

NEVADA STATE COLLEGE

SCHOOL OF LIBERAL ARTS & SCIENCES

CHEMISTRY (Professional Chemistry Concentration) B.S.

COLLEGE CORE CURRICULUM (33-44 CREDITS)

Unless otherwise noted, please refer to the NSC catalog for full list of core requirements. Note: A single course cannot be used to fulfill both a major and core curriculum requirement. Additionally, a single course cannot fulfill more than one core requirement.

 ENGLISH 3-8 CREDITS

NSC students can be placed into English courses by submitting ACT or SAT scores, or by completing the Directed Self Placement questionnaire. Students who complete Composition II will satisfy the Core Curriculum 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 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.

 MATHEMATICS 4 CREDITS

NSC students can directly self-place into Mathematics, however it is recommended that students place according to their ACT/SAT scores or complete EdReady to better guide their placement. All degree programs require MATH 120 or higher to fulfill the Mathematics Core Curriculum (please see your degree outline for specific course requirements).

The following is required as a Biology major within the Core Mathematics requirement:

- MATH 181** | Calculus I 4

 NATURAL SCIENCES 8 CREDITS

The following is required as a Biology major within the Core Natural Science requirement:

- CHEM 121** † | General Chemistry I 4
 CHEM 122** † | General Chemistry II 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 Professional Chemistry Concentration major, please refer to accompanying "Major Degree Checklist"

MAJOR REQUIREMENTS (71-75 CREDITS)

ADDITIONAL GENERAL ELECTIVES (2-11 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.



SCAN HERE FOR MORE
INFORMATION ON THE COLLEGE
CORE CURRICULUM INCLUDING A
FULL LIST OF ELIGIBLE COURSES

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CHEMISTRY (Professional Chemistry Concentration) B.S.

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 (71-75 CREDITS)

CHEMISTRY CORE COURSES

23 CREDITS

- | | | |
|---------------------------------------|------------------------------|---|
| <input type="checkbox"/> CHEM 241** † | Organic Chemistry I | 4 |
| <input type="checkbox"/> CHEM 242** † | Organic Chemistry II | 4 |
| <input type="checkbox"/> CHEM 330** | Analytical Chemistry | 3 |
| <input type="checkbox"/> CHEM 421** † | Physical Chemistry I | 5 |
| <input type="checkbox"/> CHEM 431** | Advanced Inorganic Chemistry | 3 |
| <input type="checkbox"/> CHEM 474** | Biochemistry I | 3 |

REQUIRED RELATED COURSES

15 CREDITS

- | | | |
|---------------------------------------|--|---|
| <input type="checkbox"/> MATH 182** | Calculus II | 4 |
| <input type="checkbox"/> PHYS 180** † | Physics for Scientists and Engineers I | 4 |
| <input type="checkbox"/> PHYS 181** † | Physics for Scientists and Engineers II | 4 |
| <input type="checkbox"/> STAT 391** | Applied Statistics for Biological Sciences | 3 |

PROFESSIONAL CHEMISTRY CONCENTRATION

21 CREDITS

One course must include a lab component.

- | | | |
|---------------------------------------|-------------------------------|---|
| <input type="checkbox"/> CHEM 422** | Physical Chemistry II | 3 |
| <input type="checkbox"/> CHEM 447** | Advanced Synthesis Laboratory | 2 |
| <input type="checkbox"/> CHEM 455** | Instrumental Analysis | 3 |
| <input type="checkbox"/> CHEM 495** | Senior Thesis in Chemistry I | 3 |
| <input type="checkbox"/> CHEM 496** | Senior Thesis in Chemistry II | 3 |
| <input type="checkbox"/> MATH 283** † | Calculus III | 4 |

Select one of the following:

- | | | |
|-------------------------------------|------------------------|-----|
| <input type="checkbox"/> CHEM 497** | Independent Study | 1-3 |
| <input type="checkbox"/> OR | | |
| <input type="checkbox"/> CHEM 498** | Undergraduate Research | 1-3 |

UPPER DIVISION SCIENCE ELECTIVES

12-16 CREDITS

SPECIALIZED TOPICS IN CHEMISTRY

Select four to five of the following courses (9-12 credits):

- | | | |
|-------------------------------------|---|-----|
| <input type="checkbox"/> CHEM 377** | Natural Product Chemistry | 3 |
| <input type="checkbox"/> CHEM 380** | Medicinal Chemistry | 3 |
| <input type="checkbox"/> CHEM 392** | Special Topics in Chemistry | 1-3 |
| <input type="checkbox"/> CHEM 442** | Advanced Organic Chemistry | 3 |
| <input type="checkbox"/> CHEM 445** | Organic Spectroscopy and
Structure Determination | 4 |
| <input type="checkbox"/> CHEM 456** | Medical Biochemistry | 3 |
| <input type="checkbox"/> CHEM 475** | Biochemistry II | 3 |

Select one of the following:

- | | | |
|--------------------------------------|---------------------------------------|---|
| <input type="checkbox"/> BIOL 405L** | Molecular and Cell Biology Techniques | 1 |
| <input type="checkbox"/> OR | | |
| <input type="checkbox"/> CHEM 472** | Biochemistry Laboratory | 2 |

SUPPLEMENTAL CHEMISTRY

Select from the following courses (3-4 credits).

- | | | |
|--|------------------------------|-----|
| <input type="checkbox"/> CHEM/BIOL 306** | Intro to Scientific Ethics | 1 |
| <input type="checkbox"/> CHEM 491** | Senior Seminar in Chemistry | 1 |
| <input type="checkbox"/> CHEM 492** | Advanced Topics in Chemistry | 2-6 |
| <input type="checkbox"/> CHEM 499** | Internship | 1-6 |

TOTAL CREDITS FOR DEGREE (120 CREDITS)

Check box when requirement is satisfied

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SCAN HERE FOR MORE PROGRAM
INFORMATION INCLUDING
COURSE DESCRIPTIONS AND
PREREQUISITES.

