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Preparing Physics and Chemistry Teachers at the University of Arizona

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Beginning in 2000, science majors at the University of Arizona who wish to teach in middle or high schools have enrolled in the College of Science Teacher Preparation Program (CoS TPP). Students in the program take General Education courses, content courses, and science pedagogy courses that make them eligible for teacher certification. Students can remain in their science degree programs, and take the required science pedagogy courses, or they can enroll in a BS in Science Education degree that includes the pedagogy courses, with concentrations available in Biology, Chemistry, Earth Science, and Physics. Science educators from six different departments, two permanent Adjunct Instructors, and two Teachers in Residence teach the program's courses. (One of the Teachers in Residence is supported by the PhysTEC project.) Most of the pedagogy courses include field experiences in area science classrooms; the program works with some 115 mentor teachers from throughout the Tucson area, who host preservice teachers in their field experiences. In the first six years of the program, 14 program graduates have been chemistry and physics teachers. This compares to a total of six chemistry and physics teachers produced by the College of Education program in the four years preceding the creation of the CoS TPP. In this presentation, I will describe the unique features of the courses that prospective chemistry and physics teachers take and the field experiences in which they participate. In addition, I will describe how PhysTEC-supplied resources have been used to improve the program, and the ways in which we are assessing the program's success.