












2024 - 2025 Major Map



Chemistry, BS


School/College: The College of Liberal Arts and Sciences
LACHMBS


| Term 1 0 - 15 Credit Hours Critical course signified by  | Hours | Minimum Grade | Notes |
|--|-------|---------------|---|
|  CHM 117: General Chemistry for Majors I (SCIT OR SQ) AND CHM 111: General Chemistry Laboratory for Majors I (SCIT OR SQ) OR CHM 113: General Chemistry I (SCIT OR SQ) | 4 | C | <ul style="list-style-type: none"> ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students. Select your Career Interest Areas and play me3@ASU. CHM 117 and CHM 111 are introductory courses created specifically for students in the Biochemistry or Chemistry majors. Students are strongly encouraged to select these course options. |
|  MAT 270: Calculus with Analytic Geometry I (MATH OR MA) OR MAT 265: Calculus for Engineers I (MATH OR MA) | 4-3 | C | |
| ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition | 3 | C | |
| LIA 101: Student Success in The College of Liberal Arts and Sciences | 1 | | |
| Social and Behavioral Sciences (SOBE) | 3 | | |
| Term hours subtotal: | | 15-14 | |

| Term 2 15 - 30 Credit Hours Critical course signified by  | Hours | Minimum Grade | Notes |
|---|-------|---------------|---|
|  CHM 118: General Chemistry for Majors II (SCIT OR SQ) AND CHM 112: General Chemistry Laboratory for Majors II (SCIT OR SQ) OR CHM 116: General Chemistry II (SCIT OR SQ) | 4 | C | <ul style="list-style-type: none"> Connect with a career advisor by registering for a Handshake account. CHM 118 and CHM 112 are introductory courses created specifically for students in the Biochemistry or Chemistry majors. Students are strongly encouraged to select these course options. |
|  MAT 271: Calculus with Analytic Geometry II (MATH OR MA) OR MAT 266: Calculus for Engineers II (MATH OR MA) | 4-3 | C | |
|  PHY 121: University Physics I: Mechanics (SCIT OR SQ) | 3 | C | |
| ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition | 3 | C | |
| PHY 122: University Physics Laboratory I (SCIT OR SQ) | 1 | C | |
|  Complete ENG 101 OR ENG 105 OR ENG 107 course(s). | | | |
| Term hours subtotal: | | 15-14 | |


| Term 3 30 - 45 Credit Hours Critical course signified by  | Hours | Minimum Grade | Notes |
|---|-------|---------------|--|
|  CHM 233: General Organic Chemistry I | 3 | C | <ul style="list-style-type: none"> Create a first draft resume. |
|  CHM 237: General Organic Chemistry Laboratory I | 1 | C | |


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|---|-------|---|
|  PHY 131: University Physics II: Electricity and Magnetism (SCIT OR SQ) | 3 | C |
| MAT 272: Calculus with Analytic Geometry III (MATH OR MA) OR MAT 267: Calculus for Engineers III (MATH OR MA) | 4-3 | C |
| PHY 132: University Physics Laboratory II (SCIT OR SQ) | 1 | C |
| Humanities, Arts and Design (HUAD) | 3 | |
|  Complete First-Year Composition requirement. | | |
| Complete Mathematics (MATH) requirement. | | |
| Term hours subtotal: | 15-14 | |

| Term 4 45 - 60 Credit Hours Critical course signified by  | Hours | Minimum Grade | Notes |
|---|-------|---------------|-------|
|---|-------|---------------|-------|


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|  CHM 240: Mathematical Methods in Chemistry (QTRS OR CS) | 3 | C |
| CHM 234: General Organic Chemistry II | 3 | C |
| CHM 238: General Organic Chemistry Laboratory II | 1 | C |
| Governance and Civic Engagement (CIV) | 3 | |
| <i>Complete 2 courses:</i> Elective | 5 | |
| Term hours subtotal: | 15 | |

- CHM 240 is only offered in the Spring semester.
- Transfer students who cannot take a CHM 240 equivalent course should take MAT 274 or MAT 275 (Differential Equations) and MAT 242 (Linear Algebra) in place of the five credit hours of electives in Term 4. These courses will allow the student to meet Term 4 critical tracking and the prerequisites for CHM 345 in Term 5. If these math courses are taken in place of CHM 240, students will need to take an additional UD BCH/CHM Elective to substitute the CHM 240 major requirement; discuss options with a major advisor.

| Term 5 60 - 74 Credit Hours Necessary course signified by  | Hours | Minimum Grade | Notes |
|---|-------|---------------|-------|
|---|-------|---------------|-------|

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|--|----|---|
|  CHM 345: Physical Chemistry I | 3 | C |
| CHM 325: Analytical Chemistry | 3 | C |
| CHM 326: Advanced Analytical Chemistry Laboratory | 1 | C |
| CHM 348: Physical Chemistry Laboratory I (L) | 1 | C |
| Humanities, Arts and Design (HUAD) | 3 | |
| Sustainability (SUST) | 3 | |
| Term hours subtotal: | 14 | |

- CHM 326, CHM 345, and CHM 348 are only offered in the Fall semester.

| Term 6 74 - 89 Credit Hours Necessary course signified by  | Hours | Minimum Grade | Notes |
|---|-------|---------------|-------|
|---|-------|---------------|-------|

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|---|----|---|
| ★ CHM 346: Physical Chemistry II | 3 | C |
| CHM 327: Instrumental Analysis | 3 | C |
| CHM 328: Instrumental Analysis Laboratory | 2 | C |
| CHM 349: Physical Chemistry Laboratory II (L) | 1 | C |
| American Institutions (AMIT) | 3 | |
| Upper Division Elective | 3 | |
| Term hours subtotal: | 15 | |

- CHM 327, CHM 328, CHM 346, and CHM 349 are only offered in the Spring semester.
- Explore [internship](#) opportunities.

| ★ Term 7 89 - 104 Credit Hours Necessary course signified by | Hours | Minimum Grade | Notes |
|--|-------|---------------|-------|
|--|-------|---------------|-------|

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|--|----|---|
| ★ CHM 453: Inorganic Chemistry | 3 | C |
| Science and Society Elective | 3 | C |
| CHM OR BCH Upper Division Elective | 3 | C |
| Global Communities, Societies and Individuals (GCSI) | 3 | |
| Upper Division Elective OR CHM 484: Internship | 3 | |
| Term hours subtotal: | 15 | |

- Upper Division CHM or BCH Elective must be completed at the Tempe campus and cannot be met with BCH 341, BCH 361, BCH 367, BCH 371, BCH 372, BCH 373, CHM 341, or CHM 480.
- Apply for [full-time career opportunities](#).

| ★ Term 8 104 - 120 Credit Hours Necessary course signified by | Hours | Minimum Grade | Notes |
|---|-------|---------------|-------|
|---|-------|---------------|-------|

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|--|----|---|
| ★ CHM 452: Inorganic Chemistry Laboratory (L) | 1 | C |
| CHM 460: Biological Chemistry | 3 | C |
| Upper Division Science and Society Elective | 3 | C |
| Complete 2 courses: Upper Division Elective | 9 | |
| Term hours subtotal: | 16 | |

- CHM 452 and CHM 460 are only offered in the Spring semester.

- All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at <https://thecollege.asu.edu/resources/science-society>. At least one of the two courses must be upper-division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.

Hide Course List(s)/Track Group(s)

- **Total Hours:** 120
- **Upper Division Hours:** 45 minimum

Notes:

Mathematics Placement Assessment score determines placement in first mathematics course.

Please keep in mind that the applicability of a specific transfer course toward an ASU degree program depends on the requirements of the department, division, college or school in which you are enrolled at ASU. Transfer agreements that guarantee the completion of university level requirements do not necessarily meet college and major requirements. Please consult with an advisor for more information.

General Studies designations listed next to courses on the major map were valid for the 2024 - 2025 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.