Point Loma Nazarene University		LO 1	LO 2	LO 3	LO 4	LO 5	LO 6	LO 7
Environmental Science B.S. Curriculum Map		Students will demonstrate an understanding of the process of science, and of the concepts and theories of biology across a broad range of organizational levels: molecular (M), cellular (C), organismal (O), and ecological (E).	Students will demonstrate a foundational knowledge of the principles of physical, organic, analytical, and inorganic chemistry, including the structure of matter, fundamental chemical reactions, and the factors that regulate such processes.	Students will understand the basic techniques of chemical investigation and the fundamental principles and operating procedures of the major instruments used in chemical characterization and analysis.	Students will participate in the life of the departments of Biology and/or Chemistry by involvement in science clubs and/or in various positions of responsibility such as graders, tutors, and teaching assistants.	Students will develop career goals and define a path by which to achieve these goals.	Students will develop a rationally defensible integration of science and faith, particularly with regard to environmental stewardship	Students will gain entry to professional or graduate schools, or to science-related careers.
Course	Course Title							
LOWER-DIVISION REQUIREMENTS								
Biology		**M C O P O A E I**						
BIO 102	Environment and People	I I					I	
or								
BIO105	Ecology and Conservation	I I					I	
BIO 210	Cell Biology and Biochemistry	I I					I	
BIO 211	Ecological and Evolutionary Systems	I I					I	
BIO 212	Organismal Biology	I						
Chemistry								

CHE 151	General Chemistry Tutorial *(can be waived)*		I I I I					
CHE 152	General Chemistry I		I I I I	I				
CHE 153	General Chemistry II		I I I I	I				
CHE 213	Analytical Chemistry		D/M	D/M				
CHE 294	Organic Chemistry I		I/D	D/M				
UPPER-DIVISION REQUIREMENTS		**M C O E**						
BIO 345	Genetics	D D D					D	
BIO 360	Ecology	D D					D	
BIO 497	Biology Seminar						M	
CHE 370	Instrumental Analysis		M	M				
ADVANCED SCIENCE ELECTIVES	**(minimum 8 units)**	**M C O E**						
BIO 310	General Botany	D M D						
BIO 315	Microbiology	D D D						
BIO 320	Marine Vertebrate Zoology	M				D	D	

BIO 325	Insect Biology	D						
BIO 330	Marine Invertebrate Zoology (Quad)	M					D	
BIO 340	Field Biology (Quad)	D D						
BIO 370	Marine Plant and Microbial Life (Quad)	M					D	
BIO 410	Vertebrate Biology	D/M D/M					D/M	
BIO 420	Vertebrate Physiology	D D/M						
BIO 430	Animal Behavior	D/M D/M					D/M	
BIO450/CHE450	Advanced Biochemistry	M M	M	M				
CHE 304	Organic Chemistry II		M	D/M				
CHE 325	Physical Chemistry I		M	D/M				
CHE 351	Organic Qualitative Analysis		M	M				
CHE 466	Advanced Inorganic Chemistry I		M					
CHE 468	Advanced Inorganic Chemistry II		M					

Methodology Electives	***(minimum 1 course)***	**M C O E**						
BIO 301	Research Methodology	D D D D						
BIO 490	Internship in Biology					M		
BIO 499	Research in Biology	M M M M				M		
CHE 490	Internship in Chemistry			M		M		
CHE 499	Research in Chemistry			M		M		
Extracurricular Activities								
Faculty Advising (required for registration clearance)						I, D, M		I
Pre-Health Advising						D, M		D
Pre-Teaching Advising						D, M		D
Undergraduate Research & Internships		M M M M		M		D, M		D
Participation in science clubs or as a grader, TA, or tutor					I, D, M			D
Post-baccalaureate Path								M