
* Genetics (BIOL 302 & Lab)		5	-	-
* Biomathematical Modeling (MATH 461, 462) <i>alternate years</i>		-	4	4
* Major Electives: <i>See above.</i> 1 unit may be applied to the Biomathematics major for each Biochemistry course selected from CHEM 491, 492, and 2 units may be added for CHEM 493		-	-	4
* Mathematics Seminar (MATH 485) OR Undergraduate Seminar (BIOL 405) OR Computer Seminar (CPTG 485) [2 units required]		0.5	0.5	-
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 Mathematics (UNST 404)		-	4	-
<i>Electives to complete 190 quarter units</i> (CHEM 372, 373; PHYS 231, 231, & 233 recommended)		<u>4</u>	<u>4</u>	<u>4</u>
		<u>12.5</u>	<u>16.5</u>	<u>16.0</u>
* Major Requirements			** Cognate Requirements	

BIOMATHEMATICS

B.S. Degree

CAREER OPPORTUNITIES AND RELATED OCCUPATIONS: Graduates in Biomathematics are equipped to pursue a variety of careers, depending upon the particular emphasis chosen during their undergraduate training. They may be employed as statisticians, scientific programmers, or in areas of bio-science where training in quantitative techniques is needed. Further, they are equipped to pursue graduate studies in theoretical biology, physiology, biostatistics, statistics, and areas of applied mathematics. This major can also be used for a pre-medicine or pre-dentistry program. A large number of mathematicians work in the Federal Government with the National Aeronautics and Space Administration. In the private sector, research and development laboratories, manufacturers of guided missiles, space vehicles, aircraft, and office computing machines are industries providing most of the jobs.

EDUCATIONAL QUALIFICATIONS: A Bachelor's degree is the minimum educational requirement for some beginning jobs. A double major will give excellent background for computer biological simulation and industry research. However, a Ph.D. degree is essential for college and university teaching and research, while a Master's degree will prepare for consulting jobs, quality control positions in industry, computer science and biological research.

JOB OUTLOOK: Employment of mathematicians is expected to decline through 2014, reflecting the reduction in the number of jobs with the title "mathematician." As a result, competition is expected to be keen for the limited number of jobs as mathematicians. Master's and Ph.D. degree holders with a strong background in mathematics and a related discipline, such as engineering or computer science, should have the best opportunities. Many of these workers have job titles that reflect their occupation, such as systems analyst, rather than the title mathematician, reflecting their primary educational background.

ENTERING SALARY: The National Association of Colleges and Employers reports that the national entering wage level for Spring 2006 for those with a Bachelor's degree in Mathematics was **\$41,124**.

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

Vernon Howe

Location:

Ambs Hall

951-785-2197

Professional Organizations:

Mathematical Assoc. of America

1529 18th Street, NW

Washington, D.C. 20036

<http://www.maa.org>

American Mathematical Society,

Department of Professional

Programs and Services

P.O. Box 6248

Providence, RI 02940-6248

<http://www.ams.org>

Professional Opportunities in

Math (\$1.50)

Seeking Employment in the

Mathematical Sciences (\$2.00)

Academic Advising

Administration Building

Room 206

(951) 785-2951

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