Point Loma Nazarene University **Environmental Science B.S. Curriculum Map - Students will be able to:**		LO 1 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 (population, community, ecosystem) (E).	LO 2 Apply key concepts and principles in analytical chemistry including quantitative and instrumental analysis.	LO 3 Use standard instrumentation and laboratory equipment to conduct scientific experiments and perform chemical characterization and analyses.	LO 4 Participate in the life of the Biology and/or Chemistry Department by involvement in one or more of the following areas: research, biology and/or chemistry clubs, and/or various positions of responsibility serving as graders, tutors, stockroom workers and/or teaching assistants.	LO 5 Develop a rationally defensible integration of science and faith, particularly with regard to environmental stewardship.	LO 6 Be prepared for post graduate studies or a science related career.
Course	Course Title						
LOWER-DIVISION REQUIREMENTS		**M C O E**					
BIO 1002	Environment and People	I I				I	I
BIO 2010/2010L	Cell Biology and Biochemistry	I I				I	I
BIO 2011/2011L	Ecological and Evolutionary Systems	I I				I	I
BIO 2012/2012L	Organismal Biology	I					I
CHE 1052/1052L	General Chemistry I		I	I			
CHE 1053/1053L	General Chemistry II		I	I			
CHE 2013	Analytical Chemistry		D/M	D			
CHE 2094/2094L	Organic Chemistry I			D			
UPPER-DIVISION REQUIREMENTS		**M C O E**					
BIO 3045/3045L	Genetics	D D D				D	D
BIO 3063/3063L	Conservation Ecology	D D				D	D
BIO 3083	Introduction to GIS						
BIO 4097	Biology Seminar					M	M
CHE 3070	Instrumental Analysis		M	M			
ADVANCED SCIENCE ELECTIVES	**(minimum 8 units)**	**M C O E**					
BIO 3012	Applied Plant Biology	D M D					D
BIO 3015/3015L	Microbiology	D D D					D
BIO 3023/3023L	Introduction to Oceanography	D D				D	D
BIO 3033/3033L	Marine Biology	D/M D/M				D	D
BIO 3040	Field Biology	D D					D
BIO 4010/4010L	Vertebrate Biology	D/M D/M				D/M	D
BIO 4023/4023L	Advanced Human Physiology	D D/M					D
BIO 4030/4030L	Animal Behavior	D/M D/M				D/M	D
BIO 4073/4073L	Experimental Marine Ecology	M M					D
BIO/CHE 4050/405	Advanced Biochemistry	M M					D
CHE 2096/2096L	Organic Chemistry II						
CHE 3025/3025L	Physical Chemistry I						
CHE 3051	Organic Structure Elucidation						
CHE 4066	Advanced Inorganic Chemistry I						
CHE 4068	Advanced Inorganic Chemistry II						
Methodology Electives	***(minimum 1 course)***	**M C O E**					
BIO 3052	Research Methodology	D D D D					
BIO 4090	Internship in Biology	M M M M					D/M
BIO 4099	Research in Biology	M M M M					D/M
CHE 4090	Internship in Chemistry		D/M	D/M			M
CHE 4099	Research in Chemistry		D/M	D/M			M
Extracurricular Activities		**M C O E**					
Advising (faculty, pre-health, pre-teaching)							I/D
Career Dinners							D
Science clubs and/or grader, tutor, stockroom worker, TA					I/D/M		I/D
Research		M M M M			D/M		D/M
Internships		M M M M					D/M