### General Education

**Course** | **Semester** | **Grade** | **Notes** | **Credit Hours**
--- | --- | --- | --- | ---
**COMMUNICATION (9 hours)**
ENGL 1010 | 3
ENGL 1020 | 3
COMM 2200 | 3

**HISTORY (6 hours)**
Choose two: HIST 2010, HIST 2020, HIST 2030

**HUMANITIES AND/OR FINE ARTS (9 hours)**
Choose one: ENGL 2020 or 2030 or HUM 2610
Choose two (different rubrics): ANTH 2210, ART 1030 or 1920, DANC 1000, HIST 1010, 1020, 1110, or 1120, MUS 1030, PHIL 1030, THEA 1030

**MATHEMATICS (3 hours)**
MATH 1910 | 3 of 4*

**NATURAL SCIENCES (8 hours)**
BIOL 1110/1111 | Course is also considered part of the major | 4
CHEM 1110/1111 | Course is also considered part of the major | 4

**SOCIAL/BEHAVIORAL SCIENCES (6 hours)**
Choose two (different rubrics): AAS 2100, ANTH 2010, ECON 2410, ECON 2420, GEOG 2000, G S 2010, HLTH 1530/1531, JOUR/EMC/RIM 1020, PS 1010 or 1095, P SY 1410, RS 2030, SOC 1010 or 2010, WGST 2100

**Hours Required**
41

### Major Courses (2.0 GPA required)

**Course** | **Semester** | **Grade** | **Notes** | **Credit Hours**
--- | --- | --- | --- | ---
**General Chemistry I**
CHEM 1110/1111 | Credits counted in General Education | (4)

**General Chemistry II**
CHEM 1120/1121 | Preq: CHEM 1110/1111 with a C- or better | 4

**Organic Chemistry I**
CHEM 3010/3011 | Preq: CHEM 1120/1121 or equivalent | 4

**Organic Chemistry II**
CHEM 3020/3021 | Preq: CHEM 3010/3011 | 4

**Physical Chemistry Fundamentals I**
CHEM 4330/4331 | Preq: MATH 1910; PHYS 2020/PHYS 2021; CHEM 2230/CH EM 2231 or CHEM 4550/4551 | 4

**Biochemistry I**
CHEM 4500 | Preq: CHEM 3020/CHEM 3021; not open to those who have had CHEM 3530/CHEM 3531 | 3

**Biochemistry II**
CHEM 4510 | Preq: CHEM 4500 | 3

**Bioanalytical Chemistry**
CHEM 4550/4551 | Preq: CHEM 2030/CHEM 2031 or CHEM 3020/CHEM 3021 | 4

**Biology & Chemistry Upper Division Electives**
BIOL | | 3

**General Biology**
BIOL 1110/1111 | Credits counted in General Education | (4)

**Microbiology**
BIOL 2230/2231 | Preq: BIOL 1110/BIOL 1111 and BIOL 1120/BIOL 1121 or BIOL 2010/BIOL 2011 and BIOL 2020/BIOL 2021 | 4

**Genetics**
BIOL 3250/3251 | Preq: BIOL 1110/BIOL 1111 and BIOL 1120/BIOL 1121 | 4

**Biology Upper Division Elective**
BIOL | | 3

**Hours Required**
47 (55)
### Supporting and Elective Courses

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<thead>
<tr>
<th>Course</th>
<th>Semester</th>
<th>Grade</th>
<th>Notes</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>PHYS 2010/2011 or PHYS 2110/2111</td>
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<td></td>
<td>Preq: MATH 1710 w/minimum grade of C or MATH 1730</td>
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<tr>
<td>PHYS 2020/2021 or PHYS 2120/2121</td>
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<td>Preq: PHYS 2010/2011</td>
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<tr>
<td>MATH 1910 (remaining credit from gen ed)</td>
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<td>Preq: MATH 1730 with a grade of C or better or Math ACT of 26 or better or Calculus placement test score of 73 or better</td>
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<tr>
<td>Electives</td>
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**Upper Division Electives**

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<th>Semester</th>
<th>Grade</th>
<th>Notes</th>
<th>Credit Hours</th>
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**Hours Required** 32

### Optional Minor

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<th>Course</th>
<th>Semester</th>
<th>Grade</th>
<th>Notes</th>
<th>Credit Hours</th>
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**Hours Required**

**Signed:**

Minor Advisor

Date

1. Degrees require a minimum of 120 semester hours (12 of the last 18 at MTSU) with a 2.0 GPA, a minimum of 42 upper-division hours (30 at MTSU) with a 2.0 GPA, and a minimum of 60 senior college hours.

2. Learning Support courses do not count toward the 120-hour requirement or cumulative degree GPA.

**Signed:**

Major Advisor

Date

**Signed:**

Biochemistry Coordinator

Date