

# CHEMISTRY

State Code: DC

## SECONDARY MAJOR

[\* Fall only — \*\* Spring only — ++ Interim]

1. \* CHEM 103-General Chemistry I..... = 4
  2. \*\*CHEM 104-General Chemistry II ..... = 4
  3. \* CHEM 201-Quantitative Analysis..... = 4
  4. Either..... 9 - 10
    - \* CHEM 253-Fundamentals of Organic Chemistry (Recommended)(5) and an approved Chemistry elective from CHEM 271-281, 318 (if 317 has been completed), 329 or 330 (4)
- OR**
- \* CHEM 261-Organic Chemistry I AND.....(5)
  - \*\* CHEM 262-Organic Chemistry II .....(5)
5. \* CHEM 323-Biochemistry AND..... = 4
    - CHEM 383-Biochemistry Laboratory ..... = 1
  6. \*\*CHEM 304-Physical Chemistry for the Biological Sciences (\*\* alternate years) ..... = 4
- OR**
- \* CHEM 317-Physical Chemistry (*recommended if minoring in mathematics*)..... = 1
  7. CHEM 396-Perspectives in Chemistry..... = 1
  8. CHEM 295-Chemistry Seminar (three times) ..... = 0

**TOTAL = 31 - 32 s. hrs.**

### **REQUIRED COGNATES FOR MAJOR:**

1. A sequence in Physics chosen from: ..... = 8
  - PHYS 133 and 235 (*recommended if minoring in mathematics*) **OR**
  - PHYS 221 and 222
2. MATH 161 or MATH 132 ..... = 4
3. SCES 214-Communication and Learning in the Natural Sciences ..... = 3

**TOTAL = 15 s. hrs.**

Note: CHEM 359-Seminar in Secondary Teaching of Chemistry (3) is taken concurrently with EDUC 346-Directed Teaching: Secondary.

## SECONDARY MINOR

1. \* CHEM 103-General Chemistry I..... = 4
  2. \*\*CHEM 104-General Chemistry II ..... = 4
  3. \* CHEM 201-Analytical Chemistry ..... = 4
  4. \* CHEM 253-Fundamentals of Organic Chemistry (recommended) ..... = 5
- OR**
- \* CHEM 261 -Organic Chemistry I
  5. \*\*CHEM 304-Physical Chemistry for the Biological Sciences ..... = 4
- OR**
- \* CHEM 317-Physical Chemistry (*recommended for the mathematically qualified student*)..... = 1
  6. \* CHEM 396-Perspectives in Chemistry..... = 1
  7. CHEM 323 and 383-Biochemistry I & Laboratory ..... = 5
  8. CHEM 295-Chemistry Seminar (two times) ..... = 0

**TOTAL = 27 s. hrs.**

### **Required Cognates**

#### **One of the following sequences:**

1. MATH 161-162 or MATH 132-143..... = 8
- OR**
2. PHYS 133-134 ..... = 8
- OR**
3. MATH 161 or 132 AND PHYS 221 or 133 ..... = 8

#### **And:**

4. SCES 214-Communication and Learning in the Natural Sciences ..... = 3

**TOTAL = 11 s. hrs.**

The integrated science major with a chemistry minor is the recommended program for most students. Consult with Professor C. Bruxvoort, integrated science advisor, before completing the declaration of major form.