BIOLOGY - CLINICAL SCIENCES CONCENTRATION - B.S.
Includes: Medical Technology, Cyto-Technology, Histo-Technology, and Respiratory Therapy

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
___ HIS 105 Historical Foundations of Global Cultures (3 cr) AND
___ HIS 106 Thinking Historically in a Global Age (3 cr)
II. Categories of Knowledge 35 cr
A: Logic/Numbers for Rational Thinking (4 cr)
___ MAT 117 Applied Statistics
B: Literary, Artistic & Cultural Traditions (9 cr)
___ ______________________________
___ ______________________________
___ ______________________________
C: Biological & Physical Sciences (10 cr)
___ PHY 121 Introductory Physics
___ CHM 121 Chemical Bonding
___ BIO 161 Principles of Biology: Cell Structure & Function
D: Political, Economic & Geographic Science (6 cr)
___ ______________________________
___ ______________________________
E: Social & Behavioral Science (6 cr)
___ ______________________________ #
___ ______________________________
III. Library Skills Complete via College/Advanced Writing course
Biology Major Requirements 38 cr
CORE COURSES** 15 cr
___ BIO 161 Principles of Biology: Cell Structure & Function * (4 cr)
___ BIO 162 Principles of Biology: Organismal Diversity (4 cr)
___ BIO 220 Microbiology (3 cr)
___ BIO 260 Genetics (3 cr)
___ BIO 350 Human Physiology (4 cr)
___ BIO 385 Cell Biology (3 cr)
___ BIO 300 Careers in the Health Professions (1 cr)
Additional Biology electives 7 cr
___ BIO ____________________________ (3 cr)
___ BIO ____________________________ (4 cr)
**Students must earn at least a 2.0 average in Bio 161/162 before upper level Biology electives may be taken. See the catalog for remediation procedure.
Math Requirements 4 cr
___ MAT 211 Calculus (4 cr)
Chemistry Requirements 18-21 cr
___ CHM 121 Chemical Bonding* AND
___ CHM 125 Lab IB (4 cr)
___ CHM 122 Chemical Dynamics AND
___ CHM 126 Lab IIB (4 cr)
___ CHM 221 Organic Chemistry I AND
___ CHM 225 Lab IIIB (4 cr)
___ CHM 227 Introduction to Biochemistry (4 cr)
Physics Requirements 8 cr
___ PHY 121 Introductory Physics I (3 cr)* AND
___ PHY 123 Introductory Physics I lab (1 cr)
PHY 122 Introductory Physics II (3 cr) AND PHY 124 Introductory Physics II lab (1 cr)

Medical Technology Concentration: 8 cr
Required:
___ BIO 317 Parasitology (3 cr)
___ BIO 324 Pathogenic Microbiology (3 cr)
___ BIO 374 Hematology (2 cr)
___ BIO 409 Immunology (3 cr)

Cyto-Technology Concentration: 7 cr
Strongly recommended:
___ BIO 371 Human Anatomy (4 cr)
___ BIO 418 Molecular Biology (3 cr)

Histo-Technology Concentration: 7 cr
Required:
___ BIO 371 Human Anatomy (4 cr)
___ BIO 375 Histology (3 cr)

Respitory Therapy Concentration: 7 cr
Required:
___ BIO 371 Human Anatomy (4 cr)
Strongly recommended:
___ BIO 409 Immunology (3 cr)
Recommended:
___ ENG 248 Technical/Professional Writing (3 cr)

*Major requirement double counts as General Education credits

All SU coursework must be successfully completed prior to beginning the clinical program. Up to 30 credits will be transferred back to SU after successful completion of the clinical program.

Total Graduation Requirements 120 cr

GPA Needed to Declare: 2.5

Admission to this major is competitive. Students must have earned at least 15 credits and have grades of “C” or better in BIO 161/BIO 162 AND one of the following CHM 121: Chemical Bonding, MAT 175: Pre-Calc OR MAT 211: Calculus I.

A GPA of at least 2.8 is required to remain in the Health Sciences track.

Helpful Hints for Advising:
Students should begin their math sequence in the freshman year.

Semester I BIO 161 Principles of Biology: Cell Structure & Function and/or
CHM 121 & CHM 125 Chemical Bonding and lab

Semester II BIO 162 Principles of Biology: Organisnal Diversity and/or
CHM 122 & CHM 126 Chemical Dynamics and lab

Students lacking strong chemistry/math backgrounds should consider taking CHM 105: Chemistry: An Observational Approach

Physics is normally taken in the junior year.