

The purpose of Program Planning and Assessment at Hartnell College is to obtain an honest and authentic view of a program and to assess its strengths, opportunities, needs, and connection to the mission and goals of the college. The process is based on the premise that each program reviews assessment data and uses these data for improvement. The results of these annual cycles provide data for a periodic (every five years) comprehensive review that shows evidence of improvement and outlines long-range goals.

The Program Planning and Assessment process will provide an increase in the flow of information about student learning, student success, and student behavior at Hartnell College. The result of the process will also improve institutional effectiveness.

- è For programs/disciplines scheduled for comprehensive review in spring 2014, please complete Sections I, II, and III.
- è For programs/disciplines scheduled for annual review, please complete Sections II and III.

Please complete this section for programs/disciplines scheduled for comprehensive review in spring 2014. Go to Section II for programs/disciplines scheduled for annual review in spring 2014.

A. OVERALL PROGRAM EFFECTIVENESS

1. Describe your program in terms of its overall effectiveness over the past several years. Agricultural and Industrial Technology (AIT) is an inter-disciplinary program designed to prepare the student for or for positions of employment requiring a general background in the application of technology or for transfer to the state university system. The introductory program in industrial mechanics is intended to allow students to acquire a solid base of skills in a variety of mechanical areas. More advanced skills can be learned in courses leading to the Industrial Technician certificates. Typical careers in the area of Agricultural & industrial technology might include: farm shop and equipment dealer mechanic, processing facility maintenance worker or supervisor, part technician, or fabrication shop worker.

Please consider the questions below in describing your program/discipline/area.

- How are students/employees served by the program?
Students that are in the AIT department are able to get real world applications in working in a shop fixing, maintaining or altering equipment.
- What are the unique aspects of the program?

- If there is a sequence of courses in your program, what process or framework is used to ensure alignment?

At this time there is no sequence of course in the AIT program

- How is consistency maintained between multiple sections of a single course?

At this time there are not any multiple sections taught of one course per semester.

- Has the program explored alternative scheduling approaches?

After looking at some of the courses there was a change of scheduling for four different classes for the Fall 2014; AIT-180, AIT-169, AIT-70, and AIT-172.

The first two courses (AIT-180 & AIT-169) we taught in the pass for 9 weeks, meeting for only once a week for 2 hours. It was changed for the fall to be twice a week. After looking at the students it was seen that if a student misses one class they miss the class. So by making 2 days a week for 9 weeks the students would be too far behind if they miss a day.

The next two courses (AIT-70 & AIT-172) we taught during the day time. It was changed in the Fall 2014 so the classes would be night classes. The program is trying to increase the numbers though was employees would have more time to make it to a night class.

- Do prerequisites, corequisites and strongly recommended skills continue to meet program needs? Are there special considerations regarding capabilities of incoming students?

At this time there are no prerequisites of any of the classes in the AIT department. This needs to change so students are more equipped to work in the fabrication shop.

- What professional activities have faculty recently (last three years) participated in?
 - o Fluid Power Training Institute (Winter 2013)
 - § Practical Hydraulics and Safety
 - o IVES Training Group (89.68 280.56 s.0892()-1172) (GrGra1(G BT 11.9773 0 0 12 348.

C. CTE PROGRAMS LABOR MARKET & ACHIEVEMENT

Please complete this section if the program is Career Technical Education (CTE). Go to subsection D if the program is not CTE.

1. Describe the demonstrated effectiveness on the program over the past several years with levels and trends of achievement data including degree/certificate completions (awards) and employment statistics

Over the last year and a half the AIT program has increased the average number over students in its classes. Going from an average of 6 students per class to an average of 10 students per. Last year there was a lot of recruiting seeing over 1,000 students throughout the Salinas Valley. This year over 2,000 students will be seen.

Last year there was only one student that received a certificate in AIT. This year it is expected that 4 students will receive a AIT certificate.

2. Describe the number of, activities of, and recommendations resulting from advisory committee meetings that have occurred over the past two years. What information and/or data were presented that required or currently require changes to be made to your program?

With the advisory meeting we had it was brought up that the AIT program is not very organized in what is being taught. They might teach a lot of classes but they need to teach more in the fabrication, hydraulic, electricity (in the PLC).

1. Welcome and Introductions

Al Graham did the introductions and gave an overview how the shop was set up, informed that an equipment order was just delivered, and more equipment will be ordered. He also spoke on his background and previous work at Gonzales High School, and that he has taken classes at the Alisal Campus to understand more about the program.

He informed that this meeting is to welcome the new members, update this advisory on the Ag & Industrial Technology Program (AIT), obtain input from advisory members and further curriculum development will be addressed in the fall semester.

2. Update on the program Al Graham

- Al oversees the Ag Ambassadors: the group has visited every high school from Salinas to South County, hosted the FFA Project Competition, attended a Industrial Competition in Fresno, visited the Tulare Farms Show, participated in the Industry Technology Day at the Alisal Campus hosting over 500 middle and high school students, among other events.
- Future recruiting plans include building stronger relationship with high school and adult schools to present the program for adults, offer summer camps at the shop and have students use critical thinking skills, build something, work on equipment, bring back field day next year and have 3 or 4 competitions (tractor driving, blue print reading, etc). Besides interacting with high schools we also plan to approach middle schools and present the program and explain employment opportunities.
- Zahi Atallah stated that the CTE-Career Technical Education grant is used to fund recruiting activities, and we can not only rely on counselors, we need to connect with teachers, parents and students at the high school level.

3. Enrollment

Al Graham explained that enrollment has been low, however due to high schools visits and other recruiting events we expect to increase enrollment.

4. Future Program Direction

- Al Graham reported that Hartnell plans to develop the AIT degree within the next two years. Currently we offer certificate in Ag & Industrial Technology- Industrial Mechanical and Industrial Technician. He presented the proposed program for the Associate in Science degree including agricultural classes, general education courses, computer courses and others; he also informed that we will articulate with high school to avoid requiring students to repeat classes. Zahi Atallah informed that students entering Hartnell take the assessment test to grade their level of English and -10.29(st)81.0191jol aessm9616(e)-165()16.6354(st)-6.0971vel oee A

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Curriculum Committee for approval, then sent to the Chancellor's Office in Sacramento for approval, as part of the process we need to present labor marketing analyses, input from industry advisory, and reported that the process can take one year.

- 8. Adjournment
Meeting adjourned at 7:15 pm.

Next meeting: Fall Semester (TBA)

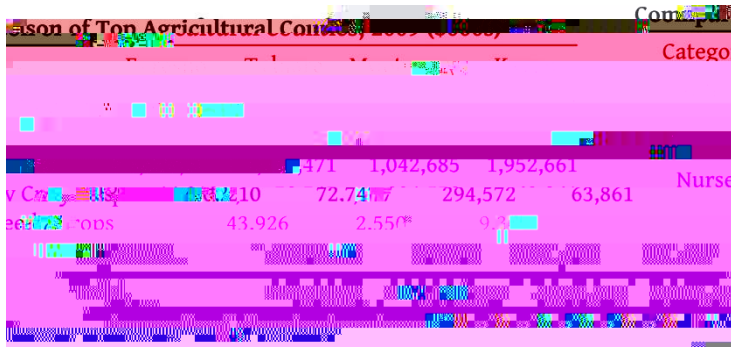
- 3. Does labor market data and/or the need for additional education indicate that changes should be made to your program? Does the program (continue to) meet a labor market demand and/or fulfill an important step toward higher/additional education?

AT A GLANCE: Economy and Workforce

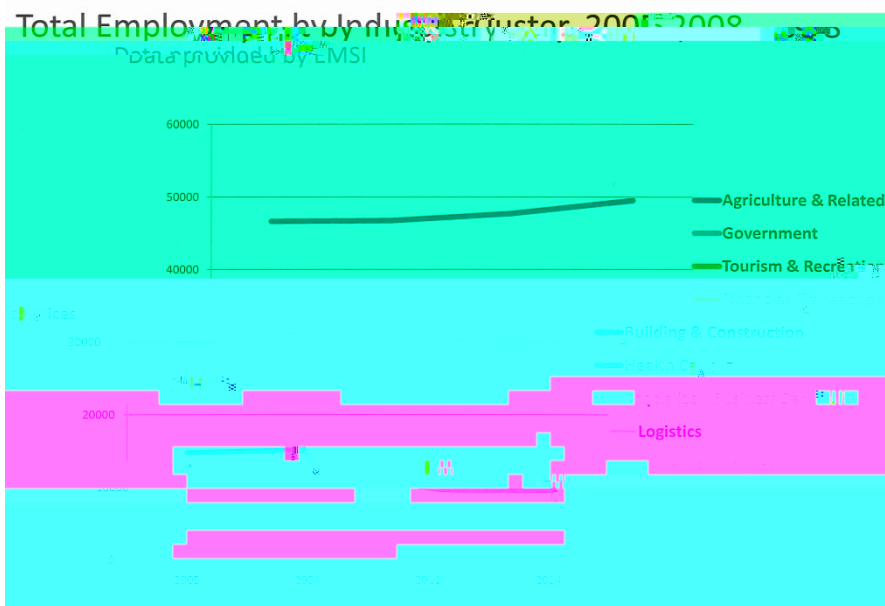
Monterey County is the third largest agricultural county in California and Agriculture supplies the majority of jobs in the county.

Table 4:

Monterey County Jobs	1990	2000	2008	2009	2010	Percent 2010
Total, All Industries	138,900	166,400	171,500	165,100	166,800	100.0%
Total Farm	28,800	39,100	43,300	42,800	45,400	27.2%
Mining and Logging	200	100	200	200	200	0.1%
Construction	4,700	6,300	6,100	4,600	4,100	2.5%
Manufacturing	9,100	8,700	6,100	5,700	5,300	3.2%

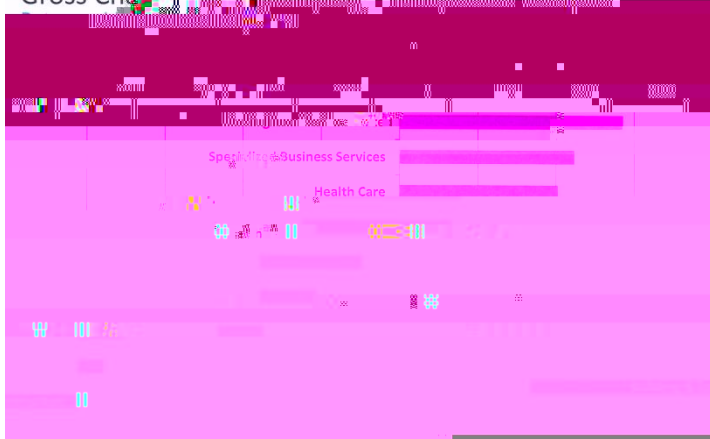


Agriculture is followed by Government and Tourism as the three largest sectors in the county economy



Recent forecasts suggest that agriculture will continue to provide the greatest number of new jobs, but post-secondary education and specialized business services, both key component of the expanding technology sector of the county, will show the highest percentage growth over the next several years.

Gross Change in Employment, 2005 to 2014



Percentage Change in Employment, 2005 to 2014

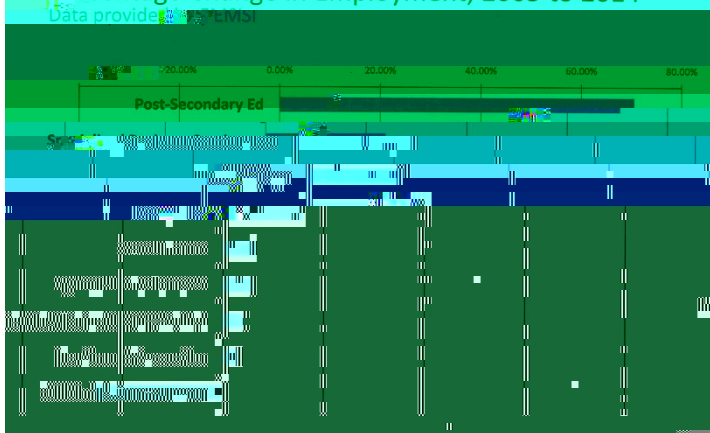


Table 5:

	1990	2000	2008	2009	2010
Monterey County Labor Force					
Civilian Labor Force	172,800	203,200	212,200	215,400	219,700
Civilian Employment	156,100	188,200	194,500	190,100	191,600
Civilian Unemployment	16,700	14,900	17,800	25,400	28,000
Civilian Unemployment Rate	9.7%	7.4%	8.4%	11.8%	12.8%

Source: CA EDD Current Employment Statistics.

Table 6: Monterey County Civilian Employed Labor Force by Occupation (16 Years and Older)

Occupational Category	Percent of Total
Total	100.0%
Management, professional and related occupations	27.4%
Management, business, and financial occupations	10.2%
Business and financial operations occupations	2.8%
Computer and mathematical occupations	1.3%
Architecture and engineering occupations	0.9%
Life, physical, and social science occupations	0.9%
Community and social services occupations	1.4%

Legal occupations	1.0%
Education, training, and library occupations	6.1%
Arts, design, entertainment, sports, and media occupations	1.2%
Healthcare practitioner and technical occupations	4.5%
Service occupations	21.4%
Healthcare support occupations	2.0%
Protective service occupations	3.7%
Personal care and service occupations	4.4%
Building and grounds cleaning and maintenance occupations	5.4%
Sales and office occupations	20.5%
Sales and related occupations	9.7%
Office and administrative support occupations	10.8%
Farming, fishing, and forestry occupations	10.6%
Construction, extraction, maintenance, and repair occupations	7.7%
Construction and extraction occupations	4.5%
Installation, maintenance, and repair occupations	3.1%
Production, transportation, and material moving occupations:	12.4%
Production occupations	4.6%
Transportation and material moving occupations	7.8%
Source: U.S. Census Bureau, 2009 American Community Survey	

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National Data

January 2014

Industrial Machinery Mechanics and Maintenance Workers and Millwrights

Industrial machinery mechanics, maintenance workers, and millwrights all repair manufacturing equipment.

Quick Facts: Industrial Machinery Mechanics and Maintenance Workers and Millwrights

2012 Median Pay	\$45,840 per year \$22.04 per hour
Entry-Level Education	High school diploma or equivalent
Work Experience in a Related Occupation	None
On-the-job Training	See How to Become One
Number of Jobs, 2012	447,600
Job Outlook, 2012-22	17% (Faster than average)
Employment Change, 2012-22	

Workers in this occupation must follow safety precautions and use protective equipment, such as hardhats, safety glasses, and hearing protectors. Most work full time. However, they may be on call and work night or weekend shifts. Overtime is common.

[How to Become an Industrial Machinery Mechanic or Maintenance Worker or Millwright](#)

Industrial machinery mechanics and maintenance workers and millwrights typically need a high school diploma. However, industrial machinery mechanics need a year or more of training after high school, whereas maintenance workers typically receive on-the-job training that lasts up to a year. Most millwrights go through a 4-year apprenticeship.

[Pay](#)

The median annual wage for industrial machinery mechanics and maintenance workers and millwrights was \$45,840 in May 2012.

[Job Outlook](#)

Employment of industrial machiner

11%

Maintenance workers, machinery

11%

Note: All Occupations includes all occupations in the U.S. Economy.

Source: U.S. Bureau of Labor Statistics, Employment Projections program

Employment projections data for industrial machinery mechanics and maintenance workers and millwrights, 2012-22

Occupational Title	SOC Code	Employment, 2012	Projected Employment, 2022	Change, 2012-22	Percent	Numeric	Employment by Industry
mechanics	9041						
Maintenance workers, machinery	49-9043	89,000	98,900	11		9,900	[XLS]
Millwrights	49-9044	39,400	46,700	18		7,200	[XLS]

[<- Pay Similar Occupations >](#)

Suggested citation:

Bureau of Labor Statistics, U.S. Department of Labor,

Quick Facts: Machinists and Tool and Die Makers

Job Outlook, 2012-22	7% (Slower than average)
Employment Change, 2012-22	33,700

[What Machinists and Tool and Die Makers Do](#)

Machinists and tool and die makers set up and operate a variety of computerized and mechanically controlled machine tools to produce precision metal parts, instruments, and tools.

[Work Environment](#)

Machinists and tool and die makers work in machine shops, toolrooms, and factories. Although most work full time during regular business hours, overtime is somewhat common, as is evening and weekend work.

[How to Become a Machinist or Tool and Die Maker](#)

Machinists train in apprenticeship programs, vocational schools, community and technical colleges, or informally on the job. To become a fully trained tool and die maker takes a combination of several years of technical instruction and on-the-job training. A high school diploma is necessary.

[Pay](#)

In May 2012, the median hourly wage for machinists was \$18.99. The median hourly wage for tool and die makers was \$22.60 in May 2012.

[Job Outlook](#)

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Total, all occupations

11%

Machinists

9%

Machinists and tool and die makers

7%

Tool and die makers

-1%

Code	2012	Employment, 2022	PercentNumeric	Industry
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Quick Facts: Metal and Plastic Machine Workers

[Employment Change, 2012-22](#) -59,100

[What Metal and Plastic Machine Workers Do](#)

Metal and plastic machine workers set up and operate machines that cut, shape, and form metal and plastic materials or pieces.

[Work Environment](#)

Metal and plastic machine workers are employed mainly in factories. Although the work is not inherently dangerous, hazards exist and workers must adhere to safety standards. Most work full time, and some work evenings and weekends.

[How to Become a Metal or Plastic Machine Worker](#)

A few months of on-the-job training are enough for most workers to learn basic machine operations, but 1 year or more is required to become highly skilled. Computer-controlled machine workers may need more training. Although not always required, employers prefer workers who have a high school diploma.

[Pay](#)

The median hourly wage for metal and plastic machine workers was \$15.84 in May 2012.

[Job Outlook](#)

Employment of metal and plastic machine workers is projected to decline 6 percent from 2012 to 2022. Employment will decline due to advances in technology, foreign competition, and changing demand for the goods these workers produce.

[Similar Occupations](#)

Compare the job duties, education, job growth, and pay of metal and plastic machine workers with similar occupations.

[More Information, Including Links to O*NET](#)

Learn more about metal and plastic machine workers by visiting additional resources, including O*NET, a source on key characteristics of workers and occupations.

Job Outlook [About this section](#)

Metal and Plastic Machine Workers

Percent change in employment, projected 2012-22

Employment projections data for metal and plastic machine workers, 2012-2022

Occupational Title	SOC Code	Employment, 2012	Projected Employment, 2022	Change, 2012-2022	Percent	Numeric	Employment by Industry
operators and tenders	4051						
Pourers and casters, metal	51-4052	10,700	8,700	-19		-2,000	[XLS]
Model makers, metal and plastic	51-4061	6,100	6,300	2		100	[XLS]
Patternmakers, metal and plastic	51-4062	4,400	4,700	6		300	[XLS]
Foundry mold and coremakers	51-4071	12,400	10,400	-16		-2,000	[XLS]
Molding, coremaking, and casting machine setters, operators, and tenders, metal and plastic	51-4072	125,000	105,800	-15		-19,200	[XLS]
Multiple machine tool setters, operators, and tenders, metal and plastic	51-4081	85,900	74,500	-13		-11,400	[XLS]
Welding, soldering, and brazing machine setters, operators, and tenders	51-4122	53,500	64,100	20		10,600	[XLS]
Heat treating equipment setters, operators, and tenders, metal and plastic	51-4191	22,000	21,600	-2		-400	[XLS]
Plating and coating machine setters, operators, and tenders, metal and plastic	51-4193	35,000	31,900	-9		-3,000	[XLS]

[<- Pay Similar Occupations >](#)

Suggested citation:

D. PROGRAM GOALS

1. List and describe program/disciplinary goals for the next comprehensive review cycle Fall 2014 through Fall 2018. Be sure to highlight innovative, unique, or other especially noteworthy aspects.

A new mission and vision is currently before the board approval in February. In considering your programs future goals, please review the proposed new mission and vision statements.

VISION STATEMENT

Hartnell College will be nationally recognized for the success of our students by developing leaders who will contribute to the social, cultural, and economic vitality of our region and the global community.

MISSION STATEMENT

Focusing on the needs of the Salinas Valley, Hartnell College provides educational opportunities for students to reach academic goals in an environment committed to student learning, achievement and success.

In four year the AIT program will

- 1) Have a AS degree in Fabrication
- 2) 10 students will be graduating with a certificate or a degree in AIT
- 3) There will be articulation agreement between the 7 local high school programs (King City, Greenfield, Gonzales, Salinas, North Salinas, Mission ROP, North Monterey) that have shops with the AIT department.
- 4) 10 students will have a internships during the summer
- 5) Start working on a AS degree in Machining

This section must be completed for ALL academic programs, including those scheduled for a comprehensive review in spring 2014

A. COURSE DATA & TRENDS

1. Please evaluate the 3-year trend of enrollment and success of courses in your program/discipline. Identify the courses you are choosing to examine this current year in the list below. You do NOT need to evaluate trends for each course every year.

Course Number	Course Name	Does the course have any DE (online or hybrid) sections?
AIT-70	Introduction to Ag Mechanics	No
AIT-71	Ag and Industrial Equipment Operation	No
AIT-180	Industrial Workplace Skills	No
AIT-169	Hazmat and Industrial Safety	No
AIT-172	Agricultural Equipment Fabrication	No
AIT-75	Agricultural Machinery Management	No
AIT-173	Agricultural Structures	No
AIT-176	Hydraulics & Pneumatics	No
Weld-52	Sheet Metal Fabrication	No
Weld-58	Hardfacing and Surfacing	No
AIT-178	Industrial Electricity	No

Please use the data that have been provided. Analyze trends that you observe with respect to the data for the identified courses and answer the following questions.

ENROLLMENT

2. Review the enrollment data. Describe and analyze any patterns or anomalies that you notice. What do you make of these patterns or anomalies? What actions should be taken to ensure continuous improvement?

After looking at the data it is easy to see that the number of students that are in the AIT department is very low so recruitment needs to happen. The full-time member happen

C. CURRICULUM

Complete the following tables pertaining to courses scheduled for review.

Courses scheduled for review during AY 2013-14 as previously specified	Faculty member(s) responsible for coordinating	(a) Was the course reviewed and (b) taken through the curriculum process?	Date of approval (or anticipated approval) by Curriculum Committee
AIT-178	Frankton	Need more classes of electricity	
AIT-70	Graham		
AIT-71	Graham		
AIT-180	Graham		
AIT-169	Graham		
AIT-172	Graham	Need more classes of Fabrication	
AIT-75	Graham		
AIT-173	Graham		
AIT-176	Graham	Need more classes of Hydraulic	
Weld-52	Graham	Need to turn this class from a welding class to AIT class	
Weld-58	Graham	Need to turn this class from a welding class to AIT class	

Courses scheduled for review during AY 2015	Faculty member(s) responsible for coordinating	Target semester and year Fa 2014 or Sp 2015

D. OUTCOMES

Use your Program Outcome Map to assist you in this subsection. As you plan your course assessments, keep the high-level program outcome in mind. While course level assessment serves the purpose of examining the teaching and learning for that particular course, it also provides the data that will be viewed collectively for assessment of the associated program level outcomes.

PROGRAM LEVEL OUTCOMES

1. Please complete the following tables.

List Program level outcome(s) scheduled for assessment as previously specified	What changes have occurred in the program/discipline as a result of dialogue?	Was the Program Outcome Assessment Summary completed?
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2. Describe how program level outcomes were specifically addressed by the program/discipline during the past year.

For example, were data gathered at the course level? Was there review and analysis of the data? How did the discipline faculty engage in discussion? Were any interventions conducted? Are there any plans to make changes to certificate/degree programs or improvements in teaching and student learning?

Last year there no program level outcomes were addressed so at this time there is no data for the AIT department. Over the next couple of years the AIT department will be expanding the program by adding an AS degree and having stackable certificates.

CORE COMPETENCIES

5. Describe course level assessment results and how they will influence your plans moving forward.

After teaching AI70 and AIT

This section must be completed for ALL academic programs, whether scheduled for annual or comprehensive review in spring 2014.

A. NEW ACTIVITIES

This subsection addresses new activities for, and continuing new activities into, AY 2015-16. An activity can address many different aspects of your program/discipline and ultimately is undertaken to improve, enhance, and or keep your program/discipline current. A new activity may or may not require additional resources. Activities can include but are not limited to:

- NEW CURRICULUM
 - FABRICATION B
 - FABRICATION C
 - MACHINING A
 - MACHINING B
 - MACHINING C
 - INDUSTRIAL ELECTRICAL B
 - INDUSTRIAL ELECTRICAL C
 - HYDRAULICS B
 - PNEUMATICS B
- FURTHER DEVELOPMENT OF THE PROGRAM OR SERVICE
 - AS DEGREE IN FABRICATION
 - AS DEGREE IN MACHINING
- GRANT DEVELOPMENT AND PROPOSALS
- FACULTY AND STAFF TRAINING
 - NEED MORE TRAINING IN
 - § HYDRAULICS
 - § PNEUMATICS
 - § MACHINING
- MARKETING/OUTREACH
- ENROLLMENT MANAGEMENT
- STUDENT SERVICES
- ADMINISTRATIVE SERVICES
- SUPPORT OPERATIONS
- FACILITIES

1. List information concerning new projects or activities ES

FY 2015-16. Ongoing activities involving resources that will no longer be available from grant funds starting FY 2015-16 must be planned for appropriately.

Activity	Strategic Plan Goal(s) No. & Letter (e.g., 5A)*	Related Courses, SLOs, PLOs, or goals	Desired Outcomes	Resources Needed	Person Responsible	Estimated Date of Completion (can be more than one year in length)	Comments
1. 2-Hydraulics & Pneumatics training C41 floied		Ar)		m41			

*** Please complete this page for each new activity. ***

2. This item is used to describe how the new activity, or continuing new activity will support the program/discipline.

Consider:

- Faculty
- Other staffing
- Facilities
- Equipment (non-expendable, greater than \$5,000), supplies (expendable, valued at less than \$5,000),
 - o Hydraulic Training System
 - § 2- Model MF1020H-TSE
 - § 2-Model MF-300-VCLS
 - o Pneumatic Training System
 - § 2- Model MF700PN
 - o 480 & 3 phase 220volts power put in the shop
 - o 1 ton truck
- Software
 - o Hydraulic DVD s
 - o Torchmate (plasma cam) up dated software
- Hardware
 - o Hydraulic Cutaway Models
 - o Computer for Torchmate
- Outside services
- Training
 - o Hydraulic Training
 - § Troubleshooting Hydraulics 5 Days
- Travel
- Library materials
- Science laboratory materials

- a) Describe the new activity or follow on activity that this resource will support.

[Begin response here]

- b) Describe how this activity supports any of the following:

- 1) Core Competency
- 2) Program level Outcome
- 3) Course level Outcome
- 4) Program/Discipline Goal
- 5) Strategic Priority Goal

[Begin response here]

c) Does this activity span multiple academic years? YES NO

If yes, describe the action plan for completion of this activity.

[Begin response here]

d) What measurable outcomes are expected from this activity? List indicators of success.

[Begin response here]

e) What are the barriers to achieving success in this activity?

[Begin response here]

* Personnel: Include C, F, or M after the amount to indicate Classified Staff, Faculty, or Manager

** S for Supplies, E for Equipment. If additional supplies, for example, are needed for ongoing

APPENDIX A. Strategic Priorities & Goals

~~(b) (5) - DPP Hartnell College Strategic Plan 2018-2028~~

Priority Student Access

Goal 1A: Hartnell College will provide higher education, workforce development, and lifelong learning opportunities with seamless pathways to all of the college's present and prospective constituent individuals and groups.

Goal 5A: Hartnell College will provide programs and services that are relevant to the needs of its diverse student population, while also developing and employing a culture of innovation that will lead to improved institutional effectiveness and student learning.

Priority 6: Partnership with Industry, Business Agencies and Education

Goal 6A: Hartnell College is committed to strengthening and furthering its current partnerships, in order to secure lasting, mutually beneficial relationships between the college and the community that the college serves.