Texas Higher Education Coordinating Board
Technology Workforce Development Grants Program – 2006
TETC Texas Youth in Technology (TYT) Demonstration Project

Project Selection Process

The selection process included the following steps:

STEP 1: The Chair of the Texas Higher Education Coordinating Board (CB) appointed the Technology Workforce Development (TWD) Grants Program Advisory Committee. This panel consists of 10 distinguished representatives of industry and academic members of the Texas Engineering and Technical Consortium (TETC).

STEP 2: The Governor's office committed $1 million of federal grant funds to TETC, enabling the Technology Demonstration Project. Grant funds come from CFDA 17.258, 17.259, and 17.260. The CB and the Texas Workforce Commission signed an interagency cooperation agreement on March 15, 2005. Per the agreement, the grant period is 12 months from date of signature, with the possibility for a one-year extension. On March 24, the CB announced the upcoming competition on its Techworkforce website and sent email notification to TETC liaisons, institution representatives for sponsored projects, and previous project leaders.

STEP 3: The TWD Advisory Committee oversaw creation of the program announcement. The Committee recommended that a) funding be capped to $95,000 for Phase I of awarded grants, b) awards include an automatic extension for Phase II with double the allowable funding for the Phase I period, pending approval of follow-up funding through the Texas Workforce Commission, and c) each Texas institution be allowed to submit two proposals from eligible engineering and computer science departments or colleges.

STEP 3: The CB issued the program announcement on June 1 by web posting, and sent email notifications to all eligible institutions.

STEP 4: By the July 1 submission deadline, the CB received 25 proposals from 16 institutions, with a total request of $6.5 million for Phases I and II combined.

STEP 5: One review panel of out-of-state experts from academia and in-state and out-of-state industry technology leaders involved with workforce development discussed the proposals during two teleconference meetings, using the CB developed web tool for proposal review. The panel ranked all proposals and recommended strategy changes.

STEP 6: Staff assigned funding to all proposals in rank order until the funding allocation for Phase I was reached. At its July 19, 2005 meeting, the TWD Advisory Committee reviewed the selections of the reviewers and the recommendation of the staff including one budget increase. The Committee recommended the selected projects for funding to the CB, including the budget increase.

STEP 7: At its July 20, 2006 meeting, the CB approved funding of 11 projects in rank order for a program value of $950,000 for Phase I and a potential $1,899,709 for Phase II of the program.

Technology Workforce Development Grants Advisory Committee

Ms. Judy B. Shaw (Chair) – Process Engineering Manager, Texas Instruments, Dallas, TX
Mr. Brad Beavers – Austin Site Director, Intel Corporation, Austin, TX
Mr. Monte Cely – Vice President (retired), AT&T Labs, Round Rock, TX
Dr. Agnes L. DeFranco – Interim Assistant Vice President for Undergraduate Studies, University of Houston System, Houston, TX
Dr. Hesham El-Rewini, PE – Chair and Professor, Department of Computer Science and Engineering, Southern Methodist University, Dallas, TX
Ms. Cheryl R. Hewett – Manager, Higher Education Marketing, Hewlett Packard Company, Spring, TX
Dr. Ravi Marawar – Academic Program Manager, National Instruments, Austin, TX
Dr. Alvin H. Meyer – Associate Dean for Student Affairs, College of Engineering, The University of Texas at Austin, Austin, TX
Mr. Lawrence W. Stephens – Director for Systems Engineering, Lockheed Martin Missiles and Fire Control, Dallas, TX
Dr. Valerie E. Taylor – Department Head and Stewart & Stevenson Professor, Department of Computer Science, Texas A&M University, College Station, TX

2006 Review Panel Members

Dr. Robert M. Gray is *Department Vice Chair* and *Lucent Technology Professor* of the Department of Electrical Engineering at *Stanford University*, Stanford, CA and holds a Ph.D. from the University of Southern California, Los Angeles, CA, and a B.S. and M.S. from MIT, Cambridge, MA. He is a Fellow of both the Institute of Electrical and Electronics Engineers (IEEE) and the Institute of Mathematical Statistics (IMS) and received, among numerous other awards, the IEEE Centennial Medal and the IEEE Third Millennium Medal. He was awarded the 2002 Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring. He is the author of over 120 refereed journal articles and 7 books.

Dr. Bill Griffin is *Senior Principal Research Engineer* at *Lockheed Martin Missiles and Fire Control*, Dallas, TX for Guidance and Navigation. He is a Lockheed Martin Engineering Fellow and holds a B.S. from Auburn University, Auburn, AL and a M.S. from MIT, Cambridge, MA, both in aerospace engineering. Prior to his career at Lockheed Martin he was a military fighter pilot and test pilot in the U.S. Marine Corps.

Ms. Susan Staffin Metz is *Senior Advisor* for the Center for Innovation in Engineering and Science Education at the Charles V. Schaefer School of Engineering, *Stevens Institute of Technology*, Hoboken, NJ. She also is co-founder and President of WEPAN, Women in Engineering Programs & Advocates Network, Denver, CO. She holds a BA from Boston University, Boston, MA, and a M.A. form Seton Hall University, South Orange, NJ, in Counseling Psychology. She has been involved with 27 funded workforce development projects with funds from federal, private, and state sources. Among other awards she received the Maria Mitchell Women in Science Award and twice received the White House Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring for Women in Engineering Programs & Advocates Network.

Mr. Joseph T. O'Brien is *University Relations Program Manager* for the *Hewlett-Packard Company*, Van Nuys, CA. He leads the integration of HP's interaction with universities in Arizona, California, New Mexico and Washington in regards to the company's programs in research, recruiting, marketing and sales, continuing education, philanthropy, and public advocacy. He is HP's liaison to the American Society for Engineering Education (ASEE) and the Accreditation Board for Engineering and Technology (ABET). He is also member of two industrial advisory boards. He received a mathematics B.S. from California State Polytechnic University, Pomona, CA, and previously worked with Parker-Hannifin Corporation on manned space flight and space technology applications.

Dr. Teri Reed-Rhoads is *Associate Professor* and *Assistant Dean for Undergraduate Education* at *Purdue University*. She holds a B.S. in Petroleum Engineering from the University of Oklahoma, Norman, OK, a M.B.A. from The University of Texas of the Permian Basin, Odessa, TX, and a Ph.D. in Industrial Engineering from Arizona State University, Tempe, AZ. She received research funding for engineering education from the National Science Foundation, the Department of Education, and Koch Industries in excess of $12 million. She was awarded many teaching awards, such as the Educator's Leadership Academy Outstanding Professors Leadership award and the Frontiers in Education New Faculty Fellow award. Among many professional and community services she is highly active in the American Society of Engineering Education (ASEE).

Dr. Bruce Westermo is *Professor of Civil Engineering* and *Assistant Dean for Student Affairs* at the College of Engineering at *San Diego State University*, San Diego, CA. He is director for Project Lead The Way State Affiliate Institute, SDSU College of Engineering. He holds a B.S. in Mechanics, Mechanical, and Aerospace Engineering from the Illinois Institute of Technology, Chicago, IL, and a M.S. and Ph.D. in Applied Mechanics from the California Institute of Technology, Pasadena, CA. He is a recipient of the Charles Pankow Award from the Civil Engineering Research Foundation (CERF) for Innovation and the NOVA Award from the Construction Innovation Forum. He holds two patents for strain measurement.

Technology Workforce Development Grants Proposals: 2006

List of Awards

	Award Phase I	Award Phase II
1. **Prairie View A&M University** Recruitment and Retention Programs for the Department of Electrical and Computer Engineering	$94,432	$189,997
2. **Texas Engineering Experiment Station** Assessment of Computer Science at Texas A&M University Peer Teachers Program	$93,289	$191,711
3. **Texas Tech University** Curricular Development, Multidisciplinary Team Internship, and Undergraduate Peer-Mentors for West Texas Students	$94,969	$189,988
4. **Texas Tech University** Integrated Outreach, Mentoring, and Placement of Texas Youth in Engineering Careers	$94,742	$183,344
5. **The University of Texas at Austin** Increasing the Applicant Pool and Retention in Computer Engineering	$95,000	$168,200
6. **The University of Texas at Dallas** Jonsson School Undergraduate Scholars Program	$95,000	$190,000
7. **The University of Texas at El Paso** Reaching Out Across Disciplines: Learning from Each Other to Produce More Graduates in Computer Science	$94,929	$189,953
8. **The University of Texas at San Antonio** An Engineering Pipeline for High School to Undergraduate through a Structured Research and Mentoring Experience	$94,585	$188,028
9. **The University of Texas-Pan American** Increasing Engineering and Computer Science Retention through Mentoring and Learning Communities	$7,920	$37,616
10. **University of Houston** Step Forward: Preparing Low-income High School Students for Academic Success in Electrical and Computer Engineering at the University of Houston	$93,943	$180,945
11. **University of Houston-Clear Lake** Computer Science Scholars: Recruiting, Retention, and Mentoring	$91,192	$189,927
	Award TWD 2006 Phase I	**Award TWD 2006 Phase II**
	$950,000	**$1,899,709**

Total for TETC Texas Youth in Technology (TYT) Demonstration Project: **$2,849,709**