

Physics Education

Department Information

- **Department Location:**
Katherine Kilbourne Burgum Family Life, 4-H Center
- **Department Phone:**
701-231-7921
- **Department Web Site:**
www.ndsu.edu/education/
- **Credential Offered:**
B.S.; B.A.
- **Official Program Curriculum:**
bulletin.ndsu.edu/undergraduate/program-curriculum/physics-education/

Physics is the most fundamental and exact of the physical sciences. Its laws are basic to deep understanding in all of technology, and in many fields of study, such as astronomy, chemistry, engineering, materials science, photonics, biology, medicine, geology, and environmental science.

The Program

Candidates in the Physics Education major are prepared to teach a diverse curriculum to a diverse student population. The physics education student should work closely with an advisor to be sure that the general education courses taken will provide a strong foundation for the advanced courses in the major.

Professional Education Courses

Students may enroll in the 300-level professional education courses before being formally admitted to the School of Education (SOE). Prior to enrolling in the 400-level courses, students must complete the application for admission to the SOE; attain a minimum of a 2.75 grade point average overall in their course work and education courses; and pass the Praxis Core Academic Skills for Educators exam(s). Requirements for admission can be found on the School of Education website (<https://www.ndsu.edu/education>).

Student Teaching

Student teaching is the culmination of the teaching program. Students have the opportunity to apply skills acquired in college courses under the supervision of an experienced physics educator.

Student Advisement

Students will be assigned individual advisors who will work closely in program planning and in other ways to advise and assist them. Students are encouraged to seek their advisor's help whenever needed.

Certification

Upon completing this program, students are eligible for certification to teach physics in most states. The program is accredited by the Council for the Accreditation of Educator Preparation (CAEP).

Career Opportunities

Students who major in Physics education get hired to teach physical science and physics at the high school level. To expand their choices, students can elect to double major in Physics Education and Physics or take additional science coursework in other disciplines to increase teacher licensure areas. Graduates can also work in industry with the Physics major.

Please note this is a sample plan of study and not an official curriculum. Actual student schedules for each semester will vary depending on start year, education goals, applicable transfer credit, and course availability. Students are encouraged to work with their academic advisor on a regular basis to review degree progress and customize an individual plan of study.

First Year		
Fall	Credits Spring	Credits
ENGL 110 or 120 (or College Composition II based on placement)**	3-4 CHEM 122 & 122L	4
CHEM 121 & 121L	4 MATH 129 or 329	3
COMM 110	3 MATH 166	4

MATH 165	4	PHYS 251 & 251L	5
PHYS 171	1	PHYS 251R	1
15-16			17
Second Year			
Fall	Credits	Spring	Credits
EDUC 321	3	EDUC 322	3
GEOL 105 & 105L (Meets Global Perspectives Gen Ed requirement)	4	MATH 266	3
MATH 265	4	PHYS 110	3
PHYS 252 & 252L	5	PHYS 350	3
PHYS 252R	1	Social & Behavioral Science Gen Ed*	3
Pass Praxis Core Academic Skills Exam	Apply to the School of Education		
17			15
Third Year			
Fall	Credits	Spring	Credits
BIOL 124 & BIOL 100L	4	BIOL 150 & 150L	4
EDUC 451	3	EDUC 481	3
ENGL 324	3	EDUC 486	3
PHYS 355	3	PHYS 361	3
Humanities & Fine Arts Gen Ed*	3	Social & Behavioral Science Gen Ed*	3
		Wellness Gen Ed	2
16			18
Fourth Year			
Fall	Credits	Spring	Credits
EDUC 482	3	EDUC 485	1
EDUC 489	3	EDUC 487	9
PHYS 411 & 411L	4	EDUC 488	3
PHYS 462	3		
Humanities & Fine Arts Gen Ed*	3		
Apply for Student Teaching			
Complete PLT (grades 7-12) Exam			
Complete Subject Area Assessment Exam			
16			13

Total Credits: 127-128

* One of these General Education courses needs to be selected from Category D - Cultural Diversity.

** If placed into ENGL 110 in Fall of Freshman year, then ENGL 120 (3 credits) needs to be added to the plan in a different semester.