



ASSESSMENT

P.O. Box 1945, State University, AR 72467 | o: 870-680-8403 | f: 870-972-2336

Physics BS

Program-Level Student Learning Outcomes

- **Phenomena**
Describe observed and modeled phenomena using fundamental physical principles and calculus-based mathematics.
- **Communication**
Effectively communicate, both oral and written, to various audiences (layperson and professional) using appropriate terminology.
- **Instrumentation**
Demonstrate appropriate use of and the ability to troubleshoot standard research laboratory instrumentation.
- **Literature**
Use commercially available databases to search the primary scientific literature.
- **Ethics**
Demonstrate the development of standards expected of professional scientists.

BSE General Science Physics Emphasis

Program-Level Student Learning Outcomes

- Effective teachers of science understand and articulate the knowledge and practices of contemporary science. They interrelate and interpret important concepts, ideas, and applications in their fields of licensure.
- Effective teachers of science understand how students learn and develop scientific knowledge. Preservice teachers use scientific inquiry to develop this knowledge for all students.
- Effective teachers of science are able to plan for engaging all students in science learning by setting appropriate goals that are consistent with knowledge of how students learn science and are aligned with state and national standards. The plans reflect the nature and social context of science, inquiry, and appropriate safety considerations. Candidates design and select learning activities, instructional settings, and resources-- including science-specific technology, to achieve those goals; and they plan fair and equitable assessment strategies to evaluate if the learning goals are met.
- Effective teachers of science can, in a P-12 classroom setting, demonstrate and maintain chemical safety, safety procedures, and the ethical treatment of living organisms needed in the P-12 science classroom appropriate to their area of licensure.



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- Effective teachers of science provide evidence to show that P-12 students' understanding of major science concepts, principles, theories, and laws have changed as a result of instruction by the candidate and that student knowledge is at a level of understanding beyond memorization. Candidates provide evidence for the diversity of students they teach.
- Effective teachers of science strive continuously to improve their knowledge and understanding of the ever changing knowledge base of both content, and science pedagogy, including approaches for addressing inequities and inclusion for all students in science. They identify with and conduct themselves as part of the science education community.