

NEVADA STATE UNIVERSITY

SCHOOL OF LIBERAL ARTS, SCIENCES, & BUSINESS

CHEMISTRY (Concentration in Biochemistry), B.S.**COLLEGE CORE CURRICULUM (19-44 CREDITS)**

Unless otherwise noted, please refer to the Nevada State catalog for full list of Core requirements. Classes in the major requirements may be used to satisfy the Core requirements; consult an Academic Advisor for details. Note: A single course cannot fulfill more than one core requirement.

 ENGLISH 3-8 CREDITS

Nevada State students can be placed into English courses by submitting ACT or SAT scores or by completing the Directed Self Placement survey to better guide their placement. Students who complete Composition II will satisfy the Core Curriculum Composition requirement. Typically, students take Composition I during their first semester at the college and Composition II during the second semester.

- English Composition I (ENG 100, 101, or 116) 3-5
 English Composition II 3

 STUDY AND TECHNOLOGY SKILLS 0-3 CREDITS

Transfer students with 30 or more transferrable college credits or Nevada State students who complete the Nepantla Summer Bridge Program with an average GPA of 3.0 or greater will be able to waive the Study and Technology Skills Core Requirement.

- College Success (CEP 123 or ALS 101N) 2-3

 MATHEMATICS 3-5 CREDITS

Nevada State students can be placed into Math courses by submitting ACT or SAT scores or by completing the Math Directed Self-Placement survey to better guide their placement. Classes in the major may satisfy this requirement. Please see your degree outline and/or consult an Academic Advisor.

 NATURAL SCIENCES 7-8 CREDITS

Students are required to take two science courses, at least one of which must include an associated laboratory component. Classes in the major may satisfy this requirement. Please see your degree outline and/or consult an Academic Advisor.

- Natural Science Core 3-4
 Natural Science Core with Lab 4

 SOCIAL SCIENCES 3 CREDITS **FINE ARTS 3 CREDITS** **HUMANITIES 6 CREDITS**

- Humanities Core 3
 Humanities Core 3

 CONSTITUTION 3-6 CREDITS

Completion of US and NV Constitutions required. Complete either one US Constitution course and one NV Constitution course or complete one course that fulfills both US and NV Constitutions (CH 203 or PSC 101).

- Nevada Constitution 0-3
 United States Constitution 0-3

 CULTURAL DIVERSITY 3 CREDITS

For a full breakdown of requirements for the Chemistry major, please refer to accompanying "Major Degree Checklist"

MAJOR REQUIREMENTS (79-88 CREDITS)**ADDITIONAL GENERAL ELECTIVES (0-22 CREDITS)****TOTAL CREDITS FOR DEGREE (120 CREDITS)**

Check box when requirement is satisfied

**Indicates a prerequisite and/or corequisite is required. Please refer to the catalog or speak to an advisor about these requirements.

† Indicates a lab is required.

This sample degree checklist is a planning tool intended for the current academic year. Each student's situation is unique and your degree may differ from the sample presented here. It is recommended that current NS students review the Academic Requirements report in their Student Center to monitor progress toward their degree and graduation requirements. It is also strongly recommended that you meet regularly with your Academic Advisor to verify degree progression.

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All courses used to fulfill major requirements must be completed with a minimum C-. Grades below a C- carry no credit towards major requirements.

MAJOR REQUIREMENTS (79-88 CREDITS)

CHEMISTRY CORE COURSES

31 CREDITS

- CHEM 121** † | General Chemistry I 4
- CHEM 122** † | General Chemistry II 4
- CHEM 241** † | Organic Chemistry I 4
- CHEM 242** † | Organic Chemistry II 4
- CHEM 330** | Analytical Chemistry 4
- CHEM 421** † | Physical Chemistry I 3
- CHEM 423** | Physical Chemistry Lab 2
- CHEM 431** | Advanced Inorganic Chemistry 3
- CHEM 474** | Biochemistry I 3

REQUIRED RELATED COURSES

19 CREDITS

- MATH 181** | Calculus I 4
- MATH 182** | Calculus II 4
- PHYS 180** † | Physics for Scientists and Engineers I 4
- PHYS 181** † | Physics for Scientists and Engineers II 4
- STAT 391** | Applied Statistics for Biological Sciences 3

BIOCHEMISTRY CONCENTRATION COURSES

22-23 CREDITS

- BIOL 190** † | Intro to Cell and Molecular Biology 4
- BIOL 191** † | Intro to Organismal Biology 4
- BIOL 209** | Cell Processes 3
- BIOL 300** † | Principles of Genetics 4
- BIOL 405** | Molecular Biology 3
- CHEM 475** | Biochemistry II 4
- BIOL 405L** | Molecular and Cell Biology Techniques 1
- OR
- CHEM 472** | Biochemistry Laboratory 2

UPPER DIVISION SCIENCE ELECTIVES

7-15 CREDITS

Students must choose from the following courses (see catalog for pre-requisites).

- CHEM 306/BIOL 306** | Introductions to Scientific Ethics 1
- CHEM 377** | Natural Product Chemistry 3
- CHEM 380** | Medicinal Chemistry 3
- CHEM 392** | Special Topics in Chemistry 1-3
- CHEM 422** | Physical Chemistry II 3
- CHEM 432** | Inorganic Chemistry Laboratory 1
- CHEM 435** | Chemical Synthesis 3
- CHEM 442** | Advanced Organic Chemistry 3
- CHEM 445** | Organic Spectroscopy and Structure Determination 4
- CHEM 455** | Instrumental Analysis 3
- CHEM 455L** | Instrumental Analysis Laboratory 2
- CHEM 456/BCH 456** | Medical Biochemistry 3
- CHEM 491** | Senior Seminar in Chemistry 1
- CHEM 492** | Advanced Topics in Chemistry 2-6
- CHEM 495** | Senior Thesis in Chemistry I 3
- CHEM 496/BIOL 497** | Senior Thesis in Chemistry II 3
- CHEM 497** | Independent Study 1-3
- CHEM 498** | Undergraduate Research 1-3
- CHEM 499** | Internship 1-6

TOTAL CREDITS FOR DEGREE (120 CREDITS)

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