LOW DIVISION GENERAL EDUCATION REQUIREMENTS

**Written Communication: 6cr**
- ENGL 110C
- ENGL 231C

**Oral Communication: 3cr**
- COMM 101R, 103R, 112R

**Mathematics: 3cr**
- MATH 162M

**Language and Culture: 0-6cr**
- ARAB 111F, CHIN 111F, GER 101F-102F, HEBR 111F
- ITAL 101-102F, JAPN 111F
- LATN101F-102F,
- RUS 101F-102F,
- SPAN 101F-102F, 121F
- FR 101F-102F

**Human Creativity: 3cr**
- ARTH 121A, ARTS 122A,
- COMM/THEA 270A,
- DANC 185A, MUSC 264A
- THEA 241A

**Interpreting the Past: 3cr**
- HIST 100H, 101H, 102H,
- 103H, 104H, 105H

**Literature: 3cr**
- ENGL 112L, 114L, FLET 100L

**Oral Communication: 3cr**
- COMM 101R, 103R, 112R

**Literature: 3cr**
- ENGL 112L, 114L, FLET 100L

**Human Creativity: 3cr**
- COMM 372T, CS 300T, DNTH 440T,
- EET 370T, ENGL 307T, GEOG 306T,
- HIST 300T, HIST 304T, HIST 389T
- HIST 386T/SCI 302T, IT 360T,
- MUSC 335T, STEM 110T, STEM 370T,
- PHIL 383T, POLS 350T, WMST 390T

**Required Biology Core Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 115N</td>
<td>General Biology I</td>
</tr>
<tr>
<td>BIOL 116N</td>
<td>General Biology II</td>
</tr>
</tbody>
</table>

BIOL 115N-116N must be passed with a C (2.0) or better to continue.

Upon completion of Biology 116N, students must complete the following Biology courses, some of which are pre- or co-requisites for upper level biology courses (see catalog descriptions for individual courses). Biology 293 (Cell Biology) and Biology 303 (Genetics) have Math 162, (Precalculus) and Chemistry 211 (Organic Chemistry) as co-requisites. Biology 303 (Genetics) also has STAT 130M (Elementary Statistics) as a pre-requisite. Biology 405W should be taken during the junior or senior year, but not before a student has completed the rest of the core and at least 2 300- or 400-level electives. All core courses must be passed with a C (2.0) or better.

- BIOL 292 Evolution 3
- BIOL 291 Ecology 3
- BIOL 293 Cell Biology 3
- BIOL 303 Genetics 3
- BIOL 405W Senior Seminar 3

**Prerequisites for 405W:** Complete the required core courses listed above AND two Biology electives listed below (300-400 level).

**Required Biology Elective Courses:**

Students must complete 16 credit hours of Biology electives, to include one approved course from each of the areas listed below. A minimum of 3 courses must include a laboratory component. Elective courses must be passed with a C (2.0) or better. Note that course offerings in each of these areas may change; students should check the University Catalog for current offerings. Substitutions of electives are possible but must be approved in advance by the Chief Departmental Advisor in Biology.

**Human Anatomy:** BIOL 250, BIO 141, 231 or NAS 161*
**Botany:** BIOL 308
**Zoology:** BIOL 307, 401, 420, 422, 424, 458, 441
**Microbiology:** BIOL 315
NON-BIOLOGY MATH AND SCIENCE REQUIREMENTS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 121N/122N</td>
<td>College Chemistry I Lecture and Lab</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 123N/124N</td>
<td>College Chemistry II Lecture and Lab</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 211&amp; 212</td>
<td>Organic Chemistry I Lecture and Lab</td>
<td>5</td>
</tr>
<tr>
<td>OEAS 110N or OEAS 111N</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>PHYS 111N</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>MATH 200 or MATH 163/211</td>
<td></td>
<td>3/4</td>
</tr>
<tr>
<td>STAT 130M or STAT 310</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>CS 121G or CS 120G or CS 126G</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

PROFESSIONAL EDUCATION COURSES

Take Praxis I after completion of English 110C/231C and College Algebra

The first three courses are prerequisites to the remaining courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLED 301 Foundations and Introduction to Assessment in Education</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>TLED 430 Instructional Technology*</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>SPED 313 Fundamentals of Human Growth &amp; Development</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>TLED 408 Reading and Writing in Content Areas</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>TLED 360 Classroom Management and Discipline</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>SPED 406 Students with Diverse Learning Needs</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>STEM 454 Developing Instructional Strategies - Science</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>TLED 483 Practicum Seminar in Education (Corequisite with STEM 454)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>TLED 485 Teacher Candidate Internship (student teaching)</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

Notes

- Passing PRAXIS I with a composite score of 532 or qualifying SAT/ACT scores are required for admission to the program. The VCLA and Praxis I Mathematics test may be substituted for Praxis I required for initial licensure and admission to a Virginia teacher education approved program. The necessary scores are: (1) VCLA reading and writing – composite score of 470; (2) Praxis I Mathematics – minimum score 178.

- Students must be admitted into an approved teacher education program to qualify for TLED 454 - Instruction Strategies - Science.

- TLED 454 and TLED 483 are co-requisites (must be taken together). TLED 454 requires a 35 hours school practicum that can be requested on the TES website www.odu.edu/tes.

- Students must complete an approved program in teacher education (i.e., all coursework with no grade less than C in the content area (Biology courses) and C- in the professional education core. and a GPA of at least 2.75 overall in the major and in the professional education courses.

- Students must have passing Praxis II scores on biology content knowledge #235 (155) and the Virginia Communication and Literacy Assessment (VCLA) during the Senior Seminar in order to qualify for TLED 485 Student Teaching.

- To graduate, students must successfully complete all coursework, the University Writing Requirement, the University Senior Assessment, and the Biology Department Assessment (if offered). In addition to meeting other requirements of the University, students must earn a minimum of 25% of the total number of credits required for the degree (30 credits in a 120-credit degree program) through on- or off- campus instruction. This must include a minimum of 12 hours of upper-level courses in the department of the declared major. The responsibility of meeting the requirements for a degree rests with the student.

- Students, not advisors, are ultimately responsible for knowing whether or not they have completed their degree requirements. Students are expected to use the on-line Degree Evaluation system to monitor their progress each semester, identify problems as they arise, and seek assistance in a timely fashion.

- Students are expected to read, understand, and follow the policies and regulations outlined in the University Catalog for the year in which they enrolled at ODU.

- Exceptions to the curriculum requirements, policies, and procedures outlined on this sheet must be petitioned to and approved by the Chair of the Department of Biological Science and appropriate program director of the Darden College of Education.

- Due to changing University requirements, national accreditation standards, and Commonwealth licensure regulations, the programs in the Darden College of Education are under constant revision. Any changes resulting from these factors supersede the program requirements described in the catalog. Students are encouraged to obtain current program information from their advisors and the Darden College of Education website at http://education.odu.edu.

Biology Advising Contact: MGB 236 Advising Office (cosadvising@odu.edu)
Biology Education Advising Contact: Ms. Nola Nicholson (mnichols@odu.edu)
Licensure Information: 757-683-3348