

Physics Education 7-12 Effective 2017-2018 academic year

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*
COMM 101, 209, 210, or 286 (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 (4 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 (to meet 120 hour requirement for graduation)

- _____ (3 hrs) _____
- _____ (3 hrs) _____

Math Prerequisites

- Math 106 Calculus and Analytical Geometry I _____ (5 hrs) _____
- Math 107 Calculus and Analytical Geometry II _____ (4 hrs) _____
- Math 208 Calculus and Analytical Geometry III _____ (4 hrs) _____
- Math 221 Differential Equations _____ (3 hrs) _____

III. ENDORSEMENT

No grade lower than "C"

Students must complete a minimum of 26 hours in physics from the following list plus a minimum of 4 hours each in biology, chemistry, and earth & space science. Math 106, 107, 208 and 221 are prerequisites.

ASTR 204/224 Astrophysics w/lab _____ (4 hrs) _____
 (Prerequisite: Phys 211/221 and Math 107 or parallel)

PHYS 201 Modern Topics in Physics and Astronomy _____ (1 hr) _____

PHYS 211/221 General Physics I w/lab _____ (5 hrs) _____
 (Prerequisite: Math 106 or parallel & 1 yr high school physics or Phys115)

PHYS 212/222 General Physics II w/lab _____ (5 hrs) _____
 (Prerequisite: Math 107 or parallel & Phys 211/221)

PHYS 213/223 General Physics III w/lab _____ (5 hrs) _____
 (Prerequisite: Math 208 or parallel & Phys 212/222)

PHYS 231 Electrical and Electronic Circuits _____ (3 hrs) _____
 (Prerequisite: Phys 212/222)

PHYS 311 Mechanics _____ (3 hrs) _____
 (Prerequisite: Phys 212/222 and Math 221)

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

Select one of the following courses: _____ (4 hrs) _____

CHEM 109 General Chemistry I **OR**
 CHEM 110 General Chemistry II

GEOL 101 Physical Geology _____ (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) _____