

# Physics - Teaching Certificate

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The Physics Teaching Certificate provides for second endorsement approval by the Iowa Board of Educational Examiners and requires first endorsement approval (major) in another grades 5-12 science discipline, basic science, or all science.

First endorsement approval (major) may also be grades 5-12 mathematics upon completion of a secondary science methods course.

This certificate leads to endorsement #156 physics (5-12). Students must also complete all requirements for a Secondary Science or Mathematics Teaching major, including student teaching.

Required:

Physics:		
PHYSICS 1511	General Physics I	4
or PHYSICS 1701	Physics I for Science and Engineering	
PHYSICS 1512	General Physics II	4
or PHYSICS 1702	Physics II for Science and Engineering	
PHYSICS 4080/5080	Resources for Teaching Physics	2
Science Education (choose one of the following):		3
EDUC 2385	Teaching Methods I: Secondary Science	
EDUC 3585/5585	Teaching Methods II: Secondary Science	
Electives chosen from the following:		3-5
Elective hours vary by major program. Mathematics Teaching majors and Chemistry Teaching majors must select three hours from the following; other secondary science teaching majors including Comprehensive Secondary Science Teaching, Middle Level Science Teaching Dual, Biology Teaching, and Earth Science Teaching must select five hours from the following:		
PHYSICS 1100	First-Year Projects in Physics	
PHYSICS 2300	Physics III: Theory and Simulation	
PHYSICS 3000	Undergraduate Research in Physics*	
PHYSICS 3030	Robotics and Sensors	
PHYSICS 3100	Introduction to Quantum Computing	
PHYSICS 4050/5050	Optical Science	
PHYSICS 4100/5100	Modern Physics	
PHYSICS 4110/5110	Modern Physics Laboratory	
PHYSICS 4200/5200	Nanoscience	
PHYSICS 4210/5210	Nanotechnology	
PHYSICS 4290/5290	Project Lead The Way: Digital Electronics	
PHYSICS 4300/5300	Introduction to Electronics	

**Total Hours**

**16-18**

\* A maximum of 2 hours are allowed.

## Related Programs

- Comprehensive Secondary Science - Teaching B.A.
- Mathematics - Teaching B.A.