

UCLA

DEPARTMENT OF INTEGRATIVE BIOLOGY AND PHYSIOLOGY

MAJOR – PHYSIOLOGICAL SCIENCE

PREPARATION REQUIREMENTS

To enter the Physiological Science major, students must complete Life Science 1, 2; Chemistry 14A and 14B, 14C or 20A and 20B, 30A; Math 3A, 3B, and 3C, or 31A, 31B, and 32A; and Physics 6A or 1A with a GPA of 2.5 or better before Fall of their third year. For all preparation courses, students must complete each course with a grade of C or better. Repetition of more than one preparation course will result in dismissal from the major or denial of admission to the major.

Life Science 1	_____	_____	5	"Evolution, Ecology & Biodiversity"
Life Science 2	_____	_____	4	"Cell, Tissues & Organs"
Life Science 3	_____	_____	4	"Cell & Molecular Biology"
Life Science 4	_____	_____	5	"Genetics"
Life Science 23L	_____	_____	2	Laboratory and Methodology
Chem 14A or 20A	_____	_____	4	General Chemistry
Chem 14B or 20B	_____	_____	4	General Chemistry
Chem 14BL or 20L & 30AL	_____	_____	3 or 3+4	General Chemistry Lab
Chem 14C or 30A	_____	_____	4	Organic Chemistry
Chem 14CL or 30BL	_____	_____	4/3	Organic Chemistry Lab
Chem 14D or 30B	_____	_____	4	Intermediate Organic Chemistry
Math 3A or 31A or LS 30A	_____	_____	4	Calculus series
Math 3B or 31B or LS 30B	_____	_____	4	
Math 3C or 32A or Stats	_____	_____	4	
Physics 6A or 1A+4AL	_____	_____	5	Calculus-Based Physics
Physics 6B or 1B+4BL	_____	_____	5	
Physics 6C or 1C	_____	_____	5	

MAJOR REQUIREMENTS

All required courses must be taken for a letter grade. Minimum required GPA in the major is 2.0.

				<u>Prerequisites</u>
Chem 153A	_____	_____	4	Chem 14D or 30B
Chem 153L	_____	_____		Chem 14BL and LS 23L, or 20L and 30AL
Phy Sci 107 (F)	_____	_____	5	LS 2 & Phy 6A/1A
Prerequisites for Phy Sci 111A and 111B				LS 1, 2, 3, 4
Phy Sci 111A (W)	_____	_____	6	PS 107, Physics 6B/1B, Chem 14C/30A
Phy Sci 111B (S)	_____	_____	6	PS111A, Chem 14D/30B
Phy Sci 111L	_____	_____	3	Phy Sci 111A, 111B
Phy Sci Elective _____	_____	_____	4/5	Allowed 8 units of PS199
Phy Sci Elective _____	_____	_____	4/5	one outside elective
Phy Sci Elective _____	_____	_____	4/5	one 200-level course
Phy Sci Elective _____	_____	_____	4/5	
Phy Sci Elective _____	_____	_____	4/5	

PHYSIOLOGICAL SCIENCE ELECTIVES

4 out of 5 required electives must be Phy Sci

Phy Sci 108 Head and Neck Anatomy (4)
Phy Sci 122 Biomed Tech and Physiology (4)
Phy Sci 124 Molecular Biology of Aging (4)
Phy Sci 125 Molecular Systems Biology (4)
Phy Sci 126 Biological Clocks (4)
Phy Sci 133 Exercise Physiology (5)
Phy Sci 134 Exercise Endocrinology/Metabolism (4)
Phy Sci 135 Systems Modeling of Physio. Proc (5)
Phy Sci 136 Exercise & Cardiovascular Function (5)
Phy Sci C137 Growth & Adaptation in Cardio Sys (4)
Phy Sci 138 Neuromuscular Phys. & Adaptation (4)
Phy Sci M140 Hormones & Behavior (4)
Phy Sci 143 Neurobiology of Skilled Hand Function
Phy Sci C144 Neural Control of Phys. Systems (5)
Phy Sci M145 Neural Mech. Control. Movement (5)
Phy Sci 146 Prin. Of Nervous System Dev. (4)
Phy Sci 147 Neurobio of Learning & Memory (5)
Phy Sci M148 Mol. & Cellular Phys. of Neurons (4)

Phy Sci 149 Mechanisms of Human Diseases (4)
Phy Sci C150 Musculoskeletal Mechanics (5)
Phy Sci C152 Musc. Anat., Phys., Biomech (5)
Phy Sci 153 Dissection Anatomy (4)*
Phy Sci 154 Cell Comm. & Reg. of PS Proc. (4)
Phy Sci 155 Dev., Structure of Musc. Sys. (4))
Phy Sci 156 Mol Mech & Ther Musc Dystrophy (4)
Phy Sci M158 – Cell Biology (6)
Phy Sci 165 Comparative Animal Physiology (4)
Phy Sci 167 Physiology of Nutrition (4)
Phy Sci M168 History of Physiology (4)
Phy Sci 173 Anat., Phys. of Sense Organs (4)
PhySci 175 Biological Evolution of Language (4)
Phy Sci 177 Neuroethology (5)
Phy Sci M180B **or** M180C Neuroscience (5)
Phy Sci M181 Bio Bases of Psych Disords (4)

*Phy Sci 153 is offered only in the summer

OUTSIDE ELECTIVES

EEB 100 - Introduction to Ecology and Behavior
EEB 110 – Vertebrate Morphology
EEB 111 – Biology of Vertebrates
EEB 120 – Evolution
EEB 121 – Molecular Bio. & Evolution
EEB 162 – Plant Physiology

Biomath 160 – Biostatistics
Biostats 100A – Biostatistics

Chem 153BC – Biochemistry
Env Hlt Sci 100 – Intro to Env. Health

MCDB 100 - Introduction to Cell Biology
MCDB 138 – Developmental Biology
MCDB 144 – Molecular Biology of Cellular Processes and Experimental Applications of Theory

Mol & Med Pharm 110A **or** 110B – Drugs:
Mechanisms, Uses & Misuse

MIMG 101 – Fundamental Bacteriology
MIMG 102 – Intro to Virology
MIMG 185A - Immunology

Neurosci 102 –Anat. Of Nervous System
Neurosci 197A – Behavioral & Cognitive Neuro

Psych 110 – Fundamentals of Learning
Psych 118 – Comparative Psychobiology
Psych 119A-X – Behavioral Pharmacology
Psych 124A – Sensation & Perception
Psych 127A-C – Abnormal Psychology

IMPORTANT: You are required to complete a minimum of **60** upper division units. This is the College of Letters and Science requirement. Upper Division Units in the Physiological Science Major amount to **48 to 53**. Upper division courses in any subject can help you complete the deficit.