Physics Education: Skills for 21st-Century Workforce

ACTION

Congress should reject the White House’s proposed FY20 cuts to ESSA Title II-A and Title IV and instead continue to provide robust funding for those titles.

The Every Student Succeeds Act (ESSA) supports STEM education

• Titles II-A and IV directly support STEM (Science, Technology, Engineering, and Math) education
• ESSA passed overwhelmingly by Congress in bipartisan manner; signed into law in December 2015

Quality physics teachers are critical for developing the STEM workforce

• The White House supports STEM education through several initiatives, including a requirement for the Dept. of Education to make STEM a priority.
• Physics is an essential class for equipping the next generation STEM workforce with required skills and knowledge.
• There are projected to be 2.3 million job openings in STEM-related occupations between 2014 and 2024.

ESSA Titles II-A and IV strengthen STEM education

• Title II-A allows states to fund teacher preparation academies such as APS’s PhysTEC program at universities, which prepare physics majors to be high-quality teachers when they graduate.
• Almost all PhysTEC graduates go on to teach in local K-12 schools – a direct local benefit.
• Title IV allows states to put money toward informal and afterschool programs that enhance students’ STEM learning.
• 89% of PhysTEC graduates go on to teach.

PROJECTED JOB OPENINGS FOR TYPES OF STEM OCCUPATIONS (2014-2024)

- Computer occupations
- Engineers
- STEM-related management
- Life and physical science technicians
- STEM-related sales
- Life scientists
- STEM-related postsecondary teachers
- Physical scientists
- Mathematical science occupations

EMPLOYMENT OUTCOMES

- Secondary teacher 89%
- Not teaching, intend to teach 1%
- Not teaching, do not intend to teach 10%

State of ESSA Titles II-A and IV in the budget process

• The White House’s FY20 budget proposal eliminates funding for Title II-A and Title IV.
• Congress rejected the White House’s cuts in FY18 and FY19, through bipartisan resistance in both chambers.