

2009-2010 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	* General Biology (BIOL 111, 112, 113 & Labs)(15 units)	_____	_____	_____
	** Calculus I (MATH 131)(4 units) <i>Meets Honors Foundational Math</i>	_____	_____	_____
	** General Chemistry I, II, III (CHEM 111, 112, 113 & Labs)(15 units)	_____	_____	_____
	College Writing (ENGL 111, 112, 113) (9 units)	_____	_____	_____
	OR Freshman Seminar in Writing (ENGL 124) (4 units)	_____	_____	_____
	Lifetime Fitness (PEAC 120)(2 units)	_____	_____	_____
	World Language or Ancient Language (Proficiency through 201)	_____	_____	_____
	℘ Beginning to Seek (UHNR 101)(1 unit)	__X__	_____	_____
SECOND YEAR	℘ The Arts (UHNR 115/115L)(4 units)	_____	__X__	_____
	℘ The Scientific Process (UHNR 114/114L)(4 units) <i>Recommended co-requisite: ENGL 112 or 124</i>	_____	_____	__X__
	* Tools & Methods I, II, III (BIOL 221, 222, 223)(3 units)	_____	_____	_____
	** Organic Chemistry I, II, III (CHEM 371, 372, 373 & Labs)(12 units)	_____	_____	_____
THIRD YEAR	** General Physics (PHYS 231, 232, 233 & Labs)(15 units)	_____	_____	_____
	℘ Seminar in Rhetoric (UHNR 201)(2 units) <i>Pre-requisite: ENGL 113, OR ENGL 124 with a "B" or better</i>	__X__	_____	_____
	℘ Religious Understandings (UHNR 224)(4 units)	_____	__X__	_____
	℘ Global Cultures in Context:Theories and Perspectives (UHNR 231)(4 units) <i>Pre-requisite: Language through level 152 (may be taken concurrently)</i>	_____	_____	__X__
	℘ Global Cultures in Context:The Experience (UHNR 232)(4 units) <i>Pre-requisite UHNR 231</i>	__SUM__	_____	_____
	* Cellular and Molecular Biology (BIOL 301 & Lab)(5 units)	_____	_____	_____
FOURTH YEAR	* Genetics (BIOL 302 & Lab)(5 units)	_____	_____	_____
	* Developmental Biology (BIOL 303 & Lab)(5 units)	_____	_____	_____
	* Biology Colloquium I (BIOL 350)(1 unit)	_____	_____	_____
	* Biostatistics (BIOL 376)(4 units)	_____	_____	_____
	℘ Changing Communities (UHNR 314/314L)(5 units)	__X__	_____	_____
	℘ Science and the Future (UHNR 324)(4 units) <i>Pre-requisite: One quarter of calculus or statistics; UHNR 114, 114L</i>	__X__	__X__	_____
	℘ Honors Community Involvement (UHNR 354)(3 units) <i>Pre-requisite: UHNR 314/314L</i>	_____	__X__	_____
	℘ Honors Scholarship Colloquium (UHNR 364)(1 unit) <i>Pre-requisite: At least Sophomore standing</i>	_____	__X__	__X__
Electives	_____	_____	_____	
FOURTH YEAR	* Seminar (BIOL 405)(2 units)	_____	_____	_____
	* Biology Electives: <i>Choose 20 units from the following:</i> BIOL 408,410,434,436,439,446,466,467,469,474,485,487, any upper division course taught at Rosario Marine Station	_____	_____	_____
	* General Ecology (BIOL 414) OR Environmental Science (BIOL 415)(4 units)	_____	_____	_____
	* Vertebrate Natural History (BIOL 477)(4 units)	_____	_____	_____
	℘ Religious, Moral, and Social Aspects of the Academic Discipline (UHNR 404)(4 units) <i>Pre-requisite: UHNR 364; completion or concurrent enrollment in UHNR 354</i>	__X__	_____	_____
	℘ Religion and Future (UHNR 414)(4 units) <i>Pre-requisite: UHNR 224</i>	_____	__X__	_____
	℘ Seeking, Knowing, and Serving (UHNR 424)(4 units) <i>Pre-requisite: Senior Standing; completion of or concurrent enrollment in UHNR 354</i>	_____	_____	_____
	℘ Honors Scholarship Project (UHNR 464)(6-16 units) <i>Pre-requisite: Senior standing; UHNR 364</i>	_____	_____	_____
	Electives to complete 190 quarter units	_____	_____	_____
	* Major Requirements (60 units)	_____	_____	_____
** Cognate Requirements	_____	_____	_____	
℘ Honors Courses	_____	_____	_____	

BIOLOGY

Biological Science

B.S. Degree

The objectives of the Department of Biology are to help students better understand themselves and the natural world, to develop a scholarly and practical approach to the study of scientific information, and to prepare them for a career in biology or any of the many other related fields of employment.

CAREER OPPORTUNITIES AND RELATED OCCUPATIONS: Biology graduates are employed in a broad variety of government and private sector positions including, but not limited to field positions (forest service, park service, fish and wildlife management, conservation, ecology), agriculture research or management, food manufacturing industries, waste management, environmental safety and testing, industrial quality control, pharmaceutical and immunochemical industries, biotechnology (genetic engineering, molecular biology, microbiology, immunology), health related research (cancer, infectious disease, genetics), health professions (medicine, dentistry, optometry, allied health, public health), and teaching at the secondary and college levels.

EDUCATIONAL QUALIFICATIONS: Graduate training in a given area enhances the students' employability in some areas. Extraordinary opportunities are provided for the Biology students to obtain valuable experience in research laboratories of the faculty.

JOB OUTLOOK: Employment of biological scientists is projected to grow about as fast as average for all occupations over the 2004-14 period, as biotechnological research and development continues to drive job growth. Opportunities for those with a bachelor's or master's degree in biological science are expected to be better.

ENTERING SALARY: According to the National Association of Colleges and Employers, beginning salary offers in 2008 averaged **\$34,953** a year for bachelor's degree recipients in Biological and Life Sciences.

In 2008, the average entering salaries for credentialed teachers in the Inland Empire begin at **\$39,618**. Those with a Master's degree and more experience an average of about **\$70,000** a year.

As in any profession, salaries are determined by experience, professional preparation, employment setting and economic conditions of geographic location. Specific geographic regions, including Southern California, may provide more job opportunities and higher pay scales because of the high concentration of health related research facilities and biotechnology firms in the area.

SOURCES OF ADDITIONAL INFORMATION

Websites:

La Sierra University

<http://www.lasierra.edu/>

Department of Biology

<http://www.lasierra.edu/biology/>

Department Contacts:

Chairperson:

James Wilson, Ph.D.

Advisors:

G. Bradley, Ph.D. L. McCloskey, Ph.D.
N. Dean, Ph.D. J. Perumal, Ph.D.
L. Grismer, Ph.D. Shareen Sabet, Ph.D.
E. Joseph, Ph.D. J. Wilson, Ph.D.

Location:

Price Science Complex
951-785-2105

Professional Organizations:

American Institute of Biological
Sciences
Suite 200, 1444 I St. NW
Washington, DC 20005
<http://www.aibs.org>

American Society for Biochemistry
and Molecular Biology
9650 Rockville Pike
Bethesda, MD 20814
<http://www.faseb.org/asmb>

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

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