A. Policies for Admission to the Major
   1. New students (freshmen and transfers) must be admitted to the Biology major by the Office of Admissions upon admission to the University.
   2. Admission of Millersville University students to the Biology major (from other departments or undeclared status) requires that the student is in satisfactory academic standing as described in the Undergraduate Catalog. Students who were dropped from a Biology major also must satisfy the Biology Retention in the Major criteria before being readmitted to a Biology major.
   3. Non-degree and continuing education students must be admitted to the Biology major by the Office of Admissions.

B. Policies for Retention in the Major
   1. University requirements for retention must be met.
   2. All Biology majors must earn grades of C- (C minus) or higher in all core courses (BIOL 101, 211, 362, 364) required for their option.
   3. The requirements stated above must be satisfied before completion of 90 Millersville University credit hours.
   4. Millersville University students changing majors, or Biology majors changing options within the Biology major, must satisfy the above requirements prior to completion of 45 additional Millersville University credit hours. Note: Students who desire to change their major to Biology must refer to the Biology department's Admission to the Major Policy. Those transferring into the major may substitute BIOL 100 for BIOL 101 if they earn a grade of B- (B minus) or higher in this course.
   5. Transfer students with 60 credit hours or more must satisfy the above requirements prior to completion of 45 Millersville University credit hours. Transfer students with fewer than 60 credits should refer to the policy for all other majors (part #3 above).
   6. Any students failing to meet the above requirements will be dropped from the Biology major. Students who wish to re-enter the major, must follow the requirements stipulated in part 4 above.

C. Policies for Completion of the Major
   1. Completion of all University curricular requirements.
   2. Degree will be awarded after student has successfully completed a year of clinical education at an approved Medical Technology school.
   3. ENGL 312, Technical Writing, is the recommended course for the Upper Level Writing Requirement under the General Education Curriculum Requirements.

D. Admission to the clinical program is competitive and is not guaranteed.

Note to the student: This form is provided as a guide. It is your responsibility to consult regularly with your adviser to be aware of changes and curriculum details which are not incorporated on this form.
### MAJOR SEQUENCE AND DEGREE REQUIREMENTS

**Major:** BS BIOLOGY  
**Option:** MEDICAL TECHNOLOGY (Clinical Laboratory Science)  
**Major Field Requirements:** 60.0 credits  
**Other Requirements:** 24.0-25.0 credits

When applicable, up to six of the **REQUIRED RELATED** courses may be credited toward the Liberal Arts Core subject to normal distribution rules.

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Short Title</th>
<th>C.H.</th>
<th>Grade</th>
<th>Q.P.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biol 101</td>
<td>Foundations of Biology</td>
<td>4.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biol 211</td>
<td>Concepts of Zoology</td>
<td>4.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biol 362</td>
<td>Cell &amp; Development</td>
<td>4.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biol 364</td>
<td>Genetics &amp; Mol. Biology</td>
<td>4.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chem 111*</td>
<td>Intro to Chemistry I</td>
<td>4.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chem 112*</td>
<td>Intro to Chemistry II</td>
<td>4.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chem 235</td>
<td>Short Course Org. Chem</td>
<td>4.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chem 326</td>
<td>Biochemistry I</td>
<td>4.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**REQUIRED BIOLOGY COURSES (16.0 credits)**

- Biol 257 Intro to Allied Health 1.0
- Biol 454 Immunology 2.0
- Biol 461 General Microbiology 3.0

**REQUIRED MEDICAL TECH COURSES (6.0 credits)**

- Biol 356 or 254 & 255; and Biol 375 are strongly recommended.
- Biol [ ] [ ] [ ]
- Biol [ ] [ ] [ ]
- Biol [ ] [ ] [ ]

**BIOLOGY ELECTIVES (8.0 credits)**

Biol 356 or 254 & 255; and Biol 375 are strongly recommended.

**CLINICAL LAB SCIENCE EDUCATION (30.0 credits)**

Upon completion of one year of Clinical Laboratory Science education at an affiliated hospital site, 30.0 credit hours will be credited toward the B.S. degree in Biology with the Medical Technology (Clinical Laboratory Science) option.

**Clinical Laboratory Science Courses** (30 credits)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Short Title</th>
<th>C.H.</th>
<th>Grade</th>
<th>Q.P.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math 160</td>
<td>Precalculus</td>
<td>4.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Math 161</td>
<td>Calculus I</td>
<td>4.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Math 163</td>
<td>Honors Calculus</td>
<td>5.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**REQUIRED RELATED (24.0-25.0 credits)**

- Chemistry (16.0 credits)
  - Chem 111 Intro to Chemistry I 4.0
  - Chem 112 Intro to Chemistry II 4.0
  - Chem 235 Short Course Org. Chem 4.0
  - Chem 326 Biochemistry I 4.0

Note: Chem 231* and Chem 232 (total 8.0 credits) may substitute for Chem 235.

* Must earn a C- or better in these CHEM courses before completing Chem 235 or Chem 232.

**Mathematics (4.0 - 5.0 credits)**

- Math 160 Precalculus 4.0
- Math 161 Calculus I 4.0
- Math 163 Honors Calculus 5.0

Note: Some clinical sites require a course in statistics, such as Math 130, Math 235, or Biol 375.

**Physics (4.0 credits)**

- Phys 131 Physics 1 with Algebra 4.0

Note: Students who might be interested in attending graduate school or professional school after their clinical program SHOULD TAKE Phys 131.

**Suggested Additional Course (no minimum)**

- Psych 100 General Psychology 3.0

Note: Students considering going to graduate school or attending medical, dental, veterinary school or wanting to enroll in school to become a pharmacist, physical therapist, or physician assistant after completing their clinical training SHOULD ALSO TAKE Psych 100, which can be used toward the G3 general education requirement.

### General Electives (as necessary)

[ ] [ ] [ ] [ ] [ ] [ ]

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