

# **Bachelor of Science in Chemistry** Pre-med track (128 Cr.) **Four-Year Curriculum Plan**

Suggested four-year plan for freshmen entering LMU Fall 2021. 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*                                                                                                    | 1   |
| 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   |
| Total Credits                                                                                                                               | 16  |

- 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# Prerequisites: Successful completion (C- or better) of BIOL 111 and 112 and                        | 4   |
| 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 <sup>#</sup>                                                                                         | 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 |     |
| History Requirement*                                                                                                                  | 3   |

### **Total Credits 15**

- 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                                                                        | 4   |
| Analysis <sup>#</sup>                                                                                       |     |
| Prerequisites: Successful completion (C- or better) of CHEM 221                                             |     |
| CHEM 397/397X Jr. Science Seminar#                                                                          | 1   |
| Prerequisites: Successful completion (C- or better) of ENGL 102 or equivalent.                              |     |
| ENGL 240 or 250*                                                                                            | 3   |
| BIOL 441 Biochemistry <sup>#</sup>                                                                          | 4   |
| Prerequisites: Successful completion (C- or better) of BIOL 111 and CHEM 111 and CHEM 112 with labs         |     |
| BIOL 310 Comp. Vert. Anatomy & Lab#                                                                         | 4   |
| Prerequisite: Successful completion (C- or better) of BIOL 111 and 112 and CHEM 111 and 112 with labs, Fall |     |

#### **Total Credits** 15

- 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# Prerequisite: Successful completion (C- or better) of CHEM 112 | 4   |
| CHEM 497/479Z Senior Science Seminar#                                                         | 1   |
| Fine Art, Humanities or Ethics*                                                               | 3   |
| Social/Behavioral Science Requirement*                                                        | 3   |
| CHEM 483 Research in Chemistry                                                                | 1   |

## **Total Credits** 16

- Submit application to graduate/professional school
- Conduct a mock interview
- 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 <sup>-</sup> or better | 4   |
| MATH 250 Calculus II <sup>#</sup> Prerequisite: successful completion (C- or better) of MATH 150                              | 4   |
| Total Credits                                                                                                                 | 16  |

#### Total Credits 16

- 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. |
|-----------------------------------------------------------------------------------------------------------------------|-----|
| History 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                                      | 4   |
| Analysis <sup>#</sup>                                                     |     |
| Prerequisites: Successful completion (C- or better) of CHEM 221, CHEM 331 |     |
| COMM 200 Fund Speech &                                                    | 3   |
| Communication*                                                            |     |
| BIOL 365 General Physiology Prerequisite: Successful                      | 4   |
| Completion (C- or better) BIOL 310 lecture with lab, Spring               |     |
| CHEM 310 Math Methods in Chemistry#                                       | 3   |
| Prerequisites: Successful completion (C- or better) of MATH 150, 250.     |     |
| Fine Arts Requirement*                                                    | 3   |
|                                                                           | 4-  |

### **Total Credits 17**

- 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 summer

| Spring Courses — Fourth Year                                                 | Cr. |
|------------------------------------------------------------------------------|-----|
| CHEM 452 Physical Chemistry II <sup>#</sup>                                  | 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 |     |
| Social/Behavioral Science Requirement*                                       | 3   |
| Free Elective                                                                | 3   |
| Free Elective                                                                | 3   |
| =                                                                            | 4.0 |

#### **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.

| Useful Contacts                         |                          |                             |                 |  |
|-----------------------------------------|--------------------------|-----------------------------|-----------------|--|
| Title                                   | Name                     | Email                       | Phone<br>number |  |
| Chair,<br>Department<br>of<br>Chemistry | Dr.<br>Stephen<br>Everly | Stephen.Everly@lmunet.edu   | 423.869.6472    |  |
| Academic<br>Support &<br>Tutoring       | Tagge<br>Center          | Taggecenter@Imunet.edu      | 423.869.6080    |  |
| Student<br>Counseling                   | Jessica<br>Parker        | Jessica.Parker@lmunet.edu   | 423.869.6277    |  |
| Career<br>Services<br>Counselor         | Jennifer<br>Butcher      | Jennifer.Butcher@lmunet.edu | 423.869.6679    |  |
| Student<br>Success<br>Coordinator       | Gerald<br>Branham        | Gerald.Branham@Imunet.edu   | 423.489.6611    |  |

|                 | _       |     |
|-----------------|---------|-----|
|                 | Average | You |
| Entrance exam   |         |     |
| Cumulative GPA  |         |     |
| Science GPA     |         |     |
| Shadowing hours |         |     |
| Volunteer hours |         |     |
| Other:          |         |     |
| Other:          |         |     |
| Other:          |         |     |
|                 |         |     |

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<br>Earned<br>(Add all<br>semesters) | Total<br>300/400<br>(Add all<br>semesters) | Cumulative<br>GPA |
| 1 <sup>st</sup> Yr. Fall      |                   |         |                                           |                                            |                   |
| 1 <sup>st</sup> Yr.<br>Spring |                   |         |                                           |                                            |                   |
| 2 <sup>nd</sup> Yr.<br>Fall   |                   |         |                                           |                                            |                   |
| 2 <sup>nd</sup> Yr.<br>Spring |                   |         |                                           |                                            |                   |
| 3 <sup>rd</sup> Yr. Fall      |                   |         |                                           |                                            |                   |
| 3 <sup>rd</sup> Yr.<br>Spring |                   |         |                                           |                                            |                   |
| 4 <sup>th</sup> Yr. Fall      |                   |         |                                           |                                            |                   |
| 4 <sup>th</sup> Yr.<br>Spring |                   |         |                                           |                                            |                   |

| Alternative Paths: |  |  |
|--------------------|--|--|
|                    |  |  |
|                    |  |  |
|                    |  |  |
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|                    |  |  |

| Career Exploration |             |                                                                       |                       |
|--------------------|-------------|-----------------------------------------------------------------------|-----------------------|
| Career             | Description | Career Preparation – internship, research experience, coursework, etc | Career Qualifications |
|                    |             |                                                                       | BS                    |
|                    |             |                                                                       | MS                    |
|                    |             |                                                                       | PhD                   |
|                    |             |                                                                       | Certifications        |
|                    |             |                                                                       | BS                    |
|                    |             |                                                                       | MS                    |
|                    |             |                                                                       | PhD                   |
|                    |             |                                                                       | Certifications        |
|                    |             |                                                                       | BS                    |
|                    |             |                                                                       | MS                    |
|                    |             |                                                                       | PhD                   |
|                    |             |                                                                       | Certifications        |
|                    |             |                                                                       | BS                    |
|                    |             |                                                                       | MS                    |
|                    |             |                                                                       | PhD                   |
|                    |             |                                                                       | Certifications        |
|                    |             |                                                                       | BS                    |
|                    |             |                                                                       | MS                    |
|                    |             |                                                                       | PhD                   |
|                    |             |                                                                       | Certifications        |
|                    |             |                                                                       | Certifications        |