

2008-2009 CURRICULUM CHECK SHEET is a guide to the requirements of this major. **It is NOT necessary to take these courses in the order given.** Please consult the online Bulletin for specific details (<http://www.lasierra.edu/academics/bulletin>).

		FALL	WINTER	SPRING
FIRST YEAR	* Introduction to Computer Science (CPTG 121)(4 units)	_____	_____	_____
	* Calculus I, II, III (MATH 131, 132, 133)(12 units)	_____	_____	_____
	** General Chemistry I, II, III (CHEM 111, 112, 113 & Labs)(15 units)	_____	_____	_____
	First Year Seminar (UNST 101)(2 units)	_____	_____	_____
	College Writing (ENGL 111, 112, 113)(9 units)	_____	_____	_____
	Growing Up in America (SSCI 104) OR Identity & Society (SSCI 105) OR Childhood in Global Perspective (SSCI 106)(4 units)	_____	_____	_____
	Lifetime Fitness (PEAC 120)(2 units)	_____	_____	_____
SECOND YEAR	* General Biology (BIOL 111, 112, 113 & Labs)(15 units)	_____	_____	_____
	** Organic Chemistry I (CHEM 371)(4 units)	_____	_____	_____
	THEME IA: Understanding Human Nature OR National & Global Citizenship (4 units)	_____	_____	_____
	Exploring American Culture through Literature (HUMN 204) OR Expl. Amer. Culture through Visual & Perf. Arts (HUMN 205)(4 units)	_____	_____	_____
	THEME III: Religious Beliefs & Practice (8 units)	_____	_____	_____
	World Language Foundational Studies requirement (12 units)	_____	_____	_____
	Elective	_____	_____	_____
THIRD YEAR	* Introduction to Linear Algebra & Discrete Math., Differential Equations, Vector Calculus (MATH 231, 232, 233)(12 units)	_____	_____	_____
	* Major Electives: 12 additional units of upper division mathematics, computer science, or biology courses (8 units)	_____	_____	_____
	* Computer Science Seminar (CPTG 485)(.5 unit)[2 units required] OR Mathematics Seminar (MATH 485) OR Biology Seminar (BIOL 405)(2 units)	_____	_____	_____
	THEME IIA: Arts Appreciation or History (4 units)	_____	_____	_____
	THEME IIB: Historical or Contemporary Culture & Context (4 units)	_____	_____	_____
	THEME III: Religious Beliefs & Practice (4 units)	_____	_____	_____
	Adventism in a Global Perspective (RLGN 304) OR The Experience of Religion in Three Cultures (RLGN 305)(4 units)	_____	_____	_____
	Upper Division Rhetorical Course (4 units)	_____	_____	_____
	Elective	_____	_____	_____
	FOURTH YEAR	* Cellular & Molecular Biology (BIOL 301 & Lab)(5 units)	_____	_____
* Genetics (BIOL 302 & Lab)(5 units)		_____	_____	_____
* Biomathematical Modeling (MATH 461, 462) alternate years (8 units)		_____	_____	_____
* Major Electives: See above. 1 unit may be applied to the Biomathematics major for each Biochemisry course selected from CHEM 491, 492, and 2 units may be added for CHEM 493 (4 units)		_____	_____	_____
* Mathematics Seminar (MATH 485) OR Biology Seminar (BIOL 405) OR Computer Science Seminar (CPTG 485)(.5 unit)[2 units required]		_____	_____	_____
THEME III: Religious Beliefs & Pracice (4 units)		_____	_____	_____
Scientific Foundations: Choose one course from the following: NSCI 404, 405, 406, 407 (4 units)		_____	_____	_____
Religious, Moral & Social Aspects of Mathematics (UNST 404)(4 units)		_____	_____	_____
Electives to complete 190 quarter units (CHEM 372, 373; PHYS 231, 231, & 233 recommended)		_____	_____	_____
* Major Requirements (75 units) ** 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

www.lasierra.edu/departments/mathematics/

Department Contacts:

Chairperson:

Jon Vanderwerff

Advisors:

Wilton Clarke

Vernon Howe

Jon Vanderwerff

Location:

Price Science Complex, Rm 247
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>

Academic Advising
Center for Student Academic Success
Sierra Vista Hall, Room 114
(951) 785-2452

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