

TECH PREP OF THE RIO GRANDE VALLEY, INC.

Through Its Fiscal Agent, Texas State Technical College Harlingen

Request for Applications for School Districts to Participate in Continuum of Education for Advanced Manufacturing Technologies Project

Request for Applications Issued: March 9, 2006

Application Submission Deadline: 4 p.m. on April 6, 2006

Applications Must Be Mailed or Delivered To:

Tech Prep of the Rio Grande Valley, Inc.
TSTC Tech Prep Building
1902 North Loop 499
Harlingen, Texas 78550-3697

Applications that are DELIVERED must be received by the deadline.

Applications that are MAILED must be postmarked by the deadline.

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1.0 PROJECT DESCRIPTION

- 1.01 **Background Information:** The purpose of this request for applications is to identify high schools in two different school districts that will work with Tech Prep RGV, TSTC Harlingen, various manufacturing employers, and other partners on the youth component of a project funded by a U.S. Department of Labor Community-Based Job Training grant awarded to Texas State Technical College Harlingen. This is a statewide project designed to create a continuum of Advanced Manufacturing Technologies training that begins in secondary education programs, with a bridge to post-secondary education, including four-year institutions and training for dislocated and incumbent workers. The project is addressing this problem: Existing industry is facing the retirement of “baby boomers” that have learned through on-the-job training or apprenticeship programs. New industry must contend with a work-force that is not trained or certified for advanced manufacturing employment unless they have graduated from an Industrial/Manufacturing program. At this time there are employers seeking to hire more graduates than are graduating from existing programs in the Rio Grande Valley.

The focus of the youth component of the Manufacturing Continuum Project is to accomplish the following goals:

1. Inform educators, students, parents, families, and the general community about the needs of the manufacturing industry and the opportunities available in manufacturing careers to as to create a K-12 manufacturing awareness and increase the number of students pursuing manufacturing careers.
2. Create pilot high school training/youth apprenticeship programs that will train and certify high school students in Advanced Manufacturing Technologies. These programs will serve a minimum of 20 students--10 students per district in two school districts.
3. Strengthen programs that link high school manufacturing programs with Texas State Technical College’s Advanced Manufacturing programs leading to certifications and Associate of Applied Science Degrees in Machining Technology and the emerging-technology area of Mechatronics (see Manufacturing Program Overview and Preliminary Schedule for additional information about these programs).
4. Provide training for participating youth in those quality philosophies and operating procedures that industry uses (ISO, Six Sigma and Lean).
5. Utilize the National Institute for Metalworking Skills, Inc. a national accreditation system, to improve the quality of training programs as part of the national endeavor to build and maintain and globally competitive workforce while informing student participants and other interested students about career opportunities in manufacturing and the education options that can help students prepare to enter manufacturing careers.

For additional information about the National Institute for Metalworking Standards, Inc. (“NIMS”) see www.nims-skills.org.

For additional information about the national initiatives this project is designed to support, see: <http://www.doleta.gov/BRG/JobTrainInitiative/#TargetedIndustries>.

- 1.02 **Benefits for Participating School Districts:** The school districts whose applications are selected will enter into contracts with Tech Prep of the Rio Grande Valley, Inc., providing benefits for the districts and participating students as follows:
- a. Grant funding will provide costs for campuses to file applications for NIMS accreditation for participating programs and instructors (<http://www.nims-skills.org/accred/accred.htm>). A self-study and application process are required for this accreditation. The self-study itself will be the responsibility of the campus; however, grant funds will cover the cost of the NIMS Self-Study Kit and onsite NIMS review team visit required for the accreditation process. Campuses will also receive support from a Manufacturing Specialist employed by Tech Prep RGV on all facets of the Advanced Manufacturing Education program, including the NIMS accreditation process.
 - b. Grant funding will provide stipends for campus teams to participate in a summer institute on the campus of Texas State Technical College Harlingen providing training that will assist with the NIMS accreditation process.
 - c. Grant funding will provided registration fees for participating students to test for NIMS credentialing in Machining Level I and related skills certifications (<http://www.nims-skills.org/accred/accred.htm>).
 - d. Grant funding will provide costs of having a minimum of 10 students per campus (a total of 20 students) participate in four-week summer institutes in Summer 2006 and Summer 2007. These institutes will take place partially on the campus of TSTC Harlingen and partially at employer worksites (see Manufacturing Program Overview and Preliminary Schedule below). Students who participate in the program will be enrolled in dual/concurrent-enrollment courses and will be eligible for incentives for good performance.
 - e. Campus staff and students will work directly with manufacturing employers in the Rio Grande Valley on worksite learning experiences and on the NIMS accreditation and certification process.

- 1.03 **Partners' Roles and Responsibilities:** Once participating school districts have been named through this application process, partners' roles and responsibilities will be as follows:

School District:

1. Obtain approval of its school board for a contract with Tech Prep RGV, such contract to provide appropriate assurances regarding program design and commitments regarding compliance with applicable laws, rules, and regulations for the school district's areas of responsibility.
2. Provide Tech Prep RGV with copies of certifications for staff assigned to the program.
3. Provide expenditure-reimbursement and programmatic reports to Tech Prep RGV according to the schedule published by Tech Prep RGV.
4. Maintain records appropriate for the work done by school district staff.
5. Identify campus team members who will participate in the Summer Institutes and work on the self-study required for the NIMS accreditation process and on other project components as appropriate. Team members should include at least one administrator, at least one counselor, and appropriate instructional team members representing both academics (mathematics) and career and technology teachers.

6. Identify teacher(s) who will apply for NIMS certification and the areas of specialization for which those teachers will seek certification.
7. Identify students who will participate in the program (see Manufacturing Program Overview and Preliminary Schedule below). Districts must provide transportation for students for the Summer Institutes as necessary to ensure student participation.
8. Perform other duties necessary for the success of the project.

Tech Prep RGV:

1. Employ a Manufacturing Specialist who will work with campus teams on the NIMS accreditation and certification process and on other aspects of the project as necessary and appropriate.
2. Pay NIMS directly for (1) fees and expenses related to the NIMS program-accreditation process and (2) individual teacher and student application fees for NIMS certification.
3. Contract with campuses for the grant funds that will flow directly to campuses. In building budget requests for this application, campuses should specify items that can be covered through existing campus funds as in-kind contributions and should request funds for the following:
 - a. Stipends for campus team members who will participate in the Manufacturing Summer Institute at TSTC Harlingen in June 2006 and June 2007.
 - b. Extra-duty stipend for one individual who will serve as campus team leader; this individual will be responsible for coordinating with Tech Prep RGV's Manufacturing Specialist and other team members and for providing periodic reports to Tech Prep RGV.
 - c. Other expenses related to the project that cannot be covered with regular campus funds.
4. Coordinate with TSTC Harlingen staff as necessary and appropriate for overall program success.
5. Perform other duties necessary for the success of the project.

1.04 **Program Overview and Preliminary Schedule.** The program components are as identified below. The schedule is also as identified below, although dates are tentative. The final schedule and dates will be confirmed after school district partners have been identified.

Components: Program components are as follows:

- a. NIMS Accreditation: The district will pursue NIMS accreditation for its participating program.
- b. NIMS Credentialing:
 - (1) At least one teacher from the campus will pursue NIMS credential(s).
 - (2) All participating students will pursue NIMS credential(s).
- c. College Credit: Participating students will have the opportunity to earn college credit through dual enrollment during academic-year programs.
- d. Summer Institutes: Both campus teams and students will participate in summer institutes in June 2006 and June 2007.

Schedule: The preliminary schedule is as follows:

Summer 2006—First Summer Institute

June 5-8
8-3:30 daily Campus teams participate in inservice training on the TSTC Harlingen campus.

Inservice topics will include, but are not limited to, (a) overview of machining technology and related specialties (tool and die, mold making); (b) overview of mechatronics and related specialties (electronics, integrated manufacturing systems); (c) hands-on experiences in laboratories on the campus; (d) employer presentations and/or field trips to employer worksites, including an overview of apprenticeship opportunities available; and (e) the NIMS accreditation and certification process.

June 12-15 Students participate in classes on the TSTC Harlingen campus
June 19-22 Half the group of students is enrolled in machining technology instruction
8-3:30 daily and the other half of the group is enrolled in mechatronics instruction

June 26-29 Students are at employer worksites according to individual assignments.

July 3 and Students are at employer worksites according to individual assignments.
July 5-7

Academic Year 2006-2007 Academic-Year Program

Students are enrolled in classes on their home campuses. These classes will provide for students to earn college credit through dual enrollment, will incorporate worksite-learning experiences with employer partners, and will prepare students for success in earning NIMS credentials.

Campus teams work through the NIMS accreditation process, including self-study and other components.

Summer 2007—Second Summer Institute

June 4-7
8-3:30 daily Campus teams participate in inservice training on the TSTC Harlingen campus.

Inservice topics will include, but are not limited to, (a) overview of machining technology and related specialties (tool and die, mold making); (b) overview of mechatronics and related specialties (electronics, integrated manufacturing systems); (c) hands-on experiences in laboratories on the campus; and (d) employer presentations and/or field trips to employer worksites.

June 11-14 Students participate in classes on the TSTC Harlingen campus

June 18-21 8-3:30 daily Half the group of students is enrolled in machining technology instruction and the other half of the group is enrolled in mechatronics instruction

June 25-28 Students are at employer worksites according to individual assignments.

July 2-3 and July 5-6 Students are at employer worksites according to individual assignments.

1.05 **NIMS Accreditation and Certification.** NIMS accreditation for programs and certification for staff and students are important elements of the Advanced Manufacturing Education Program project. NIMS components are outlined below:

1. NIMS Accreditation self-study will occur during the year, beginning after the campus team participates in the summer institute in June 2006.
2. The NIMS on-site team review required for the accreditation process will occur according to the schedule developed as the accreditation process develops.
3. Teachers and students will sit for NIMS certification exams at the appropriate time according to the more detailed schedule developed as the partners work together.

1.06 **Overview of Machining and Mechatronics:** The occupational areas that are the subject of the Advanced Manufacturing Project are Machining Technology (Mold-Making and Tool and Die) and Mechatronics. There are excellent job opportunities available for students who graduate with credentials in either of these fields.

Machining Technology is a program of study that prepares students to enter the workforce as entry-level machinists. Students are taught to fabricate and/or repair metal products using a variety of metal-working equipment and processes. Students learn techniques needed to operate such machinery as horizontal and vertical mills, engine lathes, drill presses, shapers, surface and pedestal grinders, as well as the programming and operation of computer-aided machines such as CNC mills and lathes. Students also learn related skills such as precision measurement, blueprint reading, and the heat treatment of metals. For additional information, see web sites identified through a Machining Technology web search, e.g.: <http://www.simtech.a-star.edu.sg/research/MT.html>

Mechatronics is the synergistic combination of precision mechanical engineering, electronic control and systems thinking in the design of products and manufacturing processes. It relates to the design of systems, devices and products aimed at achieving an optimal balance between basic mechanical structure and its overall control. Mechatronics covers a wide range of application areas including consumer product design, instrumentation, manufacturing methods, computer integration and process and device control, including the field of computer-based intelligence. Instruction in electronics, integrated manufacturing systems, and related disciplines is included in the field of mechatronics. For additional information, see websites identified through a Mechatronics web search, e.g.: <http://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=3516>.

1.07 **Intended Outcomes:** Intended program outcomes are as follows:

1. For participating school districts to earn NIMS accreditation for their participating programs.
2. For teacher(s) from participating school districts to earn NIMS credentials in their subject areas.
3. For participating youth to earn college credits while in high school and attain NIMS credentials in one or more manufacturing-related areas.
4. For participating youth to continue in secondary school until they attain diplomas or their recognized equivalents, to be placed and retained in postsecondary education, and to acquire workplace skills and experiences that will ultimately assist in job placement.

1.08 **Funding:** A maximum of Sixteen Thousand and No/100 Dollars (\$16,000.00) per campus is available for school districts to cover costs associated with this program for the period beginning June 1, 2006, and ending August 31, 2007. Please refer to information provided above regarding costs that will be paid directly by Tech Prep RGV and costs that must be paid by school districts. In submitting budgets districts should also reflect projected amounts for in-kind costs to be provided. All contracts negotiated will be cost-reimbursement contracts.

2.0 INSTRUCTIONS FOR SUBMITTING AN APPLICATION

2.01 **Application Due Date.** School districts applying to serve as Manufacturing Education Project Partners should complete an application on the forms included in this packet and return the completed application to Tech Prep RGV by the deadline. **Applications must be RECEIVED in Tech Prep RGV's offices or postmarked by 4 p.m. on April 6, 2006. Partial, faxed, emailed, and/or incomplete applications will not be accepted.**

2.02 **Method of Submission.** Applications should be sealed, marked "MANUFACTURING EDUCATION PROJECT PARTNER APPLICATION," and delivered or mailed to:

Patricia G. (Pat) Bubb
Executive Director
Tech Prep of the Rio Grande Valley, Inc.
TSTC Tech Prep Building
1902 North Loop 499
Harlingen, Texas 78550-3697

2.03 **Questions and Answers.** Questions should be put in writing and addressed to Tech Prep RGV by fax at 956.364.5143 to the attention of Pat Bubb. The last date for questions to be submitted is 4 p.m. on April 3, 2006. Written replies to all questions will be posted on Tech Prep RGV's website (www.techpreprgv.com) on April 4, 2006.

3.0 GENERAL PROVISIONS

The following general provisions apply to the Advanced Manufacturing program:

3.01 **Eligible Applicants.** All school districts that are voting members of Tech Prep of the Rio Grande Valley, Inc., and that currently offer courses in machining and mechatronics-related areas are eligible to apply.

3.02 **Evaluation Criteria.** Applications will be evaluated and competitively scored according to the following scale:

Plan for NIMS Accreditation	40 points
Plan for Participation of Staff and Students	40 points
Reasonableness of Cost	<u>20 points</u>
Total	100 points

3.03 **Rules and Regulations.** This request for applications is issued in accordance with the procurement rules governing Tech Prep RGV’s fiscal agent, Texas State Technical College Harlingen (“TSTC”). TSTC Harlingen is a state agency and follows all state guidelines, and those state guidelines are binding on this request for applications. All goods and services solicited under this document shall be procured under the competitive negotiation method.

3.04 **Right to Refuse All Applications Submitted.** Tech Prep RGV reserves the right to refuse and reject any/all bids and to waive any/all formalities or technicalities, or to accept the bid considered the best and most advantageous for advancing the purposes of the Advanced Manufacturing program.

3.05 **Notice of Award, Negotiation of Contract, and Use of Funds.** Districts and campuses selected will be notified on or about April 17, 2006. Cost-reimbursement contracts will be negotiated and participant recruitment will begin as soon after April 17, 2006, as possible. All contracts are contingent on availability of funds from the U.S. Department of Labor.

3.06 **Applicable Laws.** Funding for this project is being provided to TSTC Harlingen by the U.S. Department of Labor from its Community-Based Job Training Grants program, CFDA No. 17.261. All project activities are governed by applicable Federal and state laws, rules, and regulations, U.S. Department of Labor rules and regulations applicable to the contract between TSTC Harlingen and the U.S. Department of Labor. All contracts are subject to the provision of funding for the project provided to TSTC Harlingen by the U.S. Department of Labor and provided by TSTC Harlingen to Tech Prep RGV. Opportunity for participation is open to all eligible applicants without regard to race, color, religion, sex, national origin, age, physical or mental disability, temporary medical condition, political affiliation, or belief.

4.0 Application Forms

Districts wishing to submit applications should do so utilizing the forms provided. Those forms begin on the following page.

**Advanced Manufacturing Education Program
School District Partner Site Application**

Tech Prep Staff Use Only: Date/Time Received: _____ Logged In By Staff: _____

APPLICATION COVER SHEET

School District Name: _____
Mailing Address: _____
City/State/ZIP: _____
Contact for School District on Contract Matters:
Name: _____
Title: _____
Telephone: _____ Fax: _____
Email: _____

Proposed Number of Students to Be Served: _____

Name, Title, Phone Number, and E-Mail Address of Administrator Who Will Work
With Staff and Students As Needed During the Program:

Name, Subject(s) Taught, Phone Number, and E-Mail Address of Teacher(s)
Who Will Work With Students on NIMS Credentialing for Teacher(s) and Student(s):

1. _____

2. _____

Name, Title, Phone Number, and E-Mail Address of Counselor Who Will Work
With Students As Needed During the Program:

Proposed Budget: Grant: \$ _____ In-Kind: \$ _____ Total: \$ _____

The individual whose signature appears below hereby certifies that he/she has the authority to
sign this application. Signed for School District on _____, 2006.

Superintendent or Other Authorized Person
Printed Name: _____
Title: _____

PROPOSED PLAN AND BUDGET

INSTRUCTIONS:

1. Review the request for applications and the websites mentioned in that document.
2. Prepare and submit a proposed Manufacturing Education plan for NIMS accreditation
3. Prepare and submit a proposed plan for participation of staff and students in the Manufacturing Education project
4. Prepare and submit a proposed budget

The plans and budget submitted should address all components described in this Request for Applications and should highlight any activities in which the district and campus are already engaged that would make this site an excellent site for the Manufacturing Education program.

The final plans and budget will be agreed upon during the contract negotiation process.

PROPOSED PLAN FOR NIMS ACCREDITATION

District: _____

Campus: _____

PLAN:

PROPOSED PLAN FOR PARTICIPATION OF STAFF AND STUDENTS

District:_____

Campus:_____

PLAN:

PROPOSED BUDGET

MANUFACTURING EDUCATION PROJECT

District:

Item	Requested Contract	District In-Kind	Total Project Budget	
Staff salaries (title, number of hours, rate)	\$0			
	\$0			
	\$0			
	\$0			
	\$0			
	\$0			
Benefits and Taxes @ ___% of salaries	\$0			
Other (please describe items):	\$0			
Other:	\$0			
Other:	\$0			
Other:	\$0			
Other:	\$0			
Other:	\$0			
Other:	\$0			
TOTAL		\$0		