

THE UCLA BIOCHEMISTRY MAJOR 2007 - 2008

The Department of Chemistry and Biochemistry offers four undergraduate majors, two concentrations, and one specialization: the *CHEMISTRY* major, the *PHYSICAL CHEMISTRY* concentration, the *BIOCHEMISTRY* major (described here), the *GENERAL CHEMISTRY* major (for students who want to acquire a good chemical background in preparation for careers outside chemistry), the *CHEMISTRY-MATERIALS SCIENCE* major, *CHEMISTRY-MATERIALS SCIENCE ORGANIC* concentration, and the *COMPUTING SPECIALIZATION*. For more details about these majors, consult your faculty advisor or the Undergraduate Office in Young Hall 4009.

This major is appropriate for students who are interested in attending graduate school in Biochemistry or related areas. It also satisfies many of the requirements of pre-medical and other pre-professional schools. Refer to the UCLA General Catalog for course descriptions.

Preparation for the Major	
General Chemistry:	Chem 20A(H), 20B(H), 20L, 30AL
Organic Chemistry:	Chem 30A(H), 30B, 30BL, 30C, 30CL
Math:	31A, 31B, 32A (33B recommended)
Physics:	6A(H), 6B(H), 6C(H) <u>OR</u> 1A(H), 1B(H), 1C(H), 4BL
Life Science:	Lifesci 2, Lifesci 3, Lifesci 4
Note: (H) indicates that an HONORS section is available	

Upper Division Major Requirements	
Chemistry	Chem 110A, 171
Biochemistry	Chem 153A(H), 153B(H), 153C(H), 153L, 154, 156
One Chemistry or Biochemistry Elective	One upper division or graduate-level course offered in the Dept. of Chemistry & Biochemistry (4 Units)
Four Electives	Four upper division or graduate level courses selected from the approved list.* (16 Units)
	*Microbiology 101 & 101L are highly recommended to fulfill two of the elective requirements.

Important Notes

- You may not take or repeat a chemistry or biochemistry course for credit if it is a prerequisite for a more advanced course for which you already have credit.
- Seminars, individual study courses, and research courses (e.g. 196, 199) *may not be used* to satisfy the requirements for the biochemistry major.
- You must maintain at least a 2.0 GPA in all upper division coursework taken to fulfill the major requirements.
- All prep for major and major courses must be taken for a letter grade.

Class Scheduling - Tips & Suggestions

The following schedule for the first six quarters is recommended for students planning to major in Biochemistry. A normal course load is 16 units per quarter; students should also integrate their lower division general education requirements.

		QUARTER					
		1	2	3	4	5	6
COURSES	Chemistry	20A	20B & 20L	30A & 30AL	30B & 30BL	30C & 30CL	171 & 153A
	Mathematics	31A	31B	32A			
	Physics				6A	6B	6C
	Other	English 3		Life Sci. 2	Life Sci. 3	Life Sci. 4	

UPPER DIVISION COURSES: The program of upper division courses for the Biochemistry major should be planned with care. Particular attention should be paid to prerequisites for advanced courses and to the quarter(s) in which courses are offered.

COURSE	PREREQUISITE
110A	Chem 20B; Math 32A or 3C; Physics 1A(H), 1B(H), 1C(H)*, or Physics 6A(H), 6B(H), 6C(H)*
153A(H)	Chem 30B (Life Science 2 & 3 recommended)
153B(H)	Chem 153A(H), Life Science 2 & 3
153C(H)	Chem 153A(H)
153L	Chem 30B and 30BL, and 153A(H)*
154	Chem 153A(H), 153B(H) and 153L (Chem 156 recommended)
156	Chem 110A and 153A(H)
171	Chem 30B

* indicates *may be taken concurrently* with the course

RECOMMENDED TIMING OF ADVANCED CHEMISTRY COURSES:

COURSES	QUARTER					
	7	8	9	10	11	12
153L, 153B(H) or 153C(H)		110A, 153B(H) or 153C(H)	156	154		

COLLEGE REQUIREMENTS FOR THE B.S. DEGREE: Requirements for the B.S. degree established by the College of Letters and Science are listed in the UCLA General Catalog. A total of 180 quarter units are required for the degree; **60 of these 180 units must be upper division (course numbers 100-199).**

APPROVED LIST OF COURSES TO SATISFY UPPER DIVISION ELECTIVES

All upper division chemistry & biochemistry courses are eligible with the exception of seminars, individual study courses, and research courses (e.g. 190, 199). Although only one of your electives **MUST** be a chemistry & biochemistry course, you may choose to take all of your electives within our department.

Other Departments:

You may use all upper division courses in the following departments with the exception of seminars, individual study courses, field courses, research courses (e.g. 190, 199), and any listed exceptions.

Biostatistics	Molecular & Medical Pharmacology
Biomathematics	Neuroscience
MCD Biology <i>with the exception of</i> 104, 144	EEB <i>with the exception of</i> 121, 123, 125, 126, M127, CM189AB
Mathematics <i>with the exception of</i> 106	Physics
Microbiology & Molecular Genetics	Physiological Science <i>with the exception of</i> 102, 103, M168

Departments with a limited selection of electives: For the departments listed below, you may use only the courses listed.

Anthropology 153	Human Genetics C144, CM156, CM169, CM178
Atmospheric Sciences 104, M105, M140, C145, C165	Material Science & Engineering CM180
Biol Chem M140, CM159A, CM169, M178	Medical History M169
Biomedical Engineering CM180, C185	Molecular Toxicology M110A
Chemical Engineering 100, 101A, 109, 110, CM145	Neurobiology M169
Civil and Environmental Engineering 108	Philosophy M134
Earth & Space Science C107, C109, M118	Programming in Computing 197
Electrical Engineering M185	Psychiatry M191
Environmental Health 100	Psychology 115, 116, M117ABCJL, M119LNx, 119R
Epidemiology 100	Public Health 150
Gerontology M119X	Statistics 100A, 100B, 100C, 110A, 110B