

## Biology Education 7-12

### Effective 2019-2020 academic year

#could be taken for credit towards an International Studies minor

#### I. ACHIEVEMENT CENTERED EDUCATION (ACE)

All UNL students are required to complete a minimum of 3 hours of approved course work in each of the 10 designated ACE areas.

ACE #1 *Written Texts Incorporating Research & Knowledge Skills*  
ENGL 150, 151, or 254 (3 hrs) \_\_\_\_\_

ACE #2 *Communication Skills*  
TEAC 259 (3 hrs) ✓✓✓✓✓

ACE #3 *Mathematical, Computational, Statistical, or Formal Reasoning Skills*  
MATH 106, STAT 218 or EDPS 459 (3 hrs) \_\_\_\_\_

ACE #4 *Study of Scientific Methods & Knowledge of Natural & Physical World*  
LIFE 120/120L (3 hrs) ✓✓✓✓✓

ACE #5 *Study of Humanities*  
 (Any) \_\_\_\_\_ (3 hrs) \_\_\_\_\_

ACE #6 *Study of Social Sciences*  
EDPS 251 (3 hrs) ✓✓✓✓✓

ACE #7 *Study of the Arts to Understand Their Context & Significance*  
 (Any) \_\_\_\_\_ (3 hrs) \_\_\_\_\_

ACE #8 *Ethical Principles, Civics, Stewardship & Their Importance to Society*  
TEAC 331 (3 hrs) ✓✓✓✓✓

ACE #9 *Global Awareness, Knowledge of Human Diversity through Analysis of an Issue*  
 #TEAC 330 \_\_\_\_\_ (3 hrs) ✓✓✓✓✓

ACE #10 *Integration of Abilities, Capacities in a Creative or Scholarly Product*  
TEAC 403B (3 hrs) ✓✓✓✓✓

#### II. PRE-PROFESSIONAL EDUCATION

No grade lower than "C"

All courses must be for a grade (not Pass/No Pass) with the exception of EPDS 297. TEAC 331 & EDPS 251 must average a 2.5 GPA

TEAC 331 School and Society \_\_\_\_\_ (3 hrs) \_\_\_\_\_

EDPS 251 Adolescent Development for Ed \_\_\_\_\_ (3 hrs) \_\_\_\_\_

EDPS 297 Practicum (take with EDPS 251) \_\_\_\_\_ (1 hr) \_\_\_\_\_

#TEAC 330 Multicultural Ed \_\_\_\_\_ (3 hrs) \_\_\_\_\_

TEAC 259 Instructional Technology \_\_\_\_\_ (3 hrs) \_\_\_\_\_

Acceptance into the Science Teacher Education Program is required before enrollment in the Professional Education courses. 80% of the endorsement courses must be completed prior to enrolling in TEAC 451V. The professional education sequence begins spring semester, continues in the fall semester, and is followed by a semester of student teaching.

**Electives (19-21)** (to meet 120 hour requirement for graduation)

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#### III. ENDORSEMENT

No grade lower than "C"

Students must complete a minimum of 24 hours in biology from the following list plus a minimum of 4 hours each in chemistry, physics, and earth & space science.

LIFE 120/120L Fundamentals of Biology I w/lab \_\_\_\_\_ (4 hrs)

LIFE 121/121L Fundamentals of Biology II w/lab \_\_\_\_\_ (4 hrs)

Select one of the following: \_\_\_\_\_ (4 hrs)

ASCI 100 Fundamentals of Animal Biology and Industry **OR**

AGRO 131/133 Plant Science w/lab (HORT 131/133)

Select one of the following: \_\_\_\_\_ (4-6 hrs)

BIOS 205 Genetics, Molecular and Cellular Biology Lab **AND**

BIOS 206 General Genetics **OR**

AGRO 215 Genetics

Select one of the following: \_\_\_\_\_ (3-4 hrs)

BIOS 207 Ecology and Evolution **OR**

NRES 211 Intro to Conservation Biology

Select one of the following: \_\_\_\_\_ (4 hrs)

BIOS 213/213L Human Physiology w/lab **OR**

ASCI 240 Anatomy & Physiology of Domestic of Animals

Select one of the following: \_\_\_\_\_ (3-4 hrs)

BIOS 115 Insect Biology & Lab **OR**

PLPT 270 Biological Invaders & Lab **OR**

BIOS 312 & 313 Microbiology & Molecular Microbiology Lab

Select one of the following: \_\_\_\_\_ (4 hrs)

CHEM 109 General Chemistry I **OR**

CHEM 110 General Chemistry II **OR**

CHEM 113 Fundamentals of Chemistry I

Select one of the following: \_\_\_\_\_ (4 hrs)

PHYS 141 Elementary General Physics I **OR**

PHYS 211/221 General Physics I w/lab **OR**

MSYM 109/109L Physical Principles in Agriculture and Life Sciences

GEOL 101 Physical Geology \_\_\_\_\_ (4 hrs)

METR 100 Weather & Climate \_\_\_\_\_ (4 hrs)

#### Professional Education Courses

All grades must be a minimum of "C+" or above.

#### Methods

TEAC 397V Practicum \_\_\_\_\_ (3 hrs)

#TEAC 413M ELL Content Area \_\_\_\_\_ (3 hrs)

TEAC 451V Teaching Principles \_\_\_\_\_ (3 hrs)

TEAC 452V Curriculum Principles \_\_\_\_\_ (3 hrs)

SPED 401B Mainstreaming \_\_\_\_\_ (3 hrs)

#### Student Teaching

TEAC 497V Student Teaching \_\_\_\_\_ (9 hrs)

TEAC 403B Student Teaching Seminar (ACE 10) \_\_\_\_\_ (3 hrs)