

Navajo Technical University

Name: _____

ID#: _____

Bachelor of Science in Chemistry

A Bachelor of Science degree in Chemistry requires **121** credit hours and the Chemistry is designed for a four-year program of study. The minimum credit load for a full-time student is 12 credit hours per semester. A student needs to complete general courses and general education electives within the first two years of study with a grade point average of 2.0 or better.

| Semester ONE | | CREDITS | Prerequisite | Semester/ Transfer | Grade |
|----------------|---|---------|--|-----------------------|-------|
| ENGL 1110 | Composition I | 3 | ENGL100 or satisfactory placement scores | | |
| MATH 1220 | College Algebra | 4 | MATH1215 or satisfactory placement scores | | |
| BCIS 1115 | Introduction to Computers | 3 | | | |
| CHEM 1120C | Introduction to Chemistry | 4 | | | |
| SSC 100 | College Success Skills | 1 | | | |
| Semester TWO | | | | | |
| ENGL 1120 | Composition II | 3 | ENGL 1210 OR 1110 | | |
| MATH 1230 | Trigonometry | 4 | MATH 1220 | | |
| PHYS 1115C | Survey of Physics | 4 | | | |
| CHEM 1217C | Principles of Chemistry I | 4 | MATH 1220, CHEM 1120C | | |
| Semester THREE | | | | | |
| ENGL 2310 | Introduction to Creative Writing | 3 | ENGL098 | | |
| CHEM 1225C | General Chemistry II for STEM Majors | 4 | CHEM 1217C | | |
| PHYS 1230C | Algebra Based Physics I | 4 | MATH 1215 | | |
| COMM 1130 | Public Speaking | 3 | | | |
| Semester FOUR | | | | | |
| BIOL 2110C | Principles of Biology: Cellular & Molecular Biology | 4 | | | |
| CHEM 286 | Inorganic Chemistry with Lab | 4 | CHEM 1217C | | |
| PHYS 1240C | Algebra-Based Physics II | 4 | PHYS 1230C | | |
| NAVA 2210 | Navajo Culture | 3 | | | |
| Semester FIVE | | | | | |
| CHEM 2130C | Organic Chemistry I | 4 | CHEM 1225C | | |
| BIOL 2130C | Introduction to Biochemistry | 4 | BIOL 302 | | |
| CHEM 3250C | Quantitative Analysis with Lab | 4 | CHEM 1225C | | |
| CHEM 2325C | Environmental Chemistry | 4 | CHEM 1217C | | |
| Semester SIX | | | | | |
| CHEM 2135C | Organic Chemistry II | 4 | CHEM 2130C | | |
| MATH 1240 | Pre-Calculus | 4 | MATH 1220 | | |
| CHEM 3545 | Mathematical & Computational Methods in Chemistry | 4 | PHYS 1310, CHEM 3545, CHEM 1217, CHEM 1225C, MATH1220 | | |
| CHEM 3620C | Physical Chemistry I with Lab | 4 | CHEM 1217C, CHEM 1225C, CHEM 3545, PHYS 1310C, MATH 1220, CHEM 222 | | |
| Semester SEVEN | | | | | |
| CHEM 4750 | Nanoscience and its Application in Chemistry | 3 | | | |
| CHEM 4225C | Industrial and Polymer Chemistry with Lab | 4 | CHEM 1217, CHEM 1225, CHEM 286, CHEM-3620, CHEM 2135 | | |
| CHEM 4330C | Analytical Chemistry with Lab | 4 | CHEM 1120, CHEM 1225, BIOL 1110, CHEM 3620, CHEM 4420C | | |
| CHEM ELECTIVE | Chemistry Elective XXX | 3 | | | |

| Semester EIGHT | | | | | |
|------------------------------------|-----------------------------------|------------|--|--|--|
| CHEM 4530 | Inorganic Chemistry II with Lab | 4 | CHEM 1217, CHEM 1225, CHEM 286, CHEM 3620, CHEM 4420, CHEM 2130, | | |
| CHEM 4640C | Pharmaceutical Chemistry with Lab | 4 | CHEM 1217, CHEM 1225, CHEM 286, CHEM 3620, CHEM 2135 | | |
| CHEM ELECTIVE | Chemistry Elective XXX | 3 | | | |
| CHEM 4420C | Physical Chemistry II with Lab | 4 | CHEM 1217, CHEM 1225, CHEM 3620, PHYS 1310, CHEM 222 | | |
| CHEM 4445 | Seminar in Chemistry | 1 | | | |
| TOTAL CREDIT HOURS REQUIRED | | 121 | | | |

Electives List

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|-------------------------|---|
| CHEM 4820A&B | Chemistry Research Projects |
| CHEM 4935C | Advanced Electrochemistry Studies & Energy Storage Research |
| CHEM 4950C | Advanced Topics in Organic Chemistry |
| CHEM 4500C | Forensic Chemistry |
| CHEM 4110C | Instrumental Analysis |
| CHEM 3500C | Food & Chemistry of Cooking with Lab |

| | Signatures | Date |
|------------------|------------|------|
| Student: | | |
| Advisor: | | |
| Registrar: | | |
| Graduation Date: | | |

Revised 4/27/2024