

Certificate

Pre-Medical and General Science Studies

Our rigorous post-baccalaureate certificate program provides a structured academic preparation for those planning to apply to health professional programs including medical, dental, veterinary, nursing, pharmacy, physician assistant, and physical therapy, among others.

To complete the Pre-Medical and General Science Studies certificate, you must take a **minimum** of 12 UCLA-equivalent (XL) courses.* Nine of the 12 courses must be chosen from the four core disciplines below (a minimum of one course from each area):

- Chemistry (CHEM)
- Biological Sciences (LIFESCI, PHYSCI, MIMG, or MCD BIO)
- Math/Statistics (MATH or STATS)
- Physics (PHYSICS)

The remaining three courses can be selected from these disciplines, or students may choose up to three anthropology, psychology, sociology, or language courses.

Completion time: 1.5 years (full-time pace) to 2-2.5 years (part-time pace)

Financial Aid Available

Locations:

Westwood
Downtown Los Angeles
Woodland Hills

Eligible for:

International Students
VA Benefits

Start any quarter!

Pre-Veterinary Typical Foundational Courses[^]

The course list below outlines typical Pre-Veterinary program requirements and supplemental courses. Always check with the program to which you plan to apply for actual course requirements before beginning this certificate. To view other medical and health professional typical course sequences, select your desired track: [Pre-Med](#), [Pre-Physician Assistant](#), [Pre-Physical Therapy](#) and [Pre-Dental](#).

COURSE NAME & NUMBER		UNITS	Typically Offered [†]				
			FALL	WINTER	SPRING	SUMMER	
Chemistry	Equals one year of General Chemistry	General Chemistry for Life Scientists I CHEM XL 14A	4.0	Classroom	Classroom	Classroom	Classroom
		General Chemistry for Life Scientists II CHEM XL 14B	4.0	Classroom	Classroom	Classroom	Classroom
		General and Organic Chemistry Laboratory I CHEM XL 14BL	3.0	Classroom	Classroom	Classroom	Classroom
	Equals one year of Organic Chemistry	Structure of Organic Molecules CHEM XL 14C	4.0	Classroom	Classroom	Classroom	Classroom
		General and Organic Chemistry Laboratory II CHEM XL 14CL	4.0	Classroom		Classroom	Classroom
		Organic Reactions and Pharmaceuticals CHEM XL 14D	4.0	Classroom	Classroom	Classroom	Classroom
		Biochemistry: Introduction to Structure, Enzymes, and Metabolism CHEM XL 153A	4.0	Classroom	Classroom	Classroom	Classroom
Biological Sciences	Equals one year of General Biology	Cell and Molecular Biology LIFESCI XL 7A	5.0	Classroom	Classroom	Classroom	Classroom
		Genetics, Evolution, and Ecology LIFESCI XL 7B	5.0	Classroom	Classroom	Classroom	Classroom
		Physiology and Human Biology LIFESCI XL 7C	5.0	Classroom	Classroom	Classroom	Classroom
		Introduction to Laboratory and Scientific Methodology LIFESCI XL 23L	3.0	Classroom	Classroom	Classroom	Classroom

*Courses are equivalent to those taught on UCLA’s main campus and are numbered: XL 1-199. **Please note**, your course of study may vary depending on how many courses you need to fulfill your foundational requirements. It may be more, it may be less. Students who are new to the sciences or are career changers will likely have to take more than the minimum 12 courses.

[^] Course requirements are specific to the health professional program to which you are applying. While this list outlines “typical” foundational courses, you must verify actual requirements with your program.

[†] Courses in this program are typically offered during the quarters and format(s) outlined above. Scheduling is subject to change at any time by UCLA Extension. Please visit our website for all current course offerings.

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Math/ Statistics		Differential and Integral Calculus MATH XL 31A	4.0	Classroom	Classroom	Classroom	Classroom
		Introduction to Statistical Methods for Life and Health Sciences STATS XL 13	5.0	Classroom	Classroom	Classroom	
Physics	Equals one year of General Physics	Physics for Life Sciences Majors: Mechanics and Energy PHYSICS XL 5A	5.0	Classroom	Classroom		
		Physics for Life Sciences Majors: Thermodynamics, Fluids, Waves, Light, and Optics PHYSICS XL 5B	5.0		Classroom	Classroom	
		Physics for Life Sciences Majors: Electricity, Magnetism, and Modern Physics PHYSICS XL 5C	5.0	Classroom		Classroom	

Pre-Veterinary Supplemental Courses

			Typically Offered [†]				
COURSE NAME & NUMBER			UNITS	FALL	WINTER	SPRING	SUMMER
Chemistry	Biochemistry: DNA, RNA, and Protein Synthesis CHEM XL 153B		4.0		Classroom	Classroom	Classroom
	Biochemistry: Biosynthetic and Energy Metabolism and Its Regulation CHEM XL 153C		4.0	Classroom		Classroom	
Biological Sciences	Genetics LIFESCI XL 107		5.0	Classroom	Classroom	Classroom	Classroom
	Introduction to Human Physiology PHYSICI XL 3		5.0	Classroom	Classroom	Classroom	Classroom
	Introduction to Human Anatomy PHYSICI XL 13		5.0		Classroom	Classroom	Classroom
	Microbiology for Nonmajors MIMG XL 6		4.0	Classroom	Classroom	Classroom	Classroom
	Microbiology Laboratory for Professional Schools MIMG XL 100L		3.0	Classroom		Classroom	
	Introductory Virology MIMG XL 102		4.0	Classroom		Classroom	
	Introduction to Cell Biology MCD BIO XL 100		5.0		Classroom		Classroom
	Developmental Biology MCD BIO XL 138		5.0	Classroom		Classroom	
	Molecular Biology of Cellular Processes and Experimental Applications MCD BIO XL 144		5.0	Classroom			
	Math/ Statistics	Precalculus MATH XL 1		4.0	Classroom	Classroom	Classroom
Integration and Infinite Series MATH XL 31B		4.0	Classroom	Classroom	Classroom	Classroom	
Introduction to Statistical Reasoning STATS XL 10		5.0	Classroom	Classroom	Classroom	Classroom	
Physics	Physics PHYSICS XL 10		4.0		Classroom	Classroom	Classroom

UCLA Extension also offers post-bacc courses which, while they don't count towards the certificate, can be of value for a more in-depth look at various science and math topics, such as animal physiology.

Please Note: An application and nonrefundable fee are required to establish candidacy in this program for a period of time covering normal progress toward completion, and may allow you to access a variety of program benefits. [Apply Now.](#)

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