Goal Progress Report - Four Columns

Long Beach City College

Dept - Manufacturing Technologies

Mission: The mission of the Manufacturing Technologies Department is to equip our students, through a variety of academic disciplines and skills related curriculum in a manner consistent with the mission of the College, with the knowledge and skills needed to transfer to a four-year institution, enter the workforce, update workplace skills, or achieve personal enrichment in a lifelong learning environment. Provide students with the educational experiences and environment that Promote discipline, competence, the capacity to attain career success in manufacturing or related professions, and a sense of professional responsibility. Our expectations is that our students will develop a high level of knowledge and critical-thinking skills which will prepare them to make informed and ethically-responsible decisions in a complex global environment.

Description: Manufacturing Technologies ? Consists of two programs: Sheet metal and Welding. Both programs serve a diverse ethnically student population. Sheet Metal offers an Associate of Science (A.S.), and two Certificates of Achievements. The Sheet Metal Core Skills Certificate requires 19 units, Sheet Metal Advanced Skills Certificate requires 31 to 32 units. The faculty consists of one full time tenure Instructor, one adjunct Instructor and one full time Instructional Aid. Welding offers an Associate of Science (A.S.) degree, a Certificate Of Achievement, and seven Certificates of Accomplishment. Faculty in the welding program consists of two full time tenure instructors, three adjunct Instructors and one full time Instructional Aid , one 45% Instructional Aid..

Summary of Access, Productivity & Effectiveness: Sheet Metal total trends show the students improving on Success Rate, Retention Rate and Completion Rate. S/M has inactivated their large block classes and introduced a series of smaller sections. They are showing vast improvements in total number of Enrollments, FTES, and WSCH. Welding total trends are slightly lower in Success Rate from 05-06 to 07-08 by 3.6%, the Retention Rate is also lower during the same time frame by 5.7%. Enrollments have increased, as well as FTES and WSCH.

Internal Conditions (see Help for list): Both programs have been severely and adversely impacted by the budget cuts with elimination of Saturday Classes and evening classes. Adjunct Faculty may not return if the budget improves. Both programs have suffered loss of students due to cancellation of classes. Student Population has been impacted in regards to delays in receiving Degrees and Certificates.

External Condition- Grants Available: The Sheet Metal and Welding Programs have both been influenced by the following external conditions:
-Both programs have received VTEA grants. These funds were used to modernize the physical plant with new technologies and equipment. These advances were also introduced to the students with additions to the curriculum.
-Field trips to Trade Shows and Industry contacts have helped build partnerships with industry and exposed students to employment opportunities.
-Advisory committees have advised both programs in regards to curriculum, facilities, equipment and technological advances
-Outreach with local secondary institutions have increase enrollment in both programs.
-Job placement in both programs has been negatively influenced by a downturn in the economy.
-Enrollment has increase due to returning veterans, displaced workers and a high number of local high school graduates

External Condition- Advisory Committee Input: Advisory committees have advised both programs in regards to curriculum, facilities, equipment and technological advances

External Condition- -Outreach with local secondary institutions have increase enrollment in both programs

Community Outreach/Partnership:

External Condition- Industry & Labor Market Trends: -Job placement in both programs has been negatively influenced by a downturn in the economy.
Enrollment has increase due to returning veterans, displaced workers and a high number of local high school graduates

Faculty & Staff : Welding Program-Full Time Faculty-Winford Sartin, Larry Gustafson
Full Time Welding Instructional Aide- Marlin Stevens
45% Instuctional Aide- Thomas Kiebler
Sheet Metal Program-Full Time Faculty- Tim Shoemaker
Full Time Sheet Metal Instructional Aide- Robert Johnson

Names & Titles of Program Review Participants: Winford E. Sartin Welding Instructor / Department Head
Tim Shoemaker Sheet Metal Instructor

2009-2010 Accomplishments: Welding Program
-Moved into new facility in the Tech 1 building in the Spring 2010
-Received new equipment to keep the program abreast with the new emerging technologies in the welding field
-Development of DLA's for the CTE Center to increase academic disciplines and skills related curriculum in a manner consistent with the mission of the college

Sheet Metal Program
-Received new equipment to keep the program abreast with the new emerging technologies in the sheet metal field
-Development of DLA's for the CTE Center to increase academic disciplines and skills related curriculum in a manner consistent with the mission of the college

Goals	Request & Justification / Resources Needed	Goal Progress	Strategies Implemented & Follow-Up
Dept - Manufacturing Technologies - Program outcome 1 - outcome **Start Date:** 01/01/2011 **End Date:** 01/01/2012 **Goal Status:** Complete **Goal Priority:** Medium **Rationale:** To provide the students greater opportunity of employment in their chosen field and to build ties with the local contractors and fabricators. This endeavor will assist in	**Resources Needed Name:** Marketing Materials **Resources Needed Description:** Provide marketing materials that explain the Internship proram **Inter-Level/ VP Level Group Decision:** Pending **Fiscal Year:** 2010 - 2011 **Duration:** On-going **Estimated Cost:**		

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providing the sheet metal and welding industries with introductions to possible future employees. **Strategies:** By participating in the NICE Grant, faculty will build relationships with local contractors. These relationships will also be strengthened through encouraging the Sheet Metal and welding business community to employ students from the related trades and volunteer as members of the Sheet Metal / welding Advisory Committee. **Responsible Parties:** Winford E. Sartin Welding Instructor / Department Head Tim Shoemaker Sheet Metal Instructor **Campus supported by this goal:** PCC **Specify if goal is for department or sub-area:** Department/ Program **Other Area impacted by this goal:** Community Relations & Marketing **Other Area(s) impacted by this goal:** Institutional Effectiveness **Level of Support Needed:** School or VP	5000.0000 **Type of Resource Requested:** 432000 - Supplies Instructional **Justification for Resource Request:** Greater success in marketing to the local business community **Department Code:** 999999 Other (describe above)		
Dept - Manufacturing Technologies - Re-engineer the Curriculum of Advanced Welding - Re-engineer and build the curriculum in order to provide advance welding processes / techniques **Year(s):** 2009 - 2010 2010 - 2011 2011 - 2012 **Start Date:** 09/28/2009	**Resources Needed Name:** Automated Pipe (cutting, beveling, welding) equipment **Resources Needed Description:** This equipment is a CNC based automated pipe beveling machine. It will be beneficial for preparing students for piping / refinery industry. **Inter-Level/ VP Level Group Decision:** NEW		

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End Date: 12/31/2012 **Goal Status:** In Progress **Goal Priority:** High **Rationale:** Curriculum must stay current with technological advancements of industry to provide students with the newest and best education within industry. **Strategies:** Continue ongoing strategies to modernize curriculum. Pursue co-operation with other programs in order to implement curriculum . **Responsible Parties:** Winford Sartin / Larry Gustafson Welding Instructors **Campus supported by this goal:** Both **Specify if goal is for department or sub-area:** Department/ Program **Name of sub-area, if applicable:** Sheet Metal **Other Area impacted by this goal:** Professional Development Program **Level of Support Needed:** School or VP	**Fiscal Year:** 2012 - 2013 **Duration:** One-time **Estimated Cost:** 75000.0000 **Type of Resource Requested:** Equipment **Justification for Resource Request:** This equipment supports the goal of reengineered curriculum to provide students with advance welding / cutting processess and techniques. **Department Code:** 097000 Welding **Requested Funding Source:** VTEA **Resources Needed Name:** FANUC Robot and associated equipment. **Resources Needed Description:** Automated Robot to do repetitive type jobs as programmed. This will keep students current with advance welding processes. **Inter-Level/ VP Level Group Decision:** NEW **Fiscal Year:** 2012 - 2013 **Duration:** One-time **Estimated Cost:** 80000.0000 **Type of Resource Requested:** Equipment **Justification for Resource Request:** This equipment supports the re-engineered curriculum necessary to provide students with advance welding processes and techniques. **Department Code:** 097000 Welding		

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	Requested Funding Source: VTEA		
	Resources Needed Name: Hire Full Time Faculty **Resources Needed Description:** Increase in numbers of students as the welding program expands. **Inter-Level/ VP Level Group Decision:** NEW **Fiscal Year:** 2012 - 2013 **Duration:** One-time **Estimated Cost:** 60000.0000 **Type of Resource Requested:** Personnel - Faculty **Justification for Resource Request:** The Welding program has increased in new and returning students. Additional Instructors will be needed to keep abreast. **Department Code:** 097000 Welding **Requested Funding Source:** General Fund		
	Resources Needed Name: Replace equipment as needed: Replace 10 TIG, welding machines **Resources Needed Description:** This equipment will replace defective gas tungsten arc welding machines, and keep current technology for students. **Inter-Level/ VP Level Group Decision:** NEW **Fiscal Year:** 2012 - 2013 **Duration:** On-going **Estimated Cost:**		

Goals	Request & Justification / Resources Needed	Goal Progress	Strategies Implemented & Follow-Up
	50000.0000 **Type of Resource Requested:** Equipment **Justification for Resource Request:** Replace defective and outdated technology **Department Code:** 097000 Welding **Requested Funding Source:** VTEA		
	Resources Needed Name: Replace equipment as needed; Replace 10 gas metal arc welding machines. **Resources Needed Description:** This equipment will replace defective GMAW machines and keep current technology for students. **Inter-Level/ VP Level Group Decision:** NEW **Fiscal Year:** 2013 - 2014 **Duration:** On-going **Estimated Cost:** 45000.0000 **Type of Resource Requested:** Equipment **Justification for Resource Request:** Replace defective and outdated technology **Department Code:** 097000 Welding **Requested Funding Source:** VTEA		
	Resources Needed Name: Replacement equipment as needed: Replace 10 SMAW, welding machines **Resources Needed Description:** This equipment will replace defective arc welding machines to keep current technology for the students.		

Goals	Request & Justification / Resources Needed	Goal Progress	Strategies Implemented & Follow-Up
	Inter-Level/ VP Level Group Decision: NEW **Fiscal Year:** 2012 - 2013 **Duration:** On-going **Estimated Cost:** 6000.0000 **Type of Resource Requested:** Equipment **Justification for Resource Request:** Replace defective and outdated technology **Department Code:** 097000 Welding **Requested Funding Source:** VTEA		
	Resources Needed Name: Welding related equipment **Resources Needed Description:** VRTEX 360 SIM Welder and associated Software. **Inter-Level/ VP Level Group Decision:** Not Approved **Fiscal Year:** 2012 - 2013 **Duration:** Both (i.e., intial & maintenance costs) **Estimated Cost:** 600000.0000 **Type of Resource Requested:** Equipment **Justification for Resource Request:** To keep curriculum current in order to meet the needs of our students and industry **Department Code:** 097000 Welding **Requested Funding Source:** VTEA		

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Dept - Manufacturing Technologies - Revamp Precision Sheet Metal Fabrication Curriculum - Through the establishment of an Precision Sheet Metal Manufacturing Advisory Committee, develop a curriculum that would support a Precision Sheet Metal Manufacturing program **Year(s):** 2009 - 2010 2010 - 2011 2011 - 2012 **Start Date:** 12/31/2009 **End Date:** 12/31/2012 **Goal Status:** In Progress **Goal Priority:** High **Rationale:** Curriculum must stay current with the technological advancements of industry. Fabricators and Manufacturers are incorporating CNC fabrication equipment in order to increase productivity and control labor costs. Higher skills sets are required of employees to design sheet metal components and to program the CNC fabrication equipment. LBCC Sheet Metal students must be introduced and master these technologies in order to prepare themselves for entry level in the industry. **Strategies:** -Continue ongoing strategies to modernize the curriculum. -Pursue co-operation with other programs in order to implement curriculum (ex. Drafting	**Resources Needed Name:** 20 ton Trumpf CNC Turret Punch and related CNC software **Resources Needed Description:** This will allow students to design, program and operate a precision CNC Turret Punch used for punching out intricate metal parts. **Inter-Level/ VP Level Group Decision:** NEW **Fiscal Year:** 2012 - 2013 **Duration:** Both (i.e., intial & maintenance costs) **Estimated Cost:** 225000.0000 **Type of Resource Requested:** Equipment **Justification for Resource Request:** To keep curriculum current in order to meet the needs of our students and industry. Modern metal fabrication techniques employ automated CNC type machinery. Students must be trained in software design, programming and operation to be sucessful in a metalworking career. **Department Code:** 093900 Sheet Metal **Requested Funding Source:** VTEA **Resources Needed Name:** Hire Full Time Faculty **Resources Needed Description:** The Sheet Metal Program has been expanding for the last two years. The program will be moving to a new and larger location with room to accommodate additional students.		

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and Electrical Programs) -Faculty will also learn the new skills and gain programming expertise by attending seminars, summer programs, and faculty professional development workshops. **Responsible Parties:** Tim Shoemaker-Sheet Metal Instructor **Campus supported by this goal:** Both **Specify if goal is for department or sub-area:** Department/ Program **Name of sub-area, if applicable:** Drafting Dept **Other Area impacted by this goal:** Grants **Level of Support Needed:** School or VP	**Inter-Level/ VP Level Group Decision:** Not Approved **Fiscal Year:** 2010 - 2011 **Duration:** On-going **Estimated Cost:** 60000.0000 **Type of Resource Requested:** Personnel - Faculty **Justification for Resource Request:** The Sheet Metal Program has increased in new and returning students. An additional Instructor will be needed to keep abreast. **Department Code:** 093900 Sheet Metal **Requested Funding Source:** General Fund **Resources Needed Name:** Koike Aronson 5' x 10" CNC Plasma Table/ with related software **Resources Needed Description:** This a precision CNC plasma cutting table . It is programmable machine with software. This will allow students to design, program and operate a precision plasma table used for cutting out intricate metal parts. **Inter-Level/ VP Level Group Decision:** NEW **Fiscal Year:** 2012 - 2013 **Duration:** One-time **Estimated Cost:** 80000.0000 **Type of Resource Requested:** Equipment **Justification for Resource Request:** Modern metal fabrication techniques employ automated CNC type machinery. Students		

Goals	Request & Justification / Resources Needed	Goal Progress	Strategies Implemented & Follow-Up
	must be trained in software design, programming and operation to be sucessful in a metalworking career. **Department Code:** 093900 Sheet Metal **Requested Funding Source:** VTEA		
	Resources Needed Name: Portable Plasma Torch **Resources Needed Description:** This is a hand held plasma torch for cutting Sheet Metal. **Inter-Level/ VP Level Group Decision:** NEW **Fiscal Year:** 2012 - 2013 **Duration:** One-time **Estimated Cost:** 3000.0000 **Type of Resource Requested:** Equipment **Justification for Resource Request:** This piece of equipment introduces the student to the setup and safe operation of a plasma cutting torch. Students need to be trained in the latest metal fabrication techniques. **Department Code:** 093900 Sheet Metal **Requested Funding Source:** VTEA		
	Resources Needed Name: Precision 28xx punch attachments **Resources Needed Description:** Precision punches for the Piranha Ironworker **Inter-Level/ VP Level Group Decision:** NEW		

Goals	Request & Justification / Resources Needed	Goal Progress	Strategies Implemented & Follow-Up
	Fiscal Year: 2012 - 2013 **Duration:** One-time **Estimated Cost:** 6000.0000 **Type of Resource Requested:** Equipment **Justification for Resource Request:** To keep curriculum current in order to meet the needs of our students and industry. Modern metal fabrication techniques employ automated CNC type machinery. Students must be trained in proper selection of precision sheet metal punching tooling **Department Code:** 093900 Sheet Metal **Requested Funding Source:** VTEA		
	Resources Needed Name: Precision punch and dies for the Press Brake **Resources Needed Description:** This tooling is need to support our (2) precision press brakes. This tooling will assist our students in tool selection, programming and fabrication of intricate sheet metal parts **Inter-Level/ VP Level Group Decision:** NEW **Fiscal Year:** 2012 - 2013 **Duration:** One-time **Estimated Cost:** 10000.0000 **Type of Resource Requested:** Equipment **Justification for Resource Request:** To keep curriculum current in order to meet		

Goals	Request & Justification / Resources Needed	Goal Progress	Strategies Implemented & Follow-Up
	the needs of our students and industry. Modern metal fabrication techniques employ automated CNC type machinery. Students must be trained in software design, programming and operation to be sucessful in a metalworking career. **Department Code:** 093900 Sheet Metal **Requested Funding Source:** VTEA		
	Resources Needed Name: Software for PlasmaCam cutting system **Resources Needed Description:** CNC design software **Inter-Level/ VP Level Group Decision:** NEW **Fiscal Year:** 2012 - 2013 **Duration:** On-going **Estimated Cost:** 10000.0000 **Type of Resource Requested:** Software **Justification for Resource Request:** Students need to be trained in software design and operation of a 2 axis metal cutting system **Department Code:** 093900 Sheet Metal **Requested Funding Source:** VTEA		
	Resources Needed Name: Training on MasterCam software **Resources Needed Description:** Training on MasterCam software **Inter-Level/ VP Level Group Decision:** NEW **Fiscal Year:**		

Goals	Request & Justification / Resources Needed	Goal Progress	Strategies Implemented & Follow-Up
	2011 - 2012 **Duration:** One-time **Estimated Cost:** 4000.0000 **Type of Resource Requested:** Professional Development **Justification for Resource Request:** The Sheet Metal Program acquired a CNC router that will support the our Sheet Metal curriculum. The Sheet Metal staff needs to acquire training in the software. This in turn will allow 3D CNC design and fabrication to be introducted to our students. **Department Code:** 093900 Sheet Metal **Requested Funding Source:** Grants		
		09/20/2011 - Added Sheet Metal 220d-"Sheet Metal CNC Fabrication Systems" to the program **N/A:** N/A **Next Step:** Continue Working on Goal **Data to Support Goal Progress:** College Catalog **Data Reported for Year:** 2	