

SCIENCE ENDORSEMENT APPLICATION PHYSICS PATHWAY

Application for the Utah State Board of Education

APPLICANT INFORMATION

Name: _____ CACTUS ID#: _____

E-mail: _____

PURPOSE

This application allows an educator to apply for the Physics Pathway Secondary Science Endorsements which includes the Science Core, Physics 1, and the Physics 2 endorsements. This application can be used to apply for one, two, or all three endorsements.

Science Core Endorsement

This endorsement, when attached to a current Educator License, verifies that the individual has the skills and knowledge necessary to teach students three-dimensionally in a secondary science classroom and is required to teach Middle School Science Courses in Grades 6, 7, or 8. Additionally, this endorsement is required as a prerequisite to earn any high school Level-1 or Level-2 content specific science endorsement.

Physics 1 Endorsement

This endorsement, when attached to a current Secondary Education License, verifies that the individual has the skills and knowledge necessary to teach students in a secondary physical science classroom and is required to teach High School (9-12) General Physics Courses and the high school Astronomy elective course. This endorsement is a prerequisite to earn the Physics 2 Endorsement.

Physics 2 Endorsement

This endorsement, when attached to a current Secondary Education License, verifies that the individual has the skills and knowledge necessary to teach students in an advanced secondary physical science classroom and is required to teach Advanced Physics (AP, CE, and IB) courses. Those with this endorsement can also teach all the courses a Physics 1 endorsed educator can teach. NOTE: Advanced Physics (AP, CE, and IB) courses may also include additional requirements in order to be approved by the university or college board.

ENDORSEMENT LEVEL

Professional endorsements will be awarded when all the requirement areas for that endorsement are met, including the prerequisite professional endorsements requirement areas. An associate endorsement will be awarded if one of the following options are completed for that endorsement as outlined below:

- Science Core Endorsement
 - Complete at least 3 of the 7 requirement areas.
- Physics 1 Endorsement
 - Holds Professional Science Core endorsement
 - Major/Minor in Physics
 - Completed at least 5 of the 11 requirement areas
- Physics 2 Endorsement
 - Holds Professional Science Core and Physics 1 Endorsement
 - Major in Physics
 - Completed at least 6 of the 13 requirement areas.

PRELIMINARY QUESTIONS

Endorsements Applying For: Which endorsements and endorsement level are you applying for? (Select all that apply)

- Associate Science Core
- Professional Science Core
- Associate Physics 1
- Professional Physics 1
- Associate Physics 2
- Professional Physics 2

College Major or Minor: Do you have a degree major or minor in Physics, Physics Education, Physical Science Education, or a Physics Variation (e.g., Astrophysics, Theoretical Physics, Nuclear Physics)? A degree major/minor IS NOT required but is one way to demonstrate competency for several requirement areas.

- No
- Yes University: _____ Major or minor? _____
Major/minor name: _____ Year: _____

Teaching Experience and Professional Learning: Have you taught either AP Physics or IB Physics for 3 years and attended the associated Professional Learning (i.e. AP Physics Summer Institute or IB DP Physics Workshop) with at least 2 years of teaching the course after the professional learning? Note: Teaching Experience and Professional Learning is NOT required but is one way to demonstrate competency for requirement areas 12 & 13.

- No
- Yes, I taught AP Physics for 3 years and attended 1 Physics Summer Institute
- Yes, I taught IB Physics for 3 years and attended 1 IB Physics Workshop

Course name: _____

Location: _____ Dates: _____

(Must include documentation of completion)

ENDORSEMENT REQUIREMENT AREAS

Use the checkboxes below to indicate how each requirement area in the Physics Endorsement Pathway Endorsement has been met. Only one demonstration of competency is needed per requirement area. For descriptions of the competencies of each requirement area and their approved options, visit: [Physics Pathway Endorsement Specs](#).

Science Core Requirement Areas

1. Earth Science Content Knowledge

- ☐ Professional Science Core Endorsement
- ☐ University Course in General Earth Science, Astronomy, Geology, or Meteorology

University: _____ Course code: _____

Course name: _____ Semester/Year: _____ Grade: _____

- ☐ Middle School Science PRAXIS Exam (5442) passed with a score of 152+
- ☐ Middle Grades General Science NES Test (205) passed with a score of 220+
- ☐ Earth and Space Science PRAXIS Exam (5572) passed with a score of 148+
- ☐ Earth and Space Science NES Test (322) passed with a score of 220+

2. Life Science Content Knowledge

- ☐ Professional Science Core Endorsement
- ☐ University Course in General Biology

University: _____ Course code: _____

Course name: _____ Semester/Year: _____ Grade: _____

- ☐ Middle School Science PRAXIS Exam (5442) passed with a score of 152+
- ☐ Middle Grades General Science NES Test (205) passed with a score of 220+
- ☐ Biology PRAXIS Exam (5236) passed with a score of 148 or higher
- ☐ Biology NES Test (316) passed with a score of 220 or higher

3. Chemistry Content Knowledge

- ☐ Professional Science Core Endorsement
- ☐ University Course in General Chemistry

University: _____ Course code: _____

Course name: _____ Semester/Year: _____ Grade: _____

- ☐ Middle School Science PRAXIS Exam (5442) passed with a score of 152+
- ☐ Middle Grades General Science NES Test (205) passed with a score of 220+
- ☐ Chemistry PRAXIS Exam (5246) passed with a score of 140 or higher
- ☐ Chemistry NES Test (321) passed with a score of 220 or higher

4. Physics Content Knowledge

- ☐ Professional Science Core Endorsement
- ☐ University Course in General Physics

University: _____ Course code: _____

Course name: _____ Semester/Year: _____ Grade: _____

- ☐ College Major or Minor in Physics, Physics Education, Physical Science Education, or a Physics Variation
- ☐ Middle School Science PRAXIS Exam (5442) passed with a score of 152+
- ☐ Middle Grades General Science NES Test (205) passed with a score of 220+
- ☐ Physics PRAXIS Exam (5266) passed with a score of 140 or higher
- ☐ Physics NES Test (323) passed with a score of 220 or higher

5. Three-Dimensional Science & Engineering Pedagogical Knowledge

- ☐ Professional Science Core Endorsement
- ☐ Professional Elementary Science Endorsement
- ☐ University Course in Three-Dimensional Science and Engineering Pedagogy

University: _____ Course code: _____

Course name: _____ Semester/Year: _____ Grade: _____

- ☐ Approved USBE or District Course

Course name: _____ Year: _____

(Must include USBE Altitude Transcript)

- ☐ LEA Certification of Competency (Must include completed [Demonstration of Three-Dimensional Science & Engineering Pedagogical Knowledge Rubric](#))

6. Science Education Teaching & Dispositions Knowledge

- ☐ Professional Science Core Endorsement
- ☐ University Course in Teaching Methods in Science

University: _____ Course code: _____

Course name: _____ Semester/Year: _____ Grade: _____

- ☐ Approved USBE or District Course

Course name: _____ Year: _____

(Must include USBE Altitude Transcript)

- ☐ LEA Certification of Competency (Must include completed [Demonstration of Science Education Teaching & Dispositions Knowledge Rubric](#))

7. Science Classroom Lab Safety Knowledge

- ☐ Professional Science Core Endorsement
- ☐ University Course in Classroom Lab Safety

University: _____ Course code: _____

Course name: _____ Semester/Year: _____ Grade: _____

- ☐ [Flinn Scientific's Laboratory Safety Course for Teachers](#)
(Must include Certificate of Completion)

- ☐ Approved USBE or District Laboratory Safety Course

Course name: _____ Year: _____

(Must include USBE Altitude Transcript)

Physics 1 Requirement Areas

8. Kinematics, Dynamics, & Conservation Laws Content Knowledge

- ☐ Professional Physics 1 Endorsement
- ☐ University Course in General Physics 1

University: _____ Course code: _____

Course name: _____ Semester/Year: _____ Grade: _____

- ☐ College Major or Minor in Physics, Physics Education, Physical Science Education, or a Physics Variation
- ☐ Physics PRAXIS Exam (5266) passed with a score of 140 or higher
- ☐ Physics NES Test (323) passed with a score of 220 or higher

9. Fields & Electromagnetism Content Knowledge

- ☐ Professional Physics 1 Endorsement
- ☐ University Course in General Physics 2

University: _____ Course code: _____

Course name: _____ Semester/Year: _____ Grade: _____

- ☐ College Major or Minor in Physics, Physics Education, Physical Science Education, or a Physics Variation
- ☐ Physics PRAXIS Exam (5266) passed with a score of 140 or higher
- ☐ Physics NES Test (323) passed with a score of 220 or higher

10. Physics Laboratory Content Knowledge

- ☐ Professional Physics 1 Endorsement
- ☐ University Course in Physics Lab

University: _____ Course code: _____

Course name: _____ Semester/Year: _____ Grade: _____

- ☐ College Major or Minor in Physics, Physics Education, Physical Science Education, or a Physics Variation
- ☐ Physics PRAXIS Exam (5266) passed with a score of 140 or higher
- ☐ Physics NES Test (323) passed with a score of 220 or higher

11. Waves & Their Applications in Technology

- ☐ Professional Physics 1 Endorsement
- ☐ University Course in one of the following 3 credit course options:
 - Modern Physics
 - Electricity and Magnetism
 - Waves, Acoustics, and Sound

University: _____ Course code: _____

Course name: _____ Semester/Year: _____ Grade: _____

- ☐ College Major or Minor in Physics, Physics Education, Physical Science Education, or a Physics Variation
- ☐ Physics PRAXIS Exam (5266) passed with a score of 140 or higher
- ☐ Physics NES Test (323) passed with a score of 220 or higher

Physics 2 Requirement Areas

12. Advanced Quantitative Physics Reasoning Content Knowledge

- ☐ University Course in Calculus I

University: _____ Course code: _____

Course name: _____ Semester/Year: _____ Grade: _____

- ☐ College Major in Physics, Physics Education, or a Physics Variation
- ☐ Teaching Experience with AP/IP Physics and Professional Learning

13. Advanced Physics Content Knowledge

- ☐ Two University Courses in any two of the following Advanced/Applied Physics course options (In addition to the Waves and Their Applications in Technology Course used to earn the Physics 1 Endorsement):

- Astronomy or Astrophysics
- Electricity and Magnetism
- Mechanical Engineering
- Mechanics or Statics
- Modern Physics
- Thermodynamics
- Waves, Acoustics, and Sound
- Optics
- Upper division (3000+) physics course

University: _____ Course code: _____

Course name: _____ Semester/Year: _____ Grade: _____

University: _____ Course code: _____

Course name: _____ Semester/Year: _____ Grade: _____

- ☐ College Major in Physics, Physics Education, or a Physics Variation

- ☐ Teaching Experience with AP/IP Physics and Professional Learning

APPLICATION SUBMISSION INSTRUCTIONS

Please submit this application online in the Utah Educator Licensing Application system, [Survey Monkey \(SM\) Apply](#).

Any university coursework and/or degrees must be documented via an official transcript. Electronic transcripts can be sent from the College/University clearinghouse to the USBE Licensing Department at transcripts@schools.utah.gov. To check the transcripts USBE has on file for you, email licensing@schools.utah.gov. Visit [USBE's Transcripts Webpage](#) for more information.

Any additional documentation demonstrating completion (e.g. Altitude Transcripts, Pedagogy Rubrics, Content Knowledge Test Scores, etc) needs to be uploaded in SM Apply.