## CHEMISTRY - MEDICAL TECHNOLOGY CONCENTRATION - B.S.

**General Education Requirements**

**I. Required Skills and Competencies** 16 cr

___ ENG 106 Writing Intensive First Year Seminar OR
ENG 110 Advanced Placement Writing (3 cr)
May need ENG 050 Basic Writing first, based on test results
___ HCS 100 Intro to Human Communication (3 cr)
___ Mathematical Competency-Required
MAT 211 Calculus I —if necessary, student may need to take MAT 175 Pre-Calculus first
___ HIS 105 World History I (3 cr) AND
___ HIS 106 World History II (3 cr)

**II. Categories of Knowledge** 37cr

A: Logic/Numbers for Rational Thinking (4 cr)
___ MAT 212 Calculus II

B: Literary, Artistic & Cultural Traditions (9 cr)
___ _____
___ _____
___ _____

C: Biological & Physical Sciences (12 cr)
___ CHM 121 Chemical Bonding *
___ PHY 221 Fundamentals of Physics I *
___ BIO 115 Principles of Biology I *

D: Political, Economic & Geographic Science (6 cr)
___ _____
___ _____

E: Social & Behavioral Science (6 cr)
___ _____
___ _____

**III. Library Skills Complete via College/Advanced Writing course**

**Chemistry Requirements** 39 cr

___ CHM 121 Chemical Bonding (3 cr) *
___ CHM 123 Lab IA (2 cr)
___ CHM 122 Chemical Dynamics (3 cr)
___ CHM 124 Lab IIA (2 cr)
___ CHM 221 Modern Organic Chemistry I (3 cr)
___ CHM 223 Lab IIIA (2 cr)
___ CHM 222 Modern Organic Chemistry II (3 cr)
___ CHM 224 Lab IVA (2 cr)
___ CHM 301 Biochemistry I (3 cr)
___ CHM 361 Physical Chemistry I (4 cr)
___ CHM 362 Physical Chemistry II (4 cr)
___ CHM 371 Analytical Chemistry (4 cr)
___ CHM 381 Advanced Inorganic Chemistry (4 cr)

**Math Requirement** 8 cr

___ MAT 211 Calculus I (4 cr) *
___ MAT 212 Calculus II (4 cr) *

**Physics Requirements** 10 cr

___ PHY 221 Fundamentals of Physics I (5 cr) *
___ PHY 222 Fundamentals of Physics II (5 cr)

**Biology Requirements** 23 cr

___ BIO 115 Principles of Biology I (4 cr) *
___ BIO 116 Principles of Biology II (4 cr)
___ BIO 220 Microbiology (3 cr)
___ BIO 260 Genetics (3 cr)
___ BIO 324 Pathogenic Microbiology (3 cr)
___ BIO 317 Parasitology (3 cr) OR
BIO 350 Human Physiology (3 cr)
___ BIO 409 Immunology (3 cr)

**Computer Science Requirements** 3 or 4 cr

See Department for Advisement
___ CSC 110 Computer Science I (4 cr) * or
CSC 180 Microcomputer Basic (3 cr) *

**Free Electives** 3 cr

***Major requirement fulfills General Education Credits**

**Total Graduation Requirements** **120 cr**

**********

***GPA Needed to Declare:*** **2.5**

A student in this major completes the pre-clinical requirements in chemistry in a four-year period and receives the B.S. degree in chemistry. Then the student completes the year of clinical education at one of the 14 affiliated hospitals and receives a B.S. degree in medical technology.

***Helpful Hints for Advising:***

| | |
|---|---|
| Semester 1 | CHM 121 Chemical Bonding & CHM 123 Lab IA<br>MAT 211 Calculus I |
| Semester II | CHM 122 Chemical Dynamics & CHM 124 Lab IIA<br>MAT 212 Calculus II<br>BIO 116 Principles of Biology II |
| Semester III | PHY 221 Fundamentals of Physics I<br>CHM 221 Modern Organic Chem I & Chem 223 Lab IIIA<br>BIO 260 Genetics |
| Semester IV | PHY 222 Fundamentals of Physics II<br>CHM 222 Mod Organic Chem II & Chem 224 Lab IVA<br>BIO 220 Microbiology |

*American Chemical Society Certification available. See Department Chairperson for details.*

All chemistry majors will take a comprehensive examination in their junior year at a time and place designated by the department. A satisfactory performance in all areas of this examination is a requirement for departmental recommendation and ACS certification.