

# Advising Guide for Physics 7-12 Certification

## Single Subject Endorsement

This advising guide is for students on the following academic bulletins: 2009/2010; 2010/2011; 2011/2012

Teacher education endorsements are divided into field endorsements or single subject endorsements. Field endorsements certify the candidate to teach a broader range of courses compared to single subject endorsements, which certify the candidate to teach in one subject area only. Consequently, a teacher holding a field endorsement is typically more marketable than a teacher holding a single subject endorsement.

This advising guide and your personal long range planning guide are designed to accompany the Degree Audit.

While every attempt has been made to accurately list all course requirements, please refer to the Undergraduate Bulletin and Degree Audit.

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Achievement-Centered Education (ACE) requirements are found in the undergraduate bulletin.

### Pre-Professional Education Courses (13 hrs)

|          |                                      |       |
|----------|--------------------------------------|-------|
| TEAC 331 | School and Society (Sophomores +)    | 3 hrs |
| EDPS 251 | Adolescent Development for Ed        | 3 hrs |
| EDPS 297 | Practicum (take with EDPS 251)       | 1 hr  |
| TEAC 259 | Instructional Technology             | 3 hrs |
| TEAC 330 | Multicultural Education (Sophomore+) | 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.

### Physics Endorsement (44 hrs)

Note: Math 106, 107 and 108 are pre-requisites for the Physics courses which adds 14 credits to the endorsement.

|               |                                    |       |
|---------------|------------------------------------|-------|
| ASTR 204/224  | Astrophysics w/lab                 | 4 hrs |
| BIOS 101/101L | General Biology w/lab              | 4 hrs |
| CHEM 109      | General Chemistry I                | 4 hrs |
| CHEM 110      | General Chemistry II               | 4 hrs |
| METR 200      | Weather and Climate                | 4 hrs |
| PHYS 211/221  | General Physics I                  | 5 hrs |
| PHYS 212/222  | General Physics II                 | 5 hrs |
| PHYS 213/223  | General Physics III                | 5 hrs |
| PHYS 231      | Electrical and Electronic Circuits | 3 hrs |
| PHYS 311      | Mechanics                          | 3 hrs |
| PHYS 441      | Experimental Physics I             | 3 hrs |

### Professional Education Courses (27 hrs)

#### Methods

|           |                         |       |
|-----------|-------------------------|-------|
| TEAC 451V | Teaching Principles     | 3 hrs |
| TEAC 452V | Curriculum Principles   | 3 hrs |
| TEAC 397V | Practicum               | 3 hrs |
| EDPS 457  | Learning and Motivation | 3 hrs |
| SPED 401B | Mainstreaming           | 3 hrs |

#### Student Teaching

|           |                                  |       |
|-----------|----------------------------------|-------|
| TEAC 497V | Student Teaching                 | 9 hrs |
| TEAC 403B | Student Teaching Seminar (ACE10) | 3 hrs |

**Achievement-Centered Education (ACE)**  
**Requirements for Secondary Physical Sciences Grades 7 – 12**  
**ACE courses may be used to satisfy education and endorsement requirements.**  
**See undergraduate bulletin for list of ACE courses.**

| <b>Achievement – Centered Education (ACE)</b> | <b>Course Taken Term and Grade Earned</b> | <b>Suggested Course(s)</b>                        | <b>Suggested Courses that if taken will meet an education or endorsement requirement as well as the ACE requirement</b> |
|---|---|---|---|
| ACE 1. Written Communication                  |   | ENGL 101, 150, 151 or 254                         |   |
| ACE 2. Communication Competence               |   | COMM 109, 209 or 210                              |   |
| ACE 3. Math, Statistics                       |   |   | MATH 106, 107, 208  |
| ACE 4. Scientific Method                      |   |   | ASTR 103, 204. CHEM 109, 110, GEOL 103, 115, METR 200, PHYS 211/221, 212/222  |
| ACE 5. History/Humanities                     |   |   |   |
| ACE 6. Human Behavior                         |   |   | EDPS 251, 457   |
| ACE 7. Arts                                   |   | COMM 205 if speech not taken as ACE 2 requirement |   |
| ACE 8. Ethics                                 |   |   | TEAC 331  |
| ACE 9. Global Awareness                       |   |   | TEAC 330  |
| ACE 10. Integration                           |   |   | TEAC 403B   |

**Additional ACE Course Work Requirements**

**These may double dip with course work in the education and endorsement that are ACE courses.**

- Speech course: COMM 109, 209, 210 (ACE 2 courses) or COMM 205 (ACE 7 course).** You may choose to meet the speech course requirement and an ACE 2 or ACE 7 requirement with one course.
- Two ACE courses at the 300/400 level. TEAC 330, Teac 331, EDPS 457, and TEAC 403B are courses that meet program requirements, ACE requirements, and also may satisfy this requirement.**
  - \_\_\_\_\_  \_\_\_\_\_
- Four additional ACE courses for a total of 14 ACE courses.**  
**You may choose to select ACE courses above that meet education or endorsement requirements**
  - \_\_\_\_\_  \_\_\_\_\_
  - \_\_\_\_\_  \_\_\_\_\_