

Bachelor of Science in Chemistry Pre-medical/Pharmacy track (128 Cr.) Four-Year Curriculum Plan

Suggested four-year plan for freshmen entering LMU Fall 2020. Always consult LMU's Undergraduate Catalog and discuss with your academic advisor every semester prior to registering for $% \left(1\right) =\left(1\right) \left(1\right$ classes. Timing of courses may deviate from this plan based on a

Fall Courses — First Year	Cr.
ENGL 101 Composition I*	3
UACT 100 Strategies for College Success*	2
BIOL 111 General Biology I & Lab*#	4
Prerequisite: ACT reading score of 23 (or analogous SAT verbal score), placement in ENG 101 or higher, OR successful completion of BIOL 100	
CHEM 111 General Chemistry I & Lab#	4
Prerequisite: (1) a Math ACT of 21 or higher or (2) successful (C or better) grade in Math 105, Math 115, or Math 120.	
MATH 150 Calculus I*#	4
You must take this as a prerequisite for PHYS 211 and CHEM 310	

- **Total Credits** You should be exploring opportunities to participate in service initiatives.
- Have you joined the Pre-Med or Chemistry club?

Fall Courses — Second Year	Cr.
BIOL 315 Molecular Genetics & Lab#	4
Prerequisites: Successful completion (C- or better) of BIOL 111 and 112 and CHEM 111 with labs.	
CHEM 221 Organic Chemistry I & Lab#	4
Prerequisite: successful completion (C- or better) of CHEM 112 with lab.	
PHYS 211 General Physics I & Lab [#]	4
Prerequisite: (1) a Math ACT sub-score of 26 or higher, or (2) successful completion (grade of C- or better) in MATH 120 Trigonometry	
HIST Requirement*	3

Total Credits 16

- You should be exploring opportunities to volunteer and get involved in activities on campus including leadership roles
- Keep track of the number of 300/400 level courses you take. You need to complete at least 42 credits for graduation

Fall Courses — Third Year	Cr.
CHEM 331 Quantitative & Instrumental	3
Analysis [#]	
Prerequisites: Successful completion (C- or better) of CHEM 221	
CHEM 397 JR Sc Sem and Writing#	1
Prerequisites: Successful completion (C- or better) of ENGL 102 or equivalent.	
ENGL 240, 250 or 260*	3
BIOL 441 Biochemistry [#]	4
Prerequisites: Successful completion (C- or better) of BIOL 111 and CHEM 111 and CHEM 112 with labs	
BIOL 311 Comp. Vert. Anatomy II & Lab#	4
Prerequisites: Successful completion (C- or better) of BIOL 111 and BIOL 112 with labs and CHEM 111 and 112 with labs	

Total Credits

- Make plans to prepare and take graduate/professional school entrance exams (e.g., DAT, GRE, MCAT, PA-CAT, OAT)
- · Start thinking about who you would like to write you a letter of recommendation

Fall Courses — Fourth Year	Cr.
LNCN 300 American Citizenship*	1
MATH 270 Probability and Statistics#	3
CHEM 451 Physical Chemistry I#	4
Prerequisite: Successful completion (C- or better) of CHEM 112	
CHEM 497 Senior Science Seminar#	1
Fine Art, Humanities or Ethics*	3
Social/Behavioral Science Requirement*	3
Total Credits	15

- Submit application to graduate/professional school
- Complete the Intent to Graduate form after you have registered for your spring semester
- Participate in a research project

Spring Courses — First Year	Cr.
ENGL 102 Composition II*	3
LNCN 100 Lincoln's Life & Legacy*	1
BIOL 112 General Biology II & Lab*# Prerequisite: Successful completion (C' or better) of BIOL 111 lecture and lab	4
CHEM 112 General Chemistry II & Lab# Prerequisite: successful completion of CHEM 111 with a grade of C ⁻ or better	4
MATH 250 Calculus II [#] Prerequisite: successful completion (C- or better) of MATH 150	5
Total Credits	17

Total Credits

- Explore which graduate/professional school entrance exams you will need to take (e.g., DAT, GRE, MCAT, PA-CAT, OAT)
- Seek shadowing and/or volunteer opportunities during the summer

Spring Courses — Second Year	Cr.
HIST Requirement*	3
ISYS 100 Computer Literacy*	2
CHEM 222 Organic Chemistry II & Lab#	4
Prerequisite: successful completion (C- or better) of CHEM 221 with lab.	
PHYS 212 General Physics II & Lab#	4
Prerequisite: successful completion (grade of C- or better) in PHYS 211 and lab.	
BIOL 336 General Microbiology & Lab#	4
Prerequisites: Successful completion (C- or better) of BIOL 111 and BIOL 112 with labs and CHEM 111 and 112 with labs	

Total Credits 17

- Plan out your last four semesters think about what classes you need to prepare for your entrance exam; these should be completed by the end of your third year
- Keep track of the number of hours you are completing in volunteer experiences and

Spring Courses — Third Year	Cr.
CHEM 332 Quantitative & Instrumental	3
Analysis [#]	
Prerequisites: Successful completion (C- or better) of CHEM 221, CHEM 331	
COMM 200 Fund Speech &	3
Communication*	
BIOL 312 Comp. Vert. Anatomy II & Lab#	4
Prerequisites: Successful completion (C- or better) of BIOL 311 with lab	
CHEM 310 Math Methods in Chemistry#	4
Prerequisites: Successful completion (C- or better) of MATH 150, 250.	

Total Credits 15

- Explore opportunities to conduct research in your fourth year
- Schedule your graduate/professional school entrance exams (e.g., DAT, GRE, MCAT, PA-CAT, OAT) date for the summer and begin studying
- Identify writers for letters of recommendation and ask them before leaving for the summe

Spring Courses — Fourth Year	Cr.
CHEM 452 Physical Chemistry II [#]	4
Prerequisites: Successful Completion (C- or better) of CHEM 451	
CHEM 460 Inorganic Chemistry#	3
Prerequisites: Successful Completion (C- or better) of CHEM 111 and CHEM 112	
Fine Arts Requirement*	3
Social/Behavioral Science Requirement*	3
Free Elective	3
Total Credits	16

- Participate in a research project. Explore opportunities to present
- Explore gap year options, if applicable

*LMU Core Curriculum Requirement: See LMU undergraduate catalog for

Major-Specific Requirement/Collateral Requirement: These courses must be passed with at least a C- or better to progress in the program. See LMU catalog for specific grade requirements.

Course Options for Program Track Electives

Molecular and Cell Courses (MCC)		
Must select one of the following courses		
BIOL 360 Immunology	3	
Prerequisite: Successful completion (C- or better) of BIOL 111 and 112 with labs and CHEM 111 and 112 with labs, Fall		
BIOL 442 Biochemistry II	4	
Prerequisite: Successful completion (C- or better) of BIOL 441, Spring		
BIOL 450 Molecular Cell Biology	4	
Prerequisite: Successful completion (C- or better) of BIOL 315 with lab and BIOL 441, Spring		

- If the course has a corresponding laboratory course, the laboratory course MUST
- Must be passed with a C- or better to progress in the program.

Upper-Level Track Electives	Cr.
Must select at least three of the following courses AHSC 300 Medical Terminology	3
BIOL 320 Principles of Botany	<u> </u>
Prerequisite: Successful completion (C- or better) of BIOL 111 and 112 with	4
labs, Spring	
BIOL 334 General Histology	2
Prerequisite: Successful completion (C- or better) of BIOL 310, Spring	
BIOL 336 General Microbiology	4
Prerequisite: Successful completion (C- or better) of BIOL 111 and 112 with labs and CHEM 111 and 112 with labs, Spring	
BIOL 360 Immunology	3
Prerequisite: Successful completion (C- or better) of BIOL 111 and 112 with labs and CHEM 111 and 112 with labs, Fall	
BIOL 365 General Physiology	4
Prerequisite: Successful completion of BIOL 310 with lab, Spring	
BIOL 370 Ecology	4
Prerequisite: Successful completion (C- or better) of BIOL 111 and 112 with labs, Fall	
BIOL 410 Evolution	3
Prerequisite: Successful completion (C- or better) of BIOL 111 and 112 with labs, Spring odd years	
BIOL 411 Advanced Human Anatomy	4
Prerequisite: Successful completion (B- or better) of BIOL 311 and 312 with labs AND consent of instructor, Spring	
BIOL 442 Biochemistry II	4
Prerequisite: Successful completion (C- or better) of BIOL 441, Spring	
BIOL 450 Molecular Cell Biology	4
Prerequisite: Successful completion (C- or better) of BIOL 315 with lab and BIOL 441, Spring	
BIOL 460 Developmental Biology	3
Prerequisite: Successful completion (C- or better) of BIOL 310 with lab and BIOL 315 with lab, Spring odd years	
BIOL 483 Research in Biology (max 3)	1-3
Prerequisite: Junior standing and consent of faculty supervisor, Fall/Spring/Summer	
PEXS 300 Physiology of Exercise	3
Fall	
PEXS 372 Kinesiology and Biomechanics	3
Prerequisite: MATH, Spring	
PSYC 475 Neuropsychology Prerequisite: PSYC 100, Fall	3
VHS 300 Vet Parasitology &Entomology	4
Prerequisite: BIOL 112; Junior Standing, Fall	
VHS 330 One Health	3
Prerequisite: ENGL 102 and Junior Standing, Fall	
VHS 400 Zoonotic Diseases Vet/Publ. Hlth	3

Prerequisite: BIOL 112 and Junior Standing, Fall online

Course cannot count for the Molecular/Cell or Organismic level and upper level

- If the course has a corresponding laboratory course, the laboratory course MUST be taken
- Must be passed with a C- or better to progress in the program.

Organismic Elective Course (OC)		
Must select one of the following courses		
BIOL 336 General Microbiology	4	
Prerequisite: Successful completion (C- or better) of BIOL 111 and 112 with labs and CHEM 111 and 112 with labs, Spring		
BIOL 365 General Physiology	4	
Prerequisite: Successful Completion (C- or better) BIOL 310 lecture with lab, Spring		
PEXS 300 Physiology of Exercise	3	
VHS 300 Vet Parasitology & Entomology	4	
Prerequisite: Successful Completion (C- or better) of BIOL 112 with lab; Junior Standing, Fall		

- If the course has a corresponding laboratory course, the laboratory course MUST
 be taken.
- Must be passed with a C- or better to progress in the program.

Credit Hour Requirements

In order to graduate you need to complete a minimum of 128 credit hours. At least 42 of these hours must be at the 300/400 level. It is recommended that you track your hours in each of these categories as you progress.

	# of credit hours				
Semester	Current semester	300/400	Total Earned (Add all semesters)	Total 300/400 (Add all semesters)	Cumulative GPA
1 st Yr. Fall					
1 st Yr. Spring					
2 nd Yr. Fall					
2 nd Yr. Spring					
3 rd Yr. Fall					
3 rd Yr. Spring					
4 th Yr. Fall					
4 th Yr. Spring					

	Professional Tracking	
	Average	You
Entrance exam		
Cumulative GPA		
Science GPA		
Shadowing hours		
Volunteer hours		
Other:		
Other:		
Other:		