

BACHELOR OF SCIENCE IN PHYSICS TEACHING

With option for combined BS/MEd in Secondary Level Science Teaching

2/18/21

This plan of study meets requirements for a BS in Physics Teaching and USBE endorsements in Physics and Physical Science. Additional electives can be taken to earn endorsements in English as a Second Language (ESL). Additional coursework is required to obtain a teaching license and can be taken post-BS or as part of the joint BS/MEd program in Physics Teaching and Educational Psychology. Note that the BS/MEd option only adds one course to the requirements for licensure so most students will benefit from this pathway. Students should consult with an advisor early in the program to ensure that the appropriate pre-requisite, general education and endorsement courses are taken.

CORE PHYSICS COURSES (19-20 CR)

| COURSE | TITLE | CR |
|------------------------------|---|--------------|
| PHYS 1970 | UNDERGRAD SEM I | 1 |
| PHYS 1980 | UNDERGRAD SEM II | 1 |
| PHYS 2210 | PHYS SCI & ENG I | 4 |
| PHYS 2215 | PHYS SCI & ENG I LAB | 1 |
| PHYS 2220 | PHYS SCI & ENG II | 4 |
| PHYS 2225 | PHYS SCI & ENG II LAB | 1 |
| PHYS 2235 | COMP LAB for PHYS | 1 |
| PHYS 3740 | INTRO QUANT THEORY & RELATIVITY (QI) | 3 |
| PHYS 3760 OR CHEM 3070 | THERMO & STATS MECH (QI) OR THERMO & CHEM KINETICS (QI) | 3 OR 4 |

MATH COURSES (15-22 CR)

| COURSE | TITLE | CR |
|---|---|--------------|
| MATH 1050 & MATH 1060 OR MATH 1080 | COL ALGEBRA (4) & TRIGONOMETRY (3) OR PRECALCULUS | 7 OR 5 |
| MATH 1210 | CALCULUS I | 4 |

| | | |
|-----------|------------------------|---|
| MATH 1220 | CALCULUS II | 4 |
| MATH 2210 | CALCULUS III | 3 |
| MATH 2250 | LINEAR ALG & DIFF EQNS | 4 |

CHEMISTRY COURSES (9 CR)

| COURSE | TITLE | CR |
|-----------|----------------|----|
| CHEM 1210 | GEN CHEM I | 4 |
| CHEM 1215 | GEN CHEM I LAB | 1 |
| CHEM 1220 | GEN CHEM II | 4 |

ADDITIONAL PHYSICS COURSES (10 CR)

| COURSE | TITLE | CR |
|-----------|--|----|
| ASTR 3070 | FOUNDATIONS OF ASTRONOMY | 3 |
| PHYS 4410 | CLASSICAL PHYSICS I (QI) | 4 |
| PHYS 5140 | RESEARCH & TEACHING IN PHYSICS EDUCATION | 3 |

ADDITIONAL PHYSICS ELECTIVE (3-4 CR)

| COURSE | TITLE | CR |
|--------|-------|----|
|--------|-------|----|

| | | |
|-------------------------|---|-----|
| PHYS /ASTR 3XXX-5XXX | PHYS/ASTR 3XXX-5XXX (excluding PHYS 3111 and PHYS 3670) | 3-4 |
|-------------------------|---|-----|

ALLIED ELECTIVE COURSE FOR ENDORSEMENT IN PHYSICAL SCI (3 CR)

| COURSE | TITLE | CR |
|--------|----------------------------|----|
| ATMOS | ATMOS 1010 or 1020 or 5400 | 3 |

TOTAL SCIENCE CREDITS = 59-68

REQUIRED EDUCATION COURSES (17-18 CR)

| COURSE | TITLE | CR |
|--|---|-----|
| EDU 1010 OR SCI 3670 OR SCI 5050 | INTRO TO TEACHING OR SCIENCE COMM & MENTORING OR SCIENCE OF LEARNING | 2-3 |
| ETHNC 2550 OR ETHNC 2570 OR ETHNC 2580 OR ETHNC 2590 | AFRICAN AMER EXP (HF) OR AMER INDIAN EXP (HF) OR ASIAN PACIFIC AMER EXP (BF) OR PACIFIC ISLANDER EXP (HF) | 3 |
| ECS 2150 | INTRO TO MULTICULTURAL ED (DV) | 3 |
| EDPS 3721 | ADOLESCENT PSYCHOLOGY (BF) | 3 |
| EDU 5170 | SECONDARY SCIENCE METHODS | 3 |
| ECS 5709 | BUILDING FAMILY PARTNERSHIPS (32 field hours required) | 3 |

OPTIONAL ELECTIVES FOR COMPLETION OF ENGLISH AS A SECOND LANGUAGE (ESL) ENDORSEMENT (9 CR)

| COURSE | TITLE | CR |
|----------|---|---------------------|
| EDU 5200 | TEACHER LANGUAGE AWARENESS | 3 |
| ECS 5645 | ASSESSMENT OF LINGUISTICALLY DIVERSE POPULATIONS (PR: ECS 2150 OR ECS 5634 OR ECS 6634 OR ECS 5715 OR ECS 6715 AND SP ED 5021/6021 OR ECS 6035) | 3 |
| ECS 5647 | INSTRUCTIONAL METHODS FOR LINGUISTICALLY DIVERSE POPULATIONS (PR: EDU 5200, ECS 5645) | 3 (16 HRS FIELD) |

*ESL ENDORSEMENT REQUIRED TO TEACH IN GRANITE AND SALT LAKE CITY SCHOOL DISTRICTS. CAN BE TAKEN AFTER HIRE

TOTAL **REQUIRED** CREDITS FOR PHYSICS TEACHING MAJOR = 76-86

NOTE: This plan of study fulfills USBE requirements for teaching endorsements in Physics and Physical Science with an option for an endorsement in English as a Second Language. Students must also complete all General Education and Bachelor's degree requirements to total a minimum of 122 credit hours in order to graduate.

--END OF BS IN PHYSICS TEACHING REQUIREMENTS--

REQUIREMENTS FOR MASTERS OF EDUCATION IN EDUCATIONAL PSYCHOLOGY with LICENSURE

(Combined BS/MEd in Secondary Level Science Teaching **only**)(29-32 cr)

(For information about the MEd program contact sara.hatch@utah.edu at the Urban Institute for Teacher Education)

| COURSE | TITLE | PR | CR | SEM | REQUIREMENT |
|---|--|-----------------------|-----|--------|----------------|
| ED PS 6151 | Educational Applications of Technology | None | 3 | 1 | Licensure, MEd |
| ED PS 6035 | Instructional Assessments: Design, Implementation, and Analysis (online) | None | 3 | 1 | Licensure, MEd |
| SP ED 6022 | Principles of Instruction & Behavior Support | None | 3 | 1 | Licensure, MEd |
| EDU 6201 | Teaching Practices, Ethics & Professional Development (PPAT) | None | 1 | 1 | Licensure, MEd |
| EDU 6490 | Field Practicum: Secondary (9 hours/week in field) | In license program | 3 | 1 | Licensure, MEd |
| EDU 6491 | Professional Development & Teacher Research | In license program | 3 | 2 | Licensure, MEd |
| SP ED 5012 | Teaching Students with Disabilities in Inclusive Secondary Classrooms | None | 3 | 2 or 3 | Licensure, Med |
| EDU 6495 | Student Teaching: Secondary (12 weeks full-time) | In license program | 9 | 2 | Licensure, MEd |
| ED PS/EDU 5XXX- 6XXX or other | STEM Instruction Elective (see adviser) | Variable | 1-3 | 2 | MEd |

TOTAL REQUIRED MEd and LICENSURE

CREDITS = 29-32

Students must complete a minimum of 30 hours to graduate

