

Department of Chemistry (NCAT)  
BS in Chemistry (Biochemistry and Biomedical track) Curriculum Guide

| Notes | Course                                                                         | CR        | Notes | Course                                                                                          | CR        |
|-------|--------------------------------------------------------------------------------|-----------|-------|-------------------------------------------------------------------------------------------------|-----------|
|       | <b>Freshman Year: First Semester</b>                                           |           |       | <b>Freshman Year: Second Semester</b>                                                           |           |
|       | CHEM 180: General Chemistry VI                                                 | 3         |       | CHEM 181: General Chemistry VII                                                                 | 3         |
|       | CHEM 108: Chemistry Orientation                                                | 1         |       | <i>CHEM 191: Introduction to Chemical Research / CHEM 117: General Chemistry VII Laboratory</i> | 1         |
|       | CHEM 190: General Chemistry VI Laboratory                                      | 1         |       | <i>MATH 131: Calculus I</i>                                                                     | 4         |
|       | ENGL 100: Ideas and Their Expressions I                                        | 3         |       | ENGL 101: Ideas and Their Expressions II                                                        | 3         |
|       | African American Studies <sup>1</sup>                                          | 3         |       | Humanities / Fine Arts <sup>2</sup>                                                             | 3         |
|       | <i>MATH110: Pre-calculus Engineers &amp; Scientists</i>                        | 4         |       | HPED <sup>3</sup>                                                                               | 1         |
|       | HPED <sup>3</sup>                                                              | 1         |       |                                                                                                 |           |
|       | <b>Semester Total</b>                                                          | <b>16</b> |       | <b>Semester Total</b>                                                                           | <b>15</b> |
|       | <b>Sophomore Year: First Semester</b>                                          |           |       | <b>Sophomore Year: Second Semester</b>                                                          |           |
|       | <i>CHEM 208: Chemistry Sophomore Colloquium I</i>                              | 1         |       |                                                                                                 |           |
|       | CHEM 280: Organic Chemistry I                                                  | 3         |       | CHEM 281: Organic Chemistry II                                                                  | 3         |
|       | <i>CHEM 290: Res Meth in Organic Chem I/ CHEM 223: Organic Chemistry I Lab</i> | 1         |       | <i>CHEM 291: Res Meth in Organic Chem II</i>                                                    | 2         |
|       | <i>MATH 132: Calculus II</i>                                                   | 4         |       | <b>MATH ELECTIVE <sup>6</sup></b>                                                               | 4         |
|       | Global Awareness <sup>4</sup>                                                  | 3         |       | <i>PHYS 241: General Physics I</i>                                                              | 3         |
|       | <i>Social and Behavioral Sciences <sup>5</sup></i>                             | 3         |       | <i>PHYS 251: General Physics I Laboratory</i>                                                   | 1         |
|       | <b>Semester Total</b>                                                          | <b>15</b> |       | <b>Semester Total</b>                                                                           | <b>13</b> |
|       | <b>Junior Year: First Semester</b>                                             |           |       | <b>Junior Year: Second Semester</b>                                                             |           |
|       | <i>CHEM 308: Chemistry Junior Colloquium I</i>                                 | 1         |       |                                                                                                 |           |
|       | <i>CHEM 231: Quantitative Analysis I</i>                                       | 3         |       | <i>CHEM 451: Biochemistry I</i>                                                                 | 3         |
|       | <i>CHEM 232: Quantitative Analysis I Laboratory</i>                            | 2         |       | <i>CHEM 452: Biochemistry I Laboratory</i>                                                      | 2         |
|       | <i>PHYS 242: General Physics II</i>                                            | 3         |       | <i>CHEM 431: Quantitative Analysis II</i>                                                       | 3         |
|       | <i>PHYS 252: General Physics II Laboratory</i>                                 | 1         |       | <i>CHEM 432: Quantitative Analysis II Laboratory</i>                                            | 2         |
|       | <b>BIOL 101: Concepts in Biology</b>                                           | 4         |       | CHEM 391: Research in Chemistry and Biochemistry I                                              | 2         |
|       | CHEM 390: Methods in Chemical Research III                                     | 2         |       | Free Elective                                                                                   | 3         |
|       | <b>Semester Total</b>                                                          | <b>16</b> |       | <b>Semester Total</b>                                                                           | <b>15</b> |
|       | <b>Senior Year: First Semester</b>                                             |           |       | <b>Senior Year: Second Semester</b>                                                             |           |

**Department of Chemistry (NCAT)**  
**BS in Chemistry (Biochemistry and Biomedical track) Curriculum Guide**

|  |                                                            |           |  |                                                   |           |
|--|------------------------------------------------------------|-----------|--|---------------------------------------------------|-----------|
|  | <i>CHEM 408: Chemistry Senior Colloquium</i>               | <i>1</i>  |  | <i>CHEM 412: Inorganic Synthesis</i>              | <i>2</i>  |
|  | <i>CHEM 490: Research in Chemistry and Biochemistry II</i> | <i>2</i>  |  | <b>Biology Elective</b>                           | <i>4</i>  |
|  | <i>CHEM 441: Physical Chemistry I</i>                      | <i>3</i>  |  | <i>CHEM 497: (Capstone)</i>                       | <i>3</i>  |
|  | <i>CHEM 443: Physical Chemistry I Laboratory</i>           | <i>1</i>  |  | <i>CHEM 411: Inorganic Chemistry</i>              | <i>3</i>  |
|  | <b>CHEM453: Biochemistry II</b>                            | <b>3</b>  |  | <i>CHEM 442: Physical Chemistry II</i>            | <i>3</i>  |
|  | Free Elective                                              | <i>4</i>  |  | <i>CHEM 444: Physical Chemistry II Laboratory</i> | <i>1</i>  |
|  | <b>Semester Total</b>                                      | <b>14</b> |  | <b>Semester Total</b>                             | <b>16</b> |

**Total Credits: 120**

- 
1. Select one of the following: ENGL 333, ENGL 334, HIST 106, HIST 107, HIST 103, LIBS 202, MUSI 220
  2. Select one of the following: ENGL 200, ENGL 201, ENGL 230, ENGL 231, ENGL 333, ENGL 334, LIBS 202, MUSIC 216, MUSIC 220, PHIL 101, PHIL 103, PHIL 104, PHIL 201, PHIL 266, PHIL 267, SPCH 250
  3. PHED 200 may be substituted for the two courses in Physical Education. This option is now changed to free elective option
  4. Select one of the following: HIST 130, HIST 206, HIST 207, HIST 216, HIST 231, MGMT 221, PHIL 103, PHIL 201
  5. BUED 279, ECON 200, ECON 201, FCS 135, FCS 181, FCS 260, HIST 103, HIST 104, HIST 105, HIST 106, HIST 107, HIST 130, HIST 206, HIST 207, HIST 216, HIST 231, JOMC 240, POLI 110, PSYC 101, SOCI 100, SOCI 200, SSFM 226
  6. Math 224 (Statistics course) is required for the this track