



Barstow Community College  
**INSTRUCTIONAL  
PROGRAM REVIEW**

(Refer to the [Program Review Handbook](#) when completing this form)

PROGRAM:

Academic Year:  FULL PROGRAM REVIEW Date Submitted:

Academic Year:  ANNUAL UPDATE #1 Date Submitted:

Academic Year:  ANNUAL UPDATE #2 Date Submitted:

**By:**

Faculty Lead:

Members:

1. Mission and Vision
2. Description and Overview
3. Program Data
4. Curriculum
5. Internal Factors
6. External Factors
7. Continuing Education and Professional Development
8. Prior Goals and Objectives
9. Action Plan: Goals/Objectives/Actions
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[Annual Update #1](#)

[Annual Update #2](#)

## 1. Program Mission and Vision

### A. Program Mission

The goal of the Barstow Community College welding department is to impart to the student welder the skills necessary to safely and competently weld, using various welding processes, for personal pursuits, to gain entry level welding employment in the local economy and/or obtain the Welding Certificate/Associate Science Degree in Welding.

### B. Program Vision (*Where would you like the Program to be three years from now?*)

The Welding Department needs to actively encourage the student welders to be aware of the job market. To this end, over the next few years the department should develop good communications with potential employers in the area to establish listing for possible job offerings. Overall the Welding Department will continue to up with the changing technology in this industry.

### C. Describe how mission and vision align with and contribute to the College's Mission and Vision

The Welding Program at BCC prepares the student with the basic skills necessary for a career in the welding field as well as providing learning opportunities giving the student the knowledge, skills, and certification necessary for success in this field and other endeavors.

## 2. Program Description and Overview

Assume the reader does not know anything about the Program. Describe the Program, including—but not limited to—the following:

### A. Organization, including staffing and structure

The Welding Department has 3 Adjunct Instructors teaching all welding processes as well as Blueprint Reading. Weld 50-55 and 57 classes are offered in the Spring and Fall Semesters: M/W from 3:00 pm to 5:15 pm, M/W from 6:00 pm to 8:15 pm, T/Th from 3:00 pm to 5:15 pm and T/Th from 6:00 pm to 8:15 pm. In the Spring and Fall Semesters Weld 56, Blueprint Reading is offered on M/W from 6:00 pm to 8:15 pm

### B. Who do you service (including demographics)?

The Welding Department services students from Barstow College, Barstow High School Silver Valley High School, Excelsior High School, as well as any other educational facilities in the Barstow area. Employers in the the area including Santa Fe Railroad, Union Pacific Railroad, US Marine Corps Logistics Base, Moly Corp-Mountain Pass, County of San Bernardino Industrial Maitenance Mechanic training program, and other local welding facilities and businesses.  
Ft Irwin National Training Center, Southern Calif. Edison, Southwest Gas Co.,

### C. What kind of services does your unit provide?

As well, American Welding Society Certification in various welding processes is provided to students.

### D. How do you provide them?

All welding classes are presented in both classroom and shop environment for hands on learning.

E. Does the program have a degree or certificate? in Welding All welding classes, *except Weld 57*, are required for the Welding Certificate and the Associate of Science degree

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### 3. Program Data

#### A. PERFORMANCE DATA

Discuss the program’s performance on the specific data items listed below:

1) Full-time/Part-Time Faculty Ratio

	TRADITIONAL	ONLINE
2) Course Completion Rate		
3) Course Success/Retention Rate		
4) WSCH/FTEF Ratio		
Full-time:		
Part-time:		
5) Fill Rate		

Reflect on the data above:

#### B. PROGRESS ON PROGRAM LEVEL OUTCOMES (PLOS) AND STUDENT LEARNING OUTCOMES (SLOS)

1) List your Program Level Outcomes (PLOs).

**Program Learning Outcomes:**

1. Complete the Welding Certificate Program and/or obtain an Associate of Science Degree in Welding.
2. Weld, for personal pursuits using Oxy-Fuel Gas, Shielded Metal Arc, Metallic Inert Gas, Tungsten Inert Gas, and other welding processes.
3. Demonstrate skills for entry level welding employment in the local economy.

*Employers in the the area including Santa Fe Railroad, Union Pacific Railroad, US Marine Corps Logistics Base, Moly Corp-Mountain Pass, County of San Bernardino Industrial Maitenance Mechanic training program, and other local welding facilities and businesses.*

*Ft Irwin National Training Center, Southern Calif. Edison, Southwest Gas Co.,*

*All welding classes are required for the Welding Certificate and the Associate of Science degree in Welding.*

**Progress Summary** – In 2015-2016, WELD course outlines of record were updated to accurately list the SLOs for each course taught in that academic year. All student learning outcomes were assessed for each course taught. We plan to continue to assess each class as it is taught.

2) Summarize the progress you have made on Program Level Outcomes.

Revising the SLOs and course outlines of record has helped to align our specific areas of concern in the various welding processes, such as how the course objectives and methods of instruction relate, what's expected of the students and what they can expect from the course, and how they will be assessed.  
*Addition of Blueprint Reading, Weld 56, to Spring semesters in the two year plan and increased instruction in safety awareness.*

3) Summarize the progress made on course-level outcomes and assessments; use specific data, if possible.

Any new SLOs will be placed on the course outlines when courses are taught or created.  
*Increased safety awareness.*

4) Describe any program, course, and/or instructional changes made by your program as a result of the outcomes assessment process.

5) Reflecting on the responses for #2 and #3 above, what will you implement for the next assessment cycle?

C. SUPPORTING ASSESSMENT DATA (See Handbook for additional information)

1) Provide a list of any additional measures (not included in 3.A.) that you have chosen to gauge your program's effectiveness (e.g.: transfers, degrees, certificates, satisfaction, student contacts, student headcount, Perkin's data, etc.).

Achievement of AWS Welding processes certificates in areas of students interest upon completion of courses in the Welding program. *SMAW, GMAW, and GTAW certifications.*

1a) If this is a CTE program ending with a certificate or degree, include data on employment opportunities, compliance with advisory recommendations, and fiscal viability of program. (Include labor market and demand information using resources in CTE and the PR Handbook.)

2) Summarize the results of the measures listed in #1 above:

Students can use these as a basis for job applications. These are certificates outside the Welding Certificate Program from BCC.

3) What did you learn from your evaluation of these measures, and what improvements have you implemented, or do you *plan*\*to implement, as a result of your analysis of these measures? (\*List any resources required for planned implementation in #10: Resources.)

*Increased employment in welding areas, such as at Ft Irwin, USMC Maintenance Center, Borax Corp., etc.*

D. TWO YEAR SCHEDULING PLAN

1) What is the program's Two-Year Scheduling Plan?

**WELD A.S. (and Certificate) Two year plan follows the requirements as shown below:**

**Semester 1 (fall - even )**

WELD 50,51,52,53,54,55,57,& 56

**Semester 2 (spring - even )**

WELD 50,51,52,53,54,55,57, **& 56**

**Semester 3 (fall - odd )**

WELD 50,51,52,53,54,55,57,& 56

**Semester 4 (spring - odd )**

WELD 50,51,52,53,54,55,57, **& 56**

**Associate Of Science, Welding**

**Major Core Requirements (21 units)**

- WELD 50 Oxyacetylene Welding and Cutting 3
- WELD 51 Shielded Metal ARC Welding 3
- WELD 52 Position Welding (ARC Welding) 3
- WELD 53 Soldering, Brazing, and Braze Welding 3
- WELD 54 Gas Metal-ARC Welding 3
- WELD 55 Gas Tungsten-ARC Welding 3
- WELD 56 Blueprint Reading (Metal Trades) 3

**Minimum Units Required in Major 21**

**General Education Requirements 27**

**Electives 12**

**Welding Certificate Of Achievement**

**Required Courses Units**

- WELD 50 Oxyacetylene Welding & Cutting 3
- WELD 51 Shielded Metal Arc Welding & Cutting 3
- WELD 52 Position Welding (Arc Welding) 3
- WELD 53 Soldering, Brazing, & Braze Welding 3
- WELD 54 Gas Metal – Arc Welding 3
- WELD 55 Gas Tungsten – Arc Welding 3
- WELD 56 Blueprint Reading (Metal Trades) 3

ENGLISH 50 -3

MATH 101 -3

CBIS -1

**Total Units Required 28**

2) What changes, if any, have been made since the last Program Review?

With the number of classes offered each semester students have been able to complete both the AS degree in Welding and/or the Welding Certificate program in the two year time frame. *The addition of Weld 56, Blueprint Reading, to the Spring semesters increases this ability.*

3) How effective has the Two-Year Scheduling Plan been in meeting student needs and educational goals? If this is a degree or certificate pathway, can students complete in two years?

4) Reflecting on the responses above, what are the goals for the next program review cycle?

To increase the number of students enrolled and completing the degree and certificate programs in Welding. *Increasing the electrical power and ventilation in the Welding classroom will make this goal more achievable by allowing for increased enrollment.*

#### 4. Curriculum

A. List any new courses or program changes since the last program review. Be sure to include if any new courses have approved prerequisites or corequisites.

The department updated all course outlines with SLOs. One change was universal and mandated by the state to remove repeatability from courses. This was not shared with the Welding department as the department is all adjuncts and missed most of the discussions on this mandate. *Adding Weld 56 to all semesters allows more flexibility for the students since it is a required course.*

B. Verify currency of curriculum: Other than above, what changes have been made in the curriculum since the last full program review? (*Updates, delivery mode changes, archives, deletions, revisions, etc.*)

The curriculum for WELD was evaluated in 2014-2015– resulting in the new SLOs on the course outlines. The curriculum process at this time, relies on CTE training, program review and curriculum requirements. There is no standing curriculum discussion in the department because only adjuncts teach in the discipline.

1) **CURRICULUM CURRENCY:** Verify that all Transfer Level Courses are current and aligned for transfer. (May require reviewing ASSIST or meeting with Articulation Officer.)

2) **CURRICULUM DEVELOPMENT:** Verify that all textbooks on Course Outlines of Record (COR) are up to date. Normally, textbook editions should be within five years for articulation. (Contact Articulation Officer for additional information.)

C. List any courses not in full compliance with appropriate guidelines, including ASSIST, C-ID, Curriculum Committee, prerequisite validation, etc. (NOTE: Any courses that have not been updated in the past six years may not be in compliance. See Curriculum Manual or Articulation Officer for additional information, if necessary.)

All courses are in full-compliance at this time. Pre-requisites are in for validation at this time.

D. Curriculum Development: What is the plan for maintaining the currency and viability of your curriculum (*including all modes of delivery*)?

Welding is primarily hands -on and there are no clear plans to change mode of delivery at this time To off-set any repeatability changes due to the state mandate, the Welding department will review possibility of creating a “family” of courses to help increase skills for students and/or see if the welding courses meet the ‘recertification” criteria for classes that are repeatable. *Development of a Pipe Welding course to compliment the industry in the area. Also the development of a Robotic Welding course to keep up with present technology.*

#### 5. Internal Factors (see Handbook for additional information)

A. **Strengths:** Current aspects of the program or department that serve it and its future well. These aspects include what it does well, what it’s known for, what it takes pride in, and so forth. Strengths represent competencies or characteristics that the department or program may wish to enhance or preserve actively, even aggressively.

<p>Competent, experienced, well-educated faculty, trained <b><i>all</i></b> aspects of the welding trade to include welding processes, testing procedures, including destructive and non-destructive test procedures, familiar with many of the technical nuances of the welding industry.</p>	
<p><b>B. Weaknesses:</b> <i>The program or department’s internal vulnerabilities. These are areas that, if not addressed, could become liabilities, or could contribute to an erosion of the department’s capacities and future growth. They represent areas where the organization needs to improve if it is to be successful for the long term.</i></p>	
<p>Limited equipment due to need for <b><i>additional power and ventilation to utilize new equipment to increase enrollment</i></b>, as well as class room space for lecture capabilities as needed.</p>	

**6. External Factors** (see Handbook for additional information)

**A. Opportunities:** *Current trends and events occurring outside the department that, if taken advantage of, are likely to have a positive effect on its long-term success. Examples may include: realistic training opportunities; industry trends; revenue-generation opportunities; development of new tools or technology to help manage workload.*

<p>Business trends in the immediate area which link to job opportunities for students as they progress in their education toward graduation. <b><i>Employers in the the area including Santa Fe Railroad, Union Pacific Railroad, US Marine Corps Logistics Base, Moly Corp-Mountain Pass, County of San Bernardino Industrial Maitenance Mechanic training program, and other local welding facilities and businesses. Ft Irwin National Training Center, Southern Calif. Edison, Southwest Gas Co.,.</i></b></p>	
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**B. Threats:** *Current trends and events occurring outside the department or program that could jeopardize its success represent potential threats. Examples may include: state, regional, or institutional economic/budget climate; loss of support services; seasonal fluctuations in workload.*

<p>Fears of economic depression in this service area because job growth subsidies or doesn’t come to fruition at all.</p>	
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**7. Continuing Education/Professional Development**

**A. What continuing education and/or professional development activities have program/unit members attended during the current cycle?**

<p>WELD instructors regularly attend the Barstow Community College CTE training. In addition one instructor is currently American Welding Society certified as a Certified Welding Inspector. This qualifies the department to certify students in various welding processes through the AWS, <b><i>NCCER certified instructors.</i></b></p>	
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**B. How did this benefit your department and the College?**

<p><b><i>Meetings with Advisory Committee of area employers discussing employment opportunities as well as needed training we could provide. Biennial meetings.</i></b></p>	
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**C. What are the plans for continuing education and/or professional development in the upcoming cycle?**

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## 8. Prior Goals/Objectives

- Briefly summarize the progress your program has made in meeting the goals and objectives identified in the most recent Program Review or Annual Update. *(Include measurements of progress or assessment methods.)*
- If the program does not have prior goals and objectives, please explain.

## 9. Goals/Objectives/Actions (ACTION PLAN)

- GOALS:** Formulate Program Goals to maintain or enhance program strengths, or to address identified weaknesses.
- ALIGNMENT:** Indicate how each Goal is aligned with the College’s Strategic Priorities.
- OBJECTIVES:** Define Objectives for reaching each Goal.
- ACTIONS/TASKS REQUIRED TO ACHIEVE OBJECTIVE:** Create a coherent set of specific steps (Actions/Tasks) that must be taken to achieve each Objective.
- OUTCOMES:** State intended Outcomes and list appropriate measures and assessment methods for each Outcome.
- ADDITIONAL INFORMATION:** This area provides for the additional communication of information necessary to further “close the loop” on the goal or action plan, as it relates to Institutional Planning. This may include references to other institutional documents, such as governing or compliance documents (i.e. Board Policy, Administrative Procedures, Title V), institutional planning documents (i.e. Strategic Plan, Educational Master Plan, Facilities Plan, Technology Plan), or Board, Presidential, Supervisory or Departmental recommendations or goals, etc. *(See Handbook for additional examples.)*

Complete the following table with your Program’s ACTION PLAN, which must include a minimum of 3 goals:

ACTION PLAN					
GOAL	ALIGNMENT WITH BCC STRATEGIC PRIORITIES	OBJECTIVE	ACTIONS/TASKS REQUIRED TO ACHIEVE OBJECTIVE	OUTCOMES, MEASURES, and ASSESSMENT	
#1	<p><b>Attract more Students</b></p> <p><i>List all that apply:</i></p> <ul style="list-style-type: none"> <li>- <b>Foster</b> innovative learning environment</li> <li>- <b>Provide</b> Successful college learning experience</li> <li>- <b>Promote</b> and support student engagement</li> <li>- <b>Cultivate</b> and enhance local partnerships</li> <li>- <b>Attract</b>/develop excellent employees</li> <li>- <b>Strengthen</b> college planning/decision making</li> </ul>	#1	<p><b>#1 Continue to improve dialogue with local businesses through use of the Advisory committee and feed back from students and businesses.</b></p>	<p>- Work with dean of CTE to outreach at employment summits</p> <p><b>Attend trade shows, expos, and demonstrations of new innovations.</b></p> <p><b>Communicate with other community college welding programs for new insights.</b></p>	<p><b>OUTCOMES:</b> Business helping inform employees of welding program</p> <p><b>MEASURES:</b></p> <p><b>ASSESSMENT:</b> Enrollment numbers and Class survey on why students are taking class and where they heard about the program.</p> <p><b>Employer feed back.</b></p>
		#2	<p><b>#2 Have counselors and other student contacts become more engaged in the welding department goals</b></p>	<p>- Outreach to other areas on campus by attending meetings when possible or trying alternative methods of discussions if necessary.</p>	<p><b>OUTCOMES:</b> more students being informed of welding program</p> <p><b>MEASURES:</b></p> <p><b>ASSESSMENT:</b> Enrollment numbers and Class survey on why students are taking class and where they heard about the program.</p> <p><b>Employer feed back.</b></p>
		#3	<p><b>#3 Promote in the community</b></p>	<p>Work with dean of CTE to outreach and Public Information officer to promote in more venues or in more way: <b>Advisory committee, media advertising.</b></p>	<p><b>OUTCOMES:</b> More community acknowledgement of welding program</p> <p><b>MEASURES:</b></p> <p><b>ASSESSMENT:</b> Enrollment numbers and Class survey on why students are taking class and where they heard about the program.</p> <p><b>Employer feed back..</b></p>
	<b>Additional Information:</b>				

ACTION PLAN				
GOAL	ALIGNMENT WITH BCC STRATEGIC PRIORITIES	OBJECTIVE	ACTIONS/TASKS REQUIRED TO ACHIEVE OBJECTIVE	OUTCOMES, MEASURES, and ASSESSMENT
<b>#2</b> Increase welding equipment to accommodate increased enrollment. <u>Increased electrical power and ventilation needed to utilize new equipment purchases</u>	<i>List all that apply:</i> - Foster innovative learning environment - Provide Successful college learning experience - Promote and support student engagement - Strengthen college planning/ decision making	<b>#1</b> #1 To increase students time in welding activity.	<i>Funding will be needed to upgrade power and ventilation needs.</i>	<i>Outcomes: Can be obtained without over extending budget needs of the college.</i>
		<b>#2</b> #2 To update and upgrade the weld lab equipment.	Through grants or donations from local businesses.	Assessment: Will be an increase in student success rates overall Surveys of local business will attest to these successes.
		<b>#3</b> #3 To improve and modernize to industry standards to benefit the student upon graduation.	Also from other educational oriented companies or organizations.	
<i>Additional Information:</i>				
<b>#3</b> Lecture area provided in shop/lab area with environmental consideration for noise and air pollution. <u>Additional restroom facilities to accommodate students.</u>	<i>List all that apply:</i> - Foster innovative learning environment - Provide Successful college learning experience - Promote and support student engagement	<b>#1</b> #1 Increases instructional capabilities by allowing lectures for one welding process be conducted while others are working in the shop areas.	<u>Construction of walls, etc. using construction class students to build and learn.</u>	<i>Outcomes: Costs could be minimal if college used this as a learning experience for construction students.</i>
		<b>#2</b> #2 Environmentally safe for student learning.	Noise and air pollution decreased	Assessment: Again will be seen by overall enrollment and success of students.
		<b>#3</b> #3 Quiet atmosphere for learning objectives	Noise and air pollution decreased	
<i>Additional Information:</i>				



## 10. Resources Required

List all significant resources needed to achieve the objectives shown in the table above, including personnel, training, technology, information, equipment, supplies, and space. Every request for additional resources must support at least one objective.

Also list any resources required to implement planned improvements noted in 3.C.3)

**IMPORTANT:** A **BUDGET ALLOCATION PROPOSAL** must be completed and submitted for **EACH** new resource requested.

Goal #	Objective #	Resource Required	Estimated Cost	BAP Required? Yes or No	If No, indicate funding source
1	1,2,3	Time and support for outreach – also holding meetings with counselors and other key contacts on campus and in the community	????		
2.		<u>Electrical and ventilation needed.</u>	<u>\$130,000</u>		
3.		Increased quiet lecture space.	Minimal if undertaken by a college course in construction trades.		

Annual Update #1	Academic Year: <input style="width: 90%;" type="text"/>
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**1. Progress on Program Level Outcomes (PLOs) and Student Learning Outcomes (SLOs)  
(from #3B of full PR)**

A) List your Program Level Outcomes:

B) Summarize the progress you have made on Program Level Outcomes (PLOs):

C) Summarize the progress you have made on course level outcomes and assessments (SLOs):

D) Describe any program, course, and/or instructional changes made by your program as a result of the outcomes assessment process.

E) Reflecting on the responses for B) and C) above, what will you implement for the next assessment cycle?

**2. GOALS AND OBJECTIVES (Taken From #9--Action Plan--of FULL Program Review)**

	GOAL	OBJECTIVE	ACTIONS/TASKS REQUIRED TO ACHIEVE OBJECTIVE	OUTCOMES, MEASURES, and ASSESSMENT
<b>#1</b>		#1		
		#2		
		#3		

**Goal #1 Annual Update:** (Assess progress made toward goal attainment)

GOAL		OBJECTIVE	ACTIONS/TASKS REQUIRED TO ACHIEVE OBJECTIVE	OUTCOMES, MEASURES, and ASSESSMENT
#2		#1		
		#2		
		#3		

**Goal #2 Annual Update:** (Assess progress made toward goal attainment)

GOAL		OBJECTIVE	ACTIONS/TASKS REQUIRED TO ACHIEVE OBJECTIVE	OUTCOMES, MEASURES, and ASSESSMENT
#3		#1		
		#2		
		#3		

**Goal #3 Annual Update:** (Assess progress made toward goal attainment)

### 3. Resources Required

List all significant resources needed to achieve the objectives shown in your action plan, including personnel, training, technology, information, equipment, supplies, and space. Every request for additional resources must support at least one objective.

Also list any resources required to implement planned improvements noted in 3.C.3)

**IMPORTANT:** A **BUDGET ALLOCATION PROPOSAL** must be completed and submitted for **EACH** new resource requested.

Goal #	Objective #	Resource Required	Estimated Cost	BAP Required? Yes or No	If No, indicate funding source

<b>Annual Update #2</b>	Academic Year: <input style="width: 90%;" type="text"/>
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**1. Progress on Program Level Outcomes (PLOs) and Student Learning Outcomes (SLOs)  
(from #3B of full PR)**

A) List your Program Level Outcomes:

B) Summarize the progress you have made on Program Level Outcomes (PLOs):

C) Summarize the progress you have made on course level outcomes and assessments (SLOs):

D) Describe any program, course, and/or instructional changes made by your program as a result of the outcomes assessment process.

E) Reflecting on the responses for B) and C) above, what will you implement for the next assessment cycle?

**2. GOALS AND OBJECTIVES (Taken From #9--Action Plan--of FULL Program Review)**

	GOAL	OBJECTIVE	ACTIONS/TASKS REQUIRED TO ACHIEVE OBJECTIVE	OUTCOMES, MEASURES, and ASSESSMENT
<b>#1</b>		<b>#1</b>		
		<b>#2</b>		
		<b>#3</b>		

**Goal #1 Annual Update:** (Assess progress made toward goal attainment)



GOAL		OBJECTIVE	ACTIONS/TASKS REQUIRED TO ACHIEVE OBJECTIVE	OUTCOMES, MEASURES, and ASSESSMENT
#2		#1		
		#2		
		#3		

**Goal #2 Annual Update:** (Assess progress made toward goal attainment)

GOAL		OBJECTIVE	ACTIONS/TASKS REQUIRED TO ACHIEVE OBJECTIVE	OUTCOMES, MEASURES, and ASSESSMENT
#3		#1		
		#2		
		#3		

**Goal #3 Annual Update:** (Assess progress made toward goal attainment)

### 3. Resources Required

List all significant resources needed to achieve the objectives shown in your action plan, including personnel, training, technology, information, equipment, supplies, and space. Every request for additional resources must support at least one objective.

Also list any resources required to implement planned improvements noted in 3.C.3)

**IMPORTANT:** A **BUDGET ALLOCATION PROPOSAL** must be completed and submitted for **EACH** new resource requested.

Goal #	Objective #	Resource Required	Estimated Cost	BAP Required? Yes or No	If No, indicate funding source