Part 2 – Comprehensive Program Review Fall 2009

Program Name: **Air Conditioning**

A. PAST: Review of Program Performance, Objectives, and Outcomes for the Three Previous Academic Years: 2006-07, 2007-08, 2008-09

1. List the objectives developed for this program during the last comprehensive program review.

   The main program objectives of the air conditioning program during the academic years 2005-2008 were to:

   1. To enhance the institution's planning effort.
   2. To develop and implement marketing public relations plan.
   3. To improve student access to the college's educational programs using technology and innovative instructional methods.
   4. To develop partnerships with business and industry.
   5. To increase course offerings and enhance educational opportunities.

2. Present program performance data in tabular form for the previous three years that demonstrates the program's performance toward meeting the previous objectives. Include the following standard program performance metrics as well additional program specific metrics, if any.
   a. For teaching programs this data should include at least the following: Enrollment at census, number of sections, fill rate, retention rate, success rate, and grade distribution for each course in the program, during each semester and session of the previous three academic years. In addition, the Full Time Equivalent Faculty (FTEF) and Full Time Equivalent Students (FTES) and the ratio of FTES per FTEF should be presented for the program for each semester and session.
   b. For non teaching programs this data should include the following: TBD

Air Conditioning and Refrigeration Program
Enrollment Count at Census

Course	Fall				Spring				Summer				Winter				Grand Total
	2007	2008	2009	Total	2007	2008	2009	Total	2007	2008	2009	Total	2007	2008	2009	Total	
ACR 101		23	21	44	17	16	33	66									110
ACR 102	40	26		66			16	16							14	14	96
ACR 103		9	19	28	34	11	13	58	18			18	11			11	115
ACR 104	16	10	13	39	33	8		41									80
ACR 105	15		12	27	21			21		20		20					68
ACR 106			15	15	10	23	14	47									62
Total	71	68	80	219	115	58	76	249	18	20		38	11		14	25	531

Air Conditioning and Refrigeration Program
Number of Sections

Course	Fall				Spr.				Sum.				Win.				Grand Total
	2006	2007	2008	Total	2007	2008	2009	Total	2007	2008	2009	Total	2007	2008	2009	Total	
ACR 101		1	1	2	1	1	2	4									6
ACR 102	2	2		4			1	1							1	1	6
ACR 103		1	1	2	1	1	1	3	1			1	1			1	7
ACR 104	1	1	1	3	2	1		3									6
ACR 105	1		1	2	1			1		1		1					4
ACR 106			1	1	1	1	1	3									4

Total	4	5	5	14	6	4	5	15	1	1		2	1		1	2	33

Air Conditioning and Refrigeration Program
Fill Rate

Course	Fall				Spring				Summer				Winter				Grand Total
	2006	2007	2008	Total	2007	2008	2009	Total	2007	2008	2009	Total	2007	2008	2009	Total	
ACR 101		115%	105%	110%	85%	80%	83%	83%									92%
ACR 102	100%	65%		83%			80%	80%							70%	70%	80%
ACR 103		45%	95%	70%	170%	55%	65%	97%	90%			90%	55%			55%	82%
ACR 104	80%	50%	65%	65%	83%	40%		68%									67%
ACR 105	75%		60%	68%	105%			105%		100%		100%					85%
ACR 106			75%	75%	50%	115%	70%	78%									78%
Total	89%	68%	80%	78%	96%	73%	76%	83%	90%	100%		95%	55%		70%	63%	80%

Air Conditioning and Refrigeration Program
Student Success Rate

Course	Fall				Spring				Summer				Winter				3-Year Average
	2006	2007	2008	Avg.	2007	2008	2009	Avg.	2007	2008	2009	Avg.	2007	2008	2009	Avg.	
ACR101		78%	76%	77%	76%	56%	79%	71%									73%
ACR102	85%	85%		85%			81%	81%							86%	86%	84%
ACR103		56%	79%	67%	76%	64%	62%	67%	78%			78%	45%			45%	66%
ACR104	88%	80%	71%	80%	87%	75%		81%									80%
ACR105	80%		67%	73%	95%			95%		95%		95%					84%
ACR106			73%	73%	80%	78%	79%	79%									78%

Avg.	84%	75%	73%	76%	83%	68%	75%	76%	78%	95%		86%	45%		86%	66%	76%

Air Conditioning and Refrigeration Program
Student Retention Rate

Course	Fall				Spring				Summer				Winter				3-Yr. Average
	2006	2007	2008	Avg.	2007	2008	2009	Avg.	2007	2008	2009	Avg.	2007	2008	2009	Avg.	
ACR101		91%	95%	93%	88%	88%	82%	86%									89%
ACR102	95%	92%		94%			81%	81%							93%	93%	90%
ACR103		67%	95%	81%	100%	82%	69%	84%	78%			78%	82%			82%	82%
ACR104	88%	90%	93%	90%	90%	100%		95%									92%
ACR105	87%		92%	89%	95%			95%		95%		95%					92%
ACR106			87%	87%	90%	96%	86%	90%									90%
Avg.	90%	85%	92%	89%	93%	91%	80%	88%	78%	95%		86%	82%		93%	87%	88%

Grade Distribution

Term	Sem.	Year	Program	Course	A	B	C	CR	D	F	Other	W	Total	# Succeed	Success Rate	Retention Rate
200710	Fall	2006	ACR	ACR102	12	13	9		2	2		2	40	34	85.0%	95.0%
200710	Fall	2006	ACR	ACR104	4	9	1					2	16	14	87.5%	87.5%
200710	Fall	2006	ACR	ACR105	4	4	4			1		2	15	12	80.0%	86.7%
200715	Win.	2007	ACR	ACR103		3	2		1	3		2	11	5	45.5%	81.8%
200720	Spr.	2007	ACR	ACR101	1	9	3		1	1		2	17	13	76.5%	88.2%
200720	Spr.	2007	ACR	ACR103	6	2	5		1	3			17	13	76.5%	100.0%
200720	Spr.	2007	ACR	ACR104	1	12	14			1		3	31	27	87.1%	90.3%
200720	Spr.	2007	ACR	ACR105	10	5	5					1	21	20	95.2%	95.2%

200720	Spr.	2007	ACR	ACR106	2	4	2			1		1	10	8	80.0%	90.0%
200730	Sum.	2007	ACR	ACR103	2	8	4					4	18	14	77.8%	77.8%
200810	Fall	2007	ACR	ACR101	7	9	2			3		2	23	18	78.3%	91.3%
200810	Fall	2007	ACR	ACR102	3	11	8		1	1		2	26	22	84.6%	92.3%
200810	Fall	2007	ACR	ACR103		4	1			1		3	9	5	55.6%	66.7%
200810	Fall	2007	ACR	ACR104	2	4	2		1			1	10	8	80.0%	90.0%
200820	Spr.	2008	ACR	ACR101	4	2	3			5		2	16	9	56.3%	87.5%
200820	Spr.	2008	ACR	ACR103	4	1	2		1	1		2	11	7	63.6%	81.8%
200820	Spr.	2008	ACR	ACR104	3	1	2		1	1			8	6	75.0%	100.0%
200820	Spr.	2008	ACR	ACR106	5	8	5			4		1	23	18	78.3%	95.7%
200830	Sum.	2008	ACR	ACR105	8	7	4					1	20	19	95.0%	95.0%
200910	Fall	2008	ACR	ACR101	3	6	7		2	2		1	21	16	76.2%	95.2%
200910	Fall	2008	ACR	ACR103	6	1	8		2	1		1	19	15	78.9%	94.7%
200910	Fall	2008	ACR	ACR104	3	3	4		3			1	14	10	71.4%	92.9%
200910	Fall	2008	ACR	ACR105	2	4	2		2	1		1	12	8	66.7%	91.7%
200910	Fall	2008	ACR	ACR106	3	4	4		2			2	15	11	73.3%	86.7%
200915	Win.	2009	ACR	ACR102	7	2	3		1			1	14	12	85.7%	92.9%
200920	Spr.	2009	ACR	ACR101	5	7	14				1	6	33	26	78.8%	81.8%
200920	Spr.	2009	ACR	ACR102	3	7	3					3	16	13	81.3%	81.3%
200920	Spr.	2009	ACR	ACR103			8		1			4	13	8	61.5%	69.2%
200920	Spr.	2009	ACR	ACR106	7	2	2		1			2	14	11	78.6%	85.7%
					117	152	133	0	23	32	1	55	513	402		

Air Conditioning and Refrigeration Program
Full Time Equivalent Student (FTEs)

Course	Fall				Spring				Summer				Winter				Grand Total
	2006	2007	2008	Total	2007	2008	2009	Total	2007	2008	2009	Total	2007	2008	2009	Total	
ACR 101		3.8	3.5	7.2	2.8	2.6	5.4	10.9									18.1
ACR 102	6.6	4.3		10.9			2.4	2.4							2.5	2.5	15.8
ACR 103		1.4	3.1	4.5	2.6	1.7	2.1	6.4	3.5			3.5	1.9			1.9	16.3
ACR 104	2.6	1.6	2.1	6.4	5.4	1.3		6.7									13.2
ACR 105	0.9		0.7	1.6	1.3			1.3		1.4		1.4					4.3
ACR 106			2.3	2.3	1.5	3.8	2.3	7.6									9.9
Total	10.1	11.1	11.7	33.0	13.6	9.4	12.3	35.3	3.5	1.4		4.8	1.9		2.5	4.4	77.5

Air Conditioning and Refrigeration Program
Full Time Equivalent Faculty (FTEf)

Course	Fall				Spring				Summer				Winter				Grand Total
	2006	2007	2008	Total	2007	2008	2009	Total	2007	2008	2009	Total	2007	2008	2009	Total	
ACR 101		0.3	0.3	0.7	0.3	0.3	0.7	1.3									2.0
ACR 102	0.7	0.7		1.3			0.3	0.3							0.3	0.3	2.0
ACR 103		0.3	0.3	0.7	0.3	0.3	0.3	1.0	0.3			0.3	0.3			0.3	2.3
ACR 104	0.3	0.3	0.3	1.0	0.7	0.3		1.0									2.0
ACR 105	0.1		0.1	0.3	0.1			0.1		0.1		0.1					0.5
ACR 106			0.3	0.3	0.3	0.3	0.3	1.0									1.3
Total	1.1	1.7	1.5	4.3	1.8	1.3	1.7	4.8	0.3	0.1		0.5	0.3		0.3	0.7	10.2

Air Conditioning and Refrigeration Program FTEs per FTEf																	
Course	Fall				Spring				Summer				Winter				Overall Avg.
	2006	2007	2008	Avg.	2007	2008	2009	Avg.	2007	2008	2009	Avg.	2007	2008	2009	Avg.	
ACR 101		11.4	10.4	10.9	8.4	7.9	8.1	8.1									9.1
ACR 102	9.9	6.4		8.1			7.3	7.3							7.4	7.4	7.9
ACR 103		4.1	9.4	6.8	7.8	5.0	6.4	6.4	10.4			10.4	5.8			5.8	7.0
ACR 104	7.9	4.9	6.4	6.4	8.1	3.9		6.7									6.6
ACR 105	6.9		5.5	6.2	9.6			9.6		10.3		10.3					8.1
ACR 106			6.8	6.8	4.6	11.4	6.9	7.6									7.4
Avg.	8.9	6.6	8.0	7.7	7.6	7.1	7.4	7.4	10.4	10.3		10.4	5.8		7.4	6.6	7.6

3. Present student learning or service area outcomes data that demonstrate the program's continuous educational and/or service quality improvement. Include the following standard information and metrics as well as additional program specific metrics, if any.
   List the program level outcomes, goals or objectives and show how these support the Institutional Student Learning Outcomes. Identify the method(s) of assessment used for each of the program level outcomes. Provide a summary of the outcome data for the program, including course and program level data as appropriate.

   - SLOs were identified ACR 101, 102, 103, 104, 105 and 106 in the Fall 2008 semester
   - SLOs were assessed in the Spring 09 semester

4. Analyze the data presented visually (graphs, diagrams, etc.) and verbally (text) as appropriate, present any trends, anomalies, and conclusions. Explain the program's success or failure in meeting the objectives presented above in item one. Explain the ways that the program utilized the student learning or service area outcome data presented in item three to improve the program (changes to curriculum, instructional methodology, support services, etc.)

a. The faculty for the AC program is active in a variety of ways to participate in the college's planning process for the purpose of program improvement. The advisory committee is made up of industry professionals that evaluate the content of the program that ensures that it meets industry needs. The committee meets twice per year with faculty facilitating the meetings and agenda.
   Faculty is also involved internally with the college's customer service committee. Although the function of the committee is to create a better working environment, the faculty participation promotes harmony and collegiality that can translate into educational value.
b. A new brochure was developed by the faculty to create interest in the community and as a recruitment tool. Schools from all K-12 levels were visited to present demonstrations for students and create interest.
c. Faculty spent one semester at UC Santa Barbara completing a solar energy technology class and assist in the development of new courses. The number of course offerings in the last three academic years did not increase significantly, but remained constant due to limited number of adjunct faculty available. The limited course offerings due create a benefit of high fill rates for most classes. Technology and equipment was purchased to increase educational value and increase accessibility for students.
d. Industry was very generous in equipment and donations for instructional materials. They are also frequent guest speakers to give students the latest information available on the industry. Faculty "job shadowed" with private industry in order to connect the content of our courses with industry needs.
e. During the academic years 2005-06, 2006-07, 2007-08 class sections have been successfully offered at different times throughout the schedule. During the Fall and Spring semesters classes have been offered at 8:30 am, 1:30pm and 6:30 pm Monday through Thursday and on Saturday morning. ACR courses are offered every Winter and Summer sessions. Courses are schedule so Imperial Valley College students can achieve/earn a Certificate of Air Conditioning in as little as two semesters.

<u>Additional information</u>

B. PRESENT: Snapshot of the State of the Program in the Current Semester: Fall 2009

1. Give a verbal description of the program as it exists at the present time. Include information on current staffing levels, current student enrollments, student learning or service are outcome implementation, number of majors, and/or other data as appropriate.

   The most urgent and visible deficiency in our program are facilities. The program operates in a 50 year old building with limited space and laboratories. The environment is not very conducive to modern high tech learning. Currently air conditioning classes are taught by one full-time faculty member teaching 5 of 6 sections per semester Spring and Fall, and one section per Winter and Summer.

There is an average program fill rate of 80 %. We currently offer a certificate and degree in air conditioning. We are a Recognized training and testing facility for (NATE) North American Technician excellence.

2. Verbally describe any outside factors that are currently affecting the program. (For example: changes in job market, changing technologies, changes in transfer destinations, etc.)

   The program is being affected in a positive way by the down turn in the job market. We have printed flyers and brochures to promote enrollment in air conditioning program. Student enrollment is up as students prepare themselves to be employable when the job market returns. 50% of our students are presently employed and seek to upgrade their skills.

3. List any significant issues or problems that the program is immediately facing.

   The program is immediately facing a shortage of lab space that is needed to accommodate future anticipated growth of program. Additional adjunct faculty member will need to be hired.

C. FUTURE: Program Objectives for the Next Three Academic Years: 2009-10, 2010-11, 2011-12

1. Identify the program objectives for the next three academic years, making sure these objectives are consistent with the college's Educational Master Plan goals. Include how accomplishment is to be identified or measured and identify the planned completion dates. If any objectives are anticipated to extend beyond this three-year period, identify how much is to be accomplished by the end of this review period and performance measures.

   Hire an additional part time adjunct faculty member by Fall 2010.

   - Improve student success rate through the implementation of SLOs that will gage student success.
   - Increase SLOs from one for course to three per course.
   - Develop internship program for air conditioning student, placing them into local businesses Fall 2010.
   - Have the air conditioning program certified of accredited by a national organization by Fall of 2011.

2. Identify how student learning or service area outcomes will be expanded and fully implemented into the program. Include a progress timeline for implementation and program improvement.

   Initial student learning outcomes are being implemented in all six air conditioning courses by 2008-09. Assessments of SLOs measured in Fall 2008 were made in Spring of 2009. The program intends to add multiple SLOs in each course during the next two years, and integrate the SLOs in the general education program path.

3. Identify any resources needed to accomplish these objectives. Identify any obstacles toward accomplishment and the plan to surmount these obstacles.

   The cost of a new facility may be outside the scope of the CPR and will cost millions of dollars. Funding will be necessary for newer equipment in including spot welder, sheet metal equipment, and the latest air conditioning test equipment. About $100,000 is necessary for these purchases. As the funding opportunities decrease, it will become more challenging to purchase the equipment necessary to maintain the curriculum consistent with industry need. The present classroom lab will need to be expanded to accommodate this objective, using district and VATEA funds the proper equipment and tools can be set in place and prepare the lab to be certified or accredited.
   The air conditioning program curriculum has been aligned to meet the qualifications that are needed to reach this goal by Fall 2011.

4. Identify any outside factors that might influence your program during the next three years.

   Over the next three years it is anticipated that there will be a steady growth in the program, as the job market returns. This program is aligned with green and renewable energy, and green building which is expected to grow.