Integrated-STEM (i-STEM) Education Major

### STEM Core (14 units):
- **TST161**
- **ETE261**
- **ETE271**
- **SCI #1**
- **SCI #2**
- **SCI #3**
- **MAT127**
- **MAT105 or 106**
- **STEM #1**
- **STEM #2**
- **Spec. #1**
- **Spec. #2**
- **Spec. #3**
- **Spec. #4**

### STEM Methods (3 units):
- **TED460**
- **MST202**
- **MTT202**

<table>
<thead>
<tr>
<th>Integrative-STEM Methods</th>
<th>Science Methods</th>
<th>Math Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taken together</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Middle School endorsement** in Math or Science, requires (i) 15 cr. of content courses in Math (and/or Science) and (ii) pass middle school praxis exam for Math (and/or Science). Approximately 100% of iSTEM students complete courses for one of these endorsements, and large majority complete both.

### i-STEM Specialization Descriptions

#### (1) Technology & Engineering Specialization
- **ETE131**
- **PHY201 or PHY103**

**T&E** Specialization consists of four additional units selected from (1 course needs to be ≥300 level):
- **ETE111**
- **ETE275**
- **ETE281**
- **ETE341**
- **ETE361**
- **ETE371**
- **ETE381**
- **ETE461**
- **ETE492**

**T&E Specialization allows Secondary endorsement** in T&E Education: (i) 30 credits in T&E courses (with 12 credits at ≥300 level) and (ii) pass the Tech. Education PRAXIS exam.

#### (2) Mathematics Specialization
- **MAT128**

Math Specialization courses consists of any 4 additional MAT units numbered above MAT128. There are exceptions for only 2 of these units: (i) STA215, or above and (ii) one of MAT 111, 112, 114, 115, or 117 (middle school math content courses)

#### (3) Biology Specialization
- **BIO185**
- **CHE201**
- **CHE202**

Biology specialization courses consists of 4 additional units, as described below:
(a) two of the following three courses: BIO211, BIO221, BIO231
(b) two units of BIO electives ≥ 200 level

#### (4) Chemistry Specialization
- **MAT128**
- **CHE201**
- **CHE202**
- **Any 1 unit non-Chemistry science course**

Chemistry specialization courses consists of 4 additional units, as described below:
(a) **CHE321**
(b) **CHE322**
(c) Any 1 unit STEM elective (typically to support a middle school endorsement)

#### (5) Physics Specialization
- **MAT128**
- **PHY201**
- **PHY202**

The Physics specialization courses consists of 4 additional units: (a) three courses from: PHY120, PHY161, PHY171, Any ≥ 300 level PHY course and (b) any 1 unit STEM elective (typically to support a middle school endorsement).