

CALIFORNIA STATE UNIVERSITY, LOS ANGELES
PROGRAM FOR THE BACHELOR OF SCIENCE DEGREE IN NATURAL SCIENCE
Applied Science (Option III)

Student Name: _____
Email address: _____
GE Year / Major Year: _____

CIN: _____
Phone: _____
Advisor: _____

Requirements for this degree

The Bachelor of Science Degree in Natural Science provides broad training across several science disciplines and is offered as three options: Interdisciplinary Science (Option I), Teaching (Option II), and Applied Science (Option III). Natural Science majors choose one option. Majors choosing the Interdisciplinary Science or Teaching option must select an emphasis area in biology, chemistry, geoscience, or physics, and majors choosing the Applied Science option must select an emphasis area in food science or medical science. Students should speak with a Natural Science adviser before choosing an option.

- In each options students must earn a grade of C or higher in all courses that satisfy the following university, general education or major requirements.
 - **Consult with an advisor for the specific number of units required in all areas of the degree including General Education, 40 upper-division unit graduation requirement, and elective units needed to complete the major.**
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Option III - Bachelor of Science Degree in Natural Science – Applied Science

The Applied Science Option of the Bachelor of Science degree in Natural Science is designed primarily for preparation for broad careers in science requiring application of a general natural science background to human behavior. Total number of units required for the degree is 120, of which 78 units are in the major. A minimum of 24 additional units of upper division coursework is required in the emphasis area, and two courses must be designated as GE Writing Intensive (wi).

The following worksheets show the major requirements for each of the emphasis areas, and the last page shows the GE and University requirements.

APPLIE SCIENCE MAJOR REQUIREMENTS – FOOD SCIENCE EMPHASIS

Requirement	Units	Transfer institution and equivalent course	Or Cal State L.A. course number and title	Term	Grade
CORE (49 units)					
Fundamentals of Biological and Chemical Sciences (33 units)					
BIOL 1100 – Principles of Biology I	5				
BIOL 1200 – Principles of Biology II	5				
BIOL 2010 - Human Anatomy and Physiology I	4				
BIOL 2020 - Human Anatomy and Physiology II	4				
CHEM 1010 - Fundamentals of Chemistry	4				
CHEM 1020 - Fundamentals of Organic Chemistry	4				
CHEM 3000 - Nutritional Aspects of Biochemistry	4				
MATH 1020 – College Algebra	3				
Fundamentals of Applied Science and Human Behavior (16 units)					
MICR 2010 - Microbiology for Health Related Sciences (3)	3				
MICR 2020 - Microbiology Laboratory for Health Related Sciences (1)	1				
NATS 4200 - Cultures of Science (3)	3				
NTRS 3170 - Fundamentals for Human Nutrition (3)	3				
PSY 1500 - Introductory Psychology (3)	3				
SOC 2010 - Introduction to Sociology (3)	3				
EMPHASIS AREA (29 units)					
Students must choose one emphasis area from food science or medical science.					
Food Science Emphasis (26 units)					
<i>Select NTRS courses totaling 26 units with advisor approval.</i>					
NTRS course					
NTRS course					
NTRS course					
NTRS course					
NTRS course					
NTRS course					
NTRS course					
NTRS course					
NTRS course					
Free Electives (3 units)					
<i>Select lower and/or upper division electives with advisor approval. Completion of additional NTRS or other applied science courses is strongly recommended.</i>					
Elective					
TOTAL SEMESTER UNITS REQUIRED	81				

APPLIE SCIENCE MAJOR REQUIREMENTS – MEDICAL SCIENCE EMPHASIS

Requirement	Units	Transfer institution and equivalent course	Or Cal State L.A. course number and title	Term	Grade
CORE (49 units)					
Fundamentals of Biological and Chemical Sciences (33 units)					
BIOL 1100 – Principles of Biology I	5				
BIOL 1200 – Principles of Biology II	5				
BIOL 2010 - Human Anatomy and Physiology I	4				
BIOL 2020 - Human Anatomy and Physiology II	4				
CHEM 1010 - Fundamentals of Chemistry	4				
CHEM 1020 - Fundamentals of Organic Chemistry	4				
CHEM 3000 - Nutritional Aspects of Biochemistry	4				
MATH 1020 – College Algebra	3				
Fundamentals of Applied Science and Human Behavior (16 units)					
MICR 2010 - Microbiology for Health Related Sciences (3)	3				
MICR 2020 - Microbiology Laboratory for Health Related Sciences (1)	1				
NATS 4200 - Cultures of Science (3)	3				
NTRS 3170 - Fundamentals for Human Nutrition (3)	3				
PSY 1500 - Introductory Psychology (3)	3				
SOC 2010 - Introduction to Sociology (3)	3				
EMPHASIS AREA (29 units)					
Students must choose one emphasis area from food science or medical science.					
Medical Science Emphasis (26 units)					
<i>Select NURS courses totaling 26 units with advisor approval.</i>					
NURS course					
NURS course					
NURS course					
NURS course					
NURS course					
NURS course					
NURS course					
NURS course					
NURS course					
Free Electives (3 units)					
<i>Select lower and/or upper division electives with advisor approval. Completion of additional NURS or other applied science courses is strongly recommended.</i>					
Elective					
TOTAL SEMESTER UNITS REQUIRED	81				

GENERAL EDUCATION AND UNIVERSITY REQUIREMENTS

GE Block and Area	Units	Transfer institution and equivalent course	Or Cal State L.A. course number and title	Term	Grade
LOWER DIVISION (39 units)					
A. English Language Communication and Critical Thinking (9 units)					
A1 Oral Communication	3				
A2 Written Communication	3				
A3 Critical Thinking and Composition	3				
B. Scientific Inquiry and Quantitative Reasoning (9 units)					
Select three courses from at least two categories		NATS Option III majors satisfy by taking Core requirements for major			
B1 Physical Science with lab	6				
B2 Biological Science with lab					
B3 Interdisciplinary Physical-Biological Science					
B4 Quantitative Reasoning & Mathematical Concepts	3				
C. Arts and Humanities (9 units)					
C1 Arts	3				
C2 Humanities	3				
C AI U.S. History (American Institutions)	3				
D. Social Sciences (9 units)					
D	3				
D	3				
D AI U.S. Constitution and State/Local Govt (American Institutions)	3				
E. Lifelong Learning and Self-Development (3 units)					
IHE (cl)	3				
UPPER DIVISION (9 units) (at least one course designated (cl))					
B Natural Science and Quantitative Reasoning	3				
C Arts and Humanities	3				
D Social Sciences	3				
TOTAL SEMESTER UNITS REQUIRED	48				

Other Requirements	Units	Transfer institution and equivalent course	Or Cal State L.A. course number and title	Term	Grade
Diversity (d) or (re) (two courses, one course must be re)					
Writing Intensive (wi) (two courses) (NATS Option I majors satisfy by taking NATS 4950 and UD writing course in emphasis area)					
Civic Learning (cl) (upper division GE course)					
Graduation Writing Assessment Requirement (must be satisfied prior to completion of 90 semester units)					