

## 2007-2009 OUS Agency Request Budget Policy Package

### **Title: *Teacher Education Initiative: Pathways for Highly Qualified Math and Science Teachers to meet the changing needs of Oregon's students***

**Policy Initiative:** Excellence in Delivery and Productivity (Expanding and targeting efficiency in pathways for math/science and ESL/bilingual teacher preparation)

**Description:** This initiative is designed to enhance the capacity of OUS teacher education units to increase the number of highly qualified math and science teachers who are prepared to foster success and achievement for all students, incorporate state standards, and better address student learning needs, particularly for English language learners (ELL). This budget initiative requires funding for recruitment and program enhancement, including (1) recruitment of teacher candidates in partnership with Oregon's community colleges; (2) recruitment of new and existing teachers with skills and interests in working with diverse learners, or alternatively with skills and interests in working in math and science; (3) development/refinement of pathways for prospective teachers through a variety of pre-education and early field experiences; (4) pre-service teacher preparation; and (5) in-service professional development and retooling options. Each OUS institution will make contributions that are congruent with their missions and, in addition to external collaborations, teacher education units will work with cross-campus departments to ensure that teacher candidates are well prepared in content areas and able to interact skillfully with PK-12 students.

**System and Community College Initiatives to Address Statewide Needs.** These initiatives will strengthen collaborative capacity to (1) build on the education pathways for teachers project and campus articulation agreements to enhance opportunities for community college students to enter teacher preparation programs in math, science, and bilingual/ESL; (2) strengthen existing elementary teachers' ability to teach math/science to ELL (e.g. through curriculum development, mentoring, etc.); (3) enhance opportunities throughout the state, in partnership with community colleges, by building on the success of the Bilingual Teacher Pathway Program to provide students opportunities for developing skills and abilities to work with ELL; and (4) realize the capacity for math and science students from Oregon Institute of Technology to contribute to a highly qualified teacher workforce.

**Eastern Oregon University: Rural Pathways.** Building on a strong tradition of preparing teachers for a significant number of school districts in rural Oregon, EOU will enhance opportunities for preservice and inservice teachers to earn endorsements in science, math, and ESL -- areas that are in short supply in rural schools. EOU will 1) encourage students in rural areas to consider teaching as a career, and 2) provide those with a teaching credential access to fast track options for adding authorization levels (from elementary to middle or from middle level to high school) and content area endorsements in math or science. At the preservice level, tuition incentives will be made available to students in science and math who make a commitment to teaching.

Teacher upgrading initiatives will focus on summer coursework, including methods and practica to prepare teachers to acquire the next level of authorization and endorsement. Summer workshops will not only integrate the contextual science/math content and methods; they also will provide the appropriate ESL strategies and applications most appropriate for the grade level and content.

**Oregon State University: Pathways Plus.** Building on the successful Education Double Degree and established masters' degree in science and math education, this program will help math and science teachers add courses specifically designed to help them succeed in meeting the needs of Oregon's diverse students. These classes will provide a pathway for the completion of teaching endorsements in ESL and Bilingual Education. This program will include recruitment from all of OSU's applied science programs and Oregon community colleges. The Education Double Degree includes specific coursework that can be completed at many Oregon community colleges and also provides the flexibility for students to complete a primary degree in any of OSU's degree programs. OSU's Degree Partnership Program with 12 of Oregon's community colleges will facilitate articulation and dual enrollment for community college students.

**Portland State University: Partnership Pathways.** Building on the existing strengths of the Bilingual Teacher Pathway (BTP) Program and the PSU-Beaverton School District Center for Teaching and Learning (CTL), PSU will increase the number of highly qualified teachers who are able to successfully teach Oregon's diverse students. Bilingual, bicultural teacher candidates who have a background in math or science will be recruited into the BTP, which focuses on preparing teachers to work with ELL. Through the CTL, existing math and science teachers will be invited to participate in the Teacher Scholars Initiative that provides professional development for this learning community. Teachers will engage in research projects aimed at addressing the district's mission, curricular development needs, and areas of these teachers' scholarly interests. Issues of second language learning in math and science, biliteracy, and culturally responsive teaching, learning and assessment will be addressed. These teachers will host student teachers from BTP.

**Southern Oregon University: Pre-service and In-service Pathways.** Building on existing program offerings, SOU will provide opportunities for both pre-service and in-service teacher support to gain skills in serving math/science learners and also ELL. Pre-service and in-service participants will complete twelve quarter hours of the SOU ESL/Bilingual endorsement program in order to increase their capacity in working effectively with ELL populations. Pre-service teachers will complete the credits during the MAT/Initial Licensure Program, specifically during the second summer of coursework. In-service teachers will participate in a summer session ESL/Bilingual Endorsement Institute over two summers.

**University of Oregon: Pathways from Research to Practice.** Building on the competencies of the UO faculty, the College of Education (COE) is poised to develop a model teacher preparation program in math and science with a particular emphasis on

providing accessible and comprehensible instruction to ELL. This program will take advantage of the emerging knowledge base on pedagogy and content in math and science education. Recently, the Teacher Education Area in the college hired five new tenure line faculty members with expertise in math and science education and technology applications to support discipline knowledge. As a result of these new hires, the COE is moving to create a model teacher development program that will focus on recruiting and retaining students who are completing undergraduate degrees in math and science to complete a Master's degree with licensure in their respective content areas. The COE will forge new and strengthen existing relationships with faculty in the College of Arts and Sciences who are engaged in undergraduate education in math and the sciences. Recruitment and retention efforts will be enhanced by providing incentives to undergraduate students and practicing teachers to pursue their licensure or endorsements in math and science.

**Western Oregon University: Teacher Exchange Pathways.** Building on strong partnership efforts, the WOU Teacher Exchange will help prospective and current teachers to understand and incorporate language teaching methodology to better assist students in meeting math and science standards. This collaborative project among WOU, The Teaching Research Institute (TRI), and UO will pair WOU pre-service candidates and their mentor teachers with both College of Liberal Arts and Sciences (CLAS) and College of Education (COE) faculty. Teams consisting of WOU preservice candidates, mentor teachers, and faculty from CLAS and COE will work together with staff from TRI prior to final student teaching to: jointly plan, analyze, and refine classroom lessons and instruction to teach complex concepts in math or science with a particular focus on ELL; use StudioCode software to observe, discuss, and analyze videotaped math and science lessons provided by the UO Quality Content Teaching Project; apply best teaching practices and standards identified by TESOL and ELP as well as either national math or science standards to study and improve lesson design, delivery and student learning related to Oregon content standards; reflect on lessons taught in preservice and inservice teachers' classrooms; document student learning resulting from refined and enhanced lessons; and archive refined and enhanced lessons and videos along with teaching resources in a Teacher Exchange website for use by classroom teachers and in preservice and inservice education programs.

**Outcomes:** This initiative promotes cross-sector collaboration, student-centered opportunities, increased flexibility and marketability of teachers, enhancements to the teacher workforce, and overall systemic educational efficiencies. The outcomes include (1) 200-250 (over the biennium) highly qualified math and science teachers who are well prepared to work with Oregon's varied PK-12 student populations; (2) increased opportunities for students to participate in programs leading to math, science, and ESL/bilingual education; (3) development of partnerships among OUS institutions, community colleges and other education stakeholders that enable teachers to enhance their preparation to include both math/science content and ESL/bilingual strategies; (4) motivation and outreach to students who would pursue careers as highly qualified math and science and ESL/bilingual teachers.

**Performance Indicators:**

- Decreased costs to students
- Addressing Oregon’s teacher shortage areas
- Increased number of math and science teachers with coursework leading to the ESL/Bilingual endorsement
- Increased number of teachers with enhanced math/science content

**Budget Outline:**

|                               | Recurring Costs |               |
|-------------------------------|-----------------|---------------|
|                               | Year One        | Year Two      |
| Salaries                      | \$368,136       | \$384,169     |
| OPE                           | \$167,280       | \$171,527     |
| S&S (inc. tuition assistance) | \$964,584       | \$944,304     |
| Capital Outlay                | n/a             | n/a           |
| Technology Expenses           | n/a             | n/a           |
| Total                         | \$1.5 million   | \$1.5 million |