

## UCLA CHEMISTRY-MATERIALS SCIENCE ORGANIC CONCENTRATION 2021-2022

**CHEMISTRY-MATERIALS SCIENCE MAJOR (B.S.), ORGANIC CONCENTRATION:** This major is designed primarily for students who are interested in chemistry with an emphasis on material properties of organic matter. The major provides appropriate preparation for graduate studies in fields emphasizing interdisciplinary research involving chemistry, engineering, and applied science. Refer to the UCLA General Catalog (<http://catalog.registrar.ucla.edu/>) for course descriptions and requisites.

For more details about this major and others offered in the Department of Chemistry and Biochemistry, consult the Undergraduate Office in 4006 Young Hall.

| <b>Preparation for the Major</b> |  |
|----------------------------------|--|
| <b>General Chemistry (CHEM)</b>  | Chem 20A(H), 20B(H), 20L, 30AL                             |
| <b>Organic Chemistry (CHEM)</b>  | Chem 30A, 30B, 30BL, 30C, 30CL                             |
| <b>Math (MATH)</b>               | Math 31A, 31B, 32A, 32B, 33A (Math 33B highly recommended) |
| <b>Physics (PHYSICS)</b>         | Physics 1A(H), 1B(H), 1C(H), 4BL                           |

(H) indicates that an Honors section may be available

| <b>Upper Division Major Requirements</b>                                    |  |
|---|--|
| <b>Chemistry (CHEM)</b>   | Chem 110A, 113A, 136, 171, 185   |
| <b>One Chemistry Elective (Choose One)</b>                                  | Chem 110B, C113B, C143A, C143B, 144, 172, C173, C174, C175, C176, C180, C181 |
| <b>Materials Science &amp; Engineering (MAT SCI)</b>                        | Mat Sci 104, 110, 110L, 120, 150   |
| <b>One Materials Science &amp; Engineering Elective (MAT SCI) (4 units)</b> | Mat Sci 111, 121, 122, 131, 132, 160, 162, CM180                             |
| <b>Laboratory Electives (1 CHEM &amp; 1 MAT SCI) (7 units)</b>              | Chem 114, 184; Mat Sci 121L, 131L, 161L                                      |

### **Important Notes**

- You must have a minimum of 180 units to graduate, and 60 of those units must be upper division (courses numbered 100 to 199).
- The Chemistry-Materials Science Organic Concentration Upper Division Major Requirements satisfy at least 55 upper division units.
- All Preparation for the Major and Upper Division Major courses must be taken for a letter grade.
- Seminars, individual study courses, and research courses (e.g. 196, 199) may not be used to satisfy the requirements for the Chemistry-Materials Science Organic Concentration major.
- You must have a 2.0 GPA in the major to graduate with a degree. If you fall below a 2.0 GPA in the major, it is strongly recommended that you change majors.
- 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.
- Please note that Mat Sci 131, 131L, 132, 160, and 161L have an enforced requisite of Mat Sci 130. The Engineering Department will accept Chem 110A in place of Mat Sci 130.

# UCLA CHEMISTRY-MATERIALS SCIENCE ORGANIC CONCENTRATION MAJOR 2021-2022 – Sample Major Course Plans

## INCOMING FRESHMEN

### FRESHMAN YEAR

| FALL            | WINTER          | SPRING       |
|-----------------|-----------------|--------------|
| CHEM 20A(H) (4) | CHEM 20B(H) (4) | CHEM 30A (4) |
| MATH 31A (4)    | CHEM 20L (3)    | MATH 32A (4) |
|                 | MATH 31B (4)    |              |

### SOPHOMORE YEAR

| FALL              | WINTER            | SPRING            |
|-------------------|-------------------|-------------------|
| CHEM 30B (4)      | CHEM 30C (4)      | PHYSICS 1C(H) (5) |
| CHEM 30AL (4)     | CHEM 30BL (3)     | PHYSICS 4BL (2)   |
| MATH 32B (4)      | MATH 33A (4)      | MAT SCI 104 (4)   |
| PHYSICS 1A(H) (5) | PHYSICS 1B(H) (5) |                   |

### JUNIOR YEAR

| FALL             | WINTER          | SPRING           |
|------------------|-----------------|------------------|
| CHEM 110A (4)    | CHEM 30CL (4)   | CHEM 185 (5)     |
| MAT SCI 110 (4)  | MAT SCI 120 (4) | MAT SCI 121 (4)  |
| MAT SCI 110L (2) |                 | MAT SCI 121L (2) |
|                  |                 |                  |

### SENIOR YEAR

| FALL          | WINTER          | SPRING       |
|---------------|-----------------|--------------|
| CHEM 171 (4)  | CHEM 184 (5)    | CHEM 136 (5) |
| CHEM 113A (4) | MAT SCI 150 (4) | CHEM 172 (4) |

(Numbers in parentheses indicate the number of units.)

### Important Notes

- This plan is just one EXAMPLE of how to schedule classes to graduate in 4 years. Other schedules may be equally valid.
- This plan only includes required courses for the Preparation for the Major and the Upper Division Major Requirements.
- **This plan does not include General Education and other College requirements.** For these requirements, please consult with your College Advising Unit (College Academic Counseling, AAP, Honors, Athletics).
- Be sure to check your Degree Audit Report (DAR) frequently to ensure you are meeting all degree requirements.

## TRANSFER STUDENTS

### JUNIOR YEAR

| FALL            | WINTER          | SPRING       |
|-----------------|-----------------|--------------|
| MAT SCI 104 (4) | CHEM 110A (4)   | CHEM 172 (4) |
| CHEM 171 (4)    | MAT SCI 150 (4) | CHEM 185 (5) |
|                 | CHEM 113A (4)   |              |

### SENIOR YEAR

| FALL             | WINTER          | SPRING           |
|------------------|-----------------|------------------|
| MAT SCI 110 (4)  | CHEM 184 (5)    | CHEM 136 (5)     |
| MAT SCI 110L (2) | MAT SCI 120 (4) | MAT SCI 121 (4)  |
|                  |                 | MAT SCI 121L (2) |

(Numbers in parentheses indicate the number of units.)

### Important Notes

- This plan is just one EXAMPLE of how to schedule classes to graduate in 2 years. Other schedules may be equally valid.
- Assuming that incoming transfer students have already completed the Preparation for the Major, this plan only includes required courses for the Upper Division Major Requirements.
- **This plan does not include General Education and other College requirements.** For these requirements, please consult with your College Advising Unit (College Academic Counseling, AAP, Honors, Athletics).
- Be sure to check your Degree Audit Report (DAR) frequently to ensure you are meeting all degree requirements.

Courses may not always be taught in the quarter shown. Check with the Chemistry/Biochemistry Department for the most current list of projected course offerings.