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Abstract for an Invited Paper for the NWS08 Meeting of the American Physical Society

The role of physics departments in the recruitment, preparation and support of pre-college teachers of  $physics^1$ 

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The United States faces a critical shortage of qualified physics and physical science teachers. The number of high school students taking physics is increasing but the number of physics majors pursuing careers in pre-college teaching is not nearly sufficient to meet the demand. College and university physics departments have content expertise and ready access to potential future teachers of physics. In order to address the crisis in physics and physical science education, APS, AAPT, and AIP have developed the PhysTEC project. Seattle Pacific University is one of six fully funded PhysTEC sites. The PhysTEC project also supports a coalition of more than one hundred institutions that are committed to improving K-12 physics and physical science education. This talk will describe the national PhysTEC project along with our local PhysTEC program. We will explore ways in which physics departments can more fully integrate the preparation of pre-college physics teachers within existing departmental priorities. We will discuss opportunities for regional partnerships between 2-year and 4-year colleges, school districts, and teacher preparation programs. We will also highlight ways in which our research on the learning and teaching of physics informs the development of tools that teachers and teacher educators can use to diagnose student ideas and to design subsequent instruction that capitalizes on these ideas.

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