

Biochemistry-BS Program

Study Abroad Pathway

(last revised September 2016)

Table 1a: Undergraduate Program Schedule

These undergraduate program schedules are subject to change.

Please verify information with your academic advisor and/or School representative before planning your study abroad trip.

Term: Fall 1		Check course classification (s)				
Course Number & Title	CR	LAS	Maj	New	Prerequisite(s)	
CHEM-130 Chemical Connections	1		1		Matriculated Chemistry or Biochemistry Majors	
CHEM-151 General Chemistry	3	3			Score of 85% or higher on School of Chemistry and Materials Science assessment	
CHEM-155 Chemistry Workshop	2		2		CHEM-151 (co-req)	
MATH-181 Project-based Calculus I LAS-7a	4	4			none	
LAS Elective	3	3			none	
BIOL-121 Introductory Biology I	4	4			none	
Term credit total:	17	14	3			
Term: Fall 2		Check course classification (s)				
Course Number & Title	CR	LAS	Maj	New	Prerequisite(s)	
CHMO-332 Comp. Organic Chem. II	3		3		CHMO-331	
CHMO-336 Comp. Organic Chem Lab II	2		2		CHMO-335; CHMO-332 (co-req)	
CHMA-161 Quantitative Analysis	3		3		CHEM-151 or CHMG-141	
CHMA-165 Analytical Methods Lab	1		1		CHEM-130 or CHMG-145	
MATH-219 Multivariable Calculus or MATH 251 Probability and Statistics	3	3			MATH-182	
LAS Perspectives 1	3	3			none	
Term credit total:	15	6	9			
Term: Fall 3		Check course classification (s)				
Course Number & Title	CR	LAS	Maj	New	Prerequisite(s)	
Advanced Biochemistry Elective (A)	3		3		CHMB-402	
CHMB-405 Biochemistry Lab (Writing Intensive)	3		3		CHMB-402	
CHMA-261 Instrumental Analysis	3		3		CHMA-161 or CHMG-142	
CHMA-265 Instrumental Analysis Lab	1		1		CHMA 261 (co-req)	
PHYS-212 University Physics II LAS-6	4	4			PHYS-211 & MATH-182	
LAS Perspectives 3	3	3				
Term credit total:	17	7	10			
Term: Spring 1		Check course classification (s)				
Course Number & Title	CR	LAS	Maj	New	Prerequisite(s)	
CHMO-331 Comp. Organic Chem. I	3		3		CHEM-151	
CHMO-335 Comp. Organic Chem. Lab I	1		1		CHMO-331 (co-req)	
MATH-182 Project-based Calculus II LAS -7b	4	4			MATH-181	
Writing Seminar	3	3			none	
BIOL-122 Introductory Biology II	4	4			BIOL-121	
Term credit total:	15	11	4			
Term: Spring 2		Check course classification (s)				
Course Number & Title	CR	LAS	Maj	New	Prerequisite(s)	
CHMB-402 Biochemistry I	3		3		CHMO-231 or equiv.	
PHYS-211 University Physics I LAS-5	4	4			MATH-181	
LAS Perspectives 2	3	3			none	
BIOL-201 Cellular and Molecular Biology	4		4		BIOL-102 and BIOL-104	
LAS Immersion 1	3	3				
Term credit total:	17	10	7			
Term: Spring 3—STUDY ABROAD		Check course classification (s)				
Course Number & Title	CR	LAS	Maj	New	Prerequisite(s)	
Open Elective or Advanced Biology Elective	3					
Open Elective	4					
Open Elective	3					
LAS Immersion 2	3	3				
LAS Perspectives 4	3	3				
Term credit total:	16	6				

Term: Fall 4		Check course classification (s)			
Course Number & Title	CR	LAS	Maj	New	Prerequisite(s)
CHMI-351 Descriptive Inorganic Chemistry	3		3		CHMO-231 or equiv.
CHMP-441 Physical Chemistry I	3		3		CHMA-221 & PHYS-211
Advanced Biology Elective (C)	3		3		
LAS Elective	3	3			
LAS Immersion 3	3	3			
Term credit total:	15	6	9		

Term: Spring 4		Check course classification (s)			
Course Number & Title	CR	LAS	Maj	New	Prerequisite(s)
Advanced Chemistry Lab Elective or Biochemistry Research (B)	2		2		
Advanced Biochemistry Elective (A)	3		3		
LAS Elective	3	3			
Advanced Biology Elective (C)	3		3		
Open Elective or Advanced Biology Elective (depends on STUDY ABROAD)	3				
Term credit total:	14	3	8		

Program Totals:	Credits: 126	Liberal Arts & Sciences: 63	Major: 50	Elective & Other: 13
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Cr: credits **LAS:** liberal arts & sciences **Maj:** major requirement **New:** new course **Prerequisite(s):** list prerequisite(s) for the noted courses
 Yellow: identical course and yr Blue: identical course different term Red: different course

LAS Foundations	LAS Perspectives	LAS Immersion	LAS elective
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Biochemistry & Chemistry Electives:

Students must take 3 credits from A, 3 credits from B, and 6 credits from C

	Courses			Course Conversion Designation
	Course #	Course Title	SCH	Prerequisite (s)
A				
	CHMA-711	Advanced Instrumental Analysis	3	Graduate Standing or COS-CHMA-221 and COS-CHMP-441 (or equivalent)
	CHMB-403	Biochemistry II	3	CHMB-402
	CHMB-450	Infectious Disease: Impact on Society and Culture	3	CHMB-402
	CHMB-610	Advanced Protein Biochemistry	3	CHMB-402 Biochemistry I
	CHMB-702	Protein Conformation and Dynamics	3	CHMB-402
	CHMB-704	Biochemistry of Nucleic Acids	3	CHMB 402
	CHMI-764	Modern Inorganic Chemistry	3	Graduate standing or COS-CHMP-332 and permission of instructor
	CHMO-637	Advanced Organic Chemistry	3	Graduate Standing or COS-CHMO-332 (or equivalent) and permission of instructor
	CHMO-636	Spec. ID of Organic Compounds	3	Graduate standing in chemistry, or COS-CHMO-332 and permission of instructor
	CHMO-739	Physical Organic Chemistry	3	Graduate standing, COS-CHMO-332 and CHMP-441 or equivalent
	CHMO-640	Mechanisms of Drug Interactions	3	Graduate standing or CHMB-403
	CHMO-710	Literature Explorations in Organic Synthesis	1	COS-CHMO-637, graduate standing in chemistry, and permission of instructor
	CHMP-752	Molecular Photophysics and Photochemistry	3	Graduate standing or COS-CHMP-442 (or equivalent)
	CHMP-753	Computational Chemistry	3	Graduate standing or COS-CHMP-442 (or equivalent)
	CHPO-706	Polymer Chemistry I	3	Graduate Standing or CHMO-332 Comprehensive Organic Chemistry II and CHMP-441 Physical Chemistry I (or equivalent)
	CHPO-707	Polymer Chemistry II	3	CHPO-706 Polymer Chemistry II
B				
	CHMA-621	Advanced Instrumental Analysis Lab	3	COS-CHMB-405 or COS-CHMP-445
	CHMA-740	Practical NMR	3	Graduate Standing, or CHMO-332 or CHMA-221 and permission of instructor
	CHMB-495	Advanced Biochemistry Research	3	CHMB-402 Biochemistry I
	CHEM-495	Advanced Chemistry Research	3	CHMP-445 Experimental Physical Chemistry
	CHMI-565	Preparative Inorganic Chemistry Lab	3	CHMI-351 Inorganic Chemistry I
	CHMO-535	Advanced Techniques in Organic Synthesis	3	CHMO-336 Comprehensive Organic Chemistry Lab II
6+				

	Courses			Course Conversion Designation
	Course #	Course Title	SCH	Prerequisite (s)
C				
	MEDS-330	Immunology	3	BIOL-201
	BIOL-314	Tissue Culture	4	BIOL-201
	BIOL-265	Evolutionary Biology	4	BIOL-122
	BIOL-296	Ethical Issues in Biology and Medicine	3	BIOL-122
	BIOL-303	Cell Physiology	4	BIOL-201
	BIOL-305	Plants, Medicine & Technology	3	BIOL-201
	BIOL-415	Virology	3	BIOL-201, BIOL-321
	BIOL-416	Plant Biotechnology	4	BIOL-201, BIOL-204
	BIOL-418	Plant Molecular Biology	4	BIOL-416
	BIOL-322	Developmental Biology	4	BIOL-201
	BIOL-427	Micro & Viral Genetics	3	BIOL-201, BIOL-321, CHMB-402 or equivalent
	BIOL-450	Genetic Engineering	5	BIOL-321
	MEDS-451	Introduction to Infectious Diseases	3	BIOL-204, BIOL-201
	BIOL-313	Molecular Ecology	3	BIOL-201
	BIOL-307	Microbiology of Wastewater	3	BIOL-204
	BIOL-365	Population Genetics	3	BIOL-265
	BIOL-312	Human Genetics	3	BIOL-201
	BIOL-401	Bioseparations: Principle & Practice	4	BIOL-201
	BIOL-403	Fundamentals of Plant Biochemistry	3	BIOL-201
	BIOL-305	Food Microbiology	4	BIOL-204
	BIOL-310	Bioenergy: Microbial Production	3	BIOL-204
	BIOL-340	Genomics	3	BIOL-201
	BIOL-330	Bioinformatics	3	BIOL-201
	BIOL-494	Molecular Modeling & Proteomics	3	BIOL-330, BIOL-340
	BIOL-375	Advanced Immunology	4	MEDS-312
	BIOL-428	Eukaryotic Gene Regulation	3	BIOL-321
	BIOL-380	Bioremediation	4	BIOL-201, BIOL-204
	BIOL-420	Microbe-Host Interactions	3	BIOL-201, BIOL-204
	BIOL-370	Environmental Microbiology	4	BIOL-204
	BIOL-570, 571	Research Scholars I and II	0-4	Entry to program, Permission of instructor
	BIOL-599	Independent Study	1-4	Permission of instructor
	BIOL-430	Bioinformatics Resources	3	BIOL-330
	BIOL-610	Genetic Diseases & Disorders	3	BIOL-321 or equivalent
	BIOL-425	Ethics in Bioinformatics	3	BIOL-330
	BIOL-700	Cell Molecular Genetics	3	BIOL-201
	BIOL-204	Microbiology	4	BIOL-122

	Courses			Course Conversion Designation
	Course #	Course Title	SCH	Prerequisite (s)
	MEDS-311	Histology	4	BIOL-201
	MEDS-250	Anatomy & Physiology I	4	BIOL-102 or BIOL-122
	MEDS-251	Anatomy & Physiology II	4	BIOL-102 or BIOL-122
	MEDS-325	Endocrinology	3	BIOL-201
	BIOL-321	Genetics	3	BIOL-201