Part 2 – Comprehensive Program Review Fall 2009

Program Name: Building Construction Technology

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 objectives of the building construction program during the Academic Years 2005-2007 were to:

1. **Increase student enrollment in the classes and increase the use of technology in the classrooms.**
2. **Improve student retention and success**.

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

Building Construction Program
Enrollment Count at Census

Course	Fall				Spring				Summer				Winter				Grand Total
	2006	2007	2008	Total	2007	2008	2009	Total	2007	2008	2009	Total	2007	2008	2009	Total	
BLDC 110	19	18	16	53	17	12	9	38									91
BLDC 130					10	15	9	34									34

BLDC 140	17	9		26													26
BLDC 145	14	9	8	31	12			12									43
BLDC 150			15	15													15
BLDC 160					7			7									7
BLDC 180	16	18	9	43													43
BLDC 185							19	19									19
BLDC 190							25	25	16			16					41
BLDC 200	12			12													12
BLDC 201										12		12					12
BLDC 210		5		5									12			12	17
Total	Revi78	59	48	185	46	27	62	135	16	12		28	12			12	360

Building Construction Program
Number of Sections

Course	Fall				Spr.				Sum.				Win.				G
	2006	2007	2008	Total	2007	2008	2009	Total	2007	2008	2009	Total	2007	2008	2009	Total	
BLDC 110	1	1	1	3	2	1	1	4									
BLDC 130					1	1	1	3									
BLDC 140	1	1		2													
BLDC 145	1	1	1	3	1			1									
BLDC 150			1	1													
BLDC 160					1			1									
BLDC 180	1	1	1	3													

BLDC 185							1	1								
BLDC 190							1	1	1			1				
BLDC 200	1			1												
BLDC 201										1		1				
BLDC 210		1		1									1			1
Total	5	5	4	14	5	2	4	11	1	1		2	1			1

Building Construction 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	
BLDC 110	119%	113%	100%	110%	53%	75%	56%	59%									81%
BLDC 130					63%	94%	56%	71%									71%
BLDC 140	106%	56%		81%													81%
BLDC 145	88%	56%	50%	65%	75%			75%									67%
BLDC 150			94%	94%													94%
BLDC 160					44%			44%									44%
BLDC 180	100%	113%	56%	90%													90%
BLDC 185							119%	119%									119%
BLDC 190							156%	156%	100%			100%					128%
BLDC 200	75%			75%													75%
BLDC 201										75%		75%					75%
BLDC 210		31%		31%									75%			75%	53%

Building Construction 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			

BLDC110	74%	83%	69%	75%	59%	83%	78%	73%						
BLDC130					90%	93%	100%	94%						
BLDC140	71%	78%		74%										
BLDC145	79%	67%	100%	82%	75%			75%						
BLDC150			87%	87%										
BLDC160					86%			86%						
BLDC165						100%		100%						
BLDC180	63%	72%	22%	52%										
BLDC185						100%	89%	95%						
BLDC190							72%	72%	94%			94%		
BLDC200	58%			58%										
BLDC201										92%		92%		
BLDC210		80%		80%									92%	
Avg.	69%	76%	69%	72%	77%	94%	85%	85%	94%	92%		93%	92%	

Building Construction 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.	
BLDC110	95%	83%	88%	89%	71%	83%	100%	85%									87%
BLDC130					90%	93%	100%	94%									94%
BLDC140	88%	78%		83%													83%
BLDC145	93%	67%	100%	87%	92%			92%									88%
BLDC150			100%	100%													100%
BLDC160					100%			100%									100%
BLDC165						100%		100%									100%
BLDC180	94%	78%	56%	76%													76%
BLDC185						100%	89%	95%									95%
BLDC190							88%	88%	94%			94%					91%
BLDC200	92%			92%													92%
BLDC201										92%		92%					92%

BLDC210		80%		80%									92%			92%	86%
Avg.	92%	77%	86%	85%	88%	94%	94%	92%	94%	92%		93%	92%			92%	89%

Grade Distribution

Term	Sem.	Year	Program	Course	A	B	C	CR	D	F	Other	W	Total	# Succeed	Success Rate	Retention Rate
200710	Fall	2006	BLDC	BLDC110	1	12	1			4		1	19	14	73.7%	94.7%
200710	Fall	2006	BLDC	BLDC140	2	7	3		1	2		2	17	12	70.6%	88.2%
200710	Fall	2006	BLDC	BLDC145	1	8	2		1	1		1	14	11	78.6%	92.9%
200710	Fall	2006	BLDC	BLDC180	3	6	1			5		1	16	10	62.5%	93.8%
200710	Fall	2006	BLDC	BLDC200	5	1	1			4		1	12	7	58.3%	91.7%
200715	Win.	2007	BLDC	BLDC210	8	3						1	12	11	91.7%	91.7%
200720	Spr.	2007	BLDC	BLDC110	5	4	1		1	1		5	17	10	58.8%	70.6%
200720	Spr.	2007	BLDC	BLDC130	6	2	1					1	10	9	90.0%	90.0%
200720	Spr.	2007	BLDC	BLDC145	6	1	2		2			1	12	9	75.0%	91.7%
200720	Spr.	2007	BLDC	BLDC160	3	2	1			1			7	6	85.7%	100.0%
200730	Sum.	2007	BLDC	BLDC190	11	2	2					1	16	15	93.8%	93.8%
200810	Fall	2007	BLDC	BLDC110	4	5	6					3	18	15	83.3%	83.3%
200810	Fall	2007	BLDC	BLDC140	3	3	1					2	9	7	77.8%	77.8%
200810	Fall	2007	BLDC	BLDC145	2		2					2	6	4	66.7%	66.7%
200810	Fall	2007	BLDC	BLDC180	7	4	2		1			4	18	13	72.2%	77.8%
200810	Fall	2007	BLDC	BLDC210	1	1	2					1	5	4	80.0%	80.0%
200820	Spr.	2008	BLDC	BLDC110	6	1	3					2	12	10	83.3%	83.3%
200820	Spr.	2008	BLDC	BLDC130	8	3	3					1	15	14	93.3%	93.3%
200820	Spr.	2008	BLDC	BLDC165	5	3	2						10	10	100.0%	100.0%
200820	Spr.	2008	BLDC	BLDC185	1	5	3						9	9	100.0%	100.0%
200830	Sum.	2008	BLDC	BLDC201	5	3	3					1	12	11	91.7%	91.7%
200910	Fall	2008	BLDC	BLDC110	5	3	3			3		2	16	11	68.8%	87.5%
200910	Fall	2008	BLDC	BLDC145	3	4	1						8	8	100.0%	100.0%
200910	Fall	2008	BLDC	BLDC150	8	4	1			2			15	13	86.7%	100.0%
200910	Fall	2008	BLDC	BLDC180	2				3			4	9	2	22.2%	55.6%

200920	Spr.	2009	BLDC	BLDC110	4	1	2		1	1			9	7	77.8%	100.0%
200920	Spr.	2009	BLDC	BLDC130	3	5	1						9	9	100.0%	100.0%
200920	Spr.	2009	BLDC	BLDC185	10	7						2	19	17	89.5%	89.5%
200920	Spr.	2009	BLDC	BLDC190	10	7	1		4			3	25	18	72.0%	88.0%
					138	107	51		14	24		42	376	296		

Building Construction 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	200
BLDC 110	3.1	3.2	2.8	9.1	2.8	2.0	1.5	6.3									
BLDC 130					2.6	3.9	2.4	8.9									
BLDC 140	2.8	1.5		4.3													
BLDC 145	2.3	0.9	1.2	4.5	2.0			2.0									
BLDC 150			4.4	4.4													
BLDC 160					1.2			1.2									
BLDC 180	2.6	3.2	1.4	7.2													
BLDC 185							5.6	5.6									
BLDC 190							4.2	4.2	3.1			3.1					
BLDC 200	2.8			2.8													
BLDC 201										2.3		2.3					
BLDC 210		0.8		0.8													2
Total	13.6	9.6	9.8	33.1	8.5	5.9	13.6	28.1	3.1	2.3		5.4					2

Building Construction 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	
BLDC 110	0.3	0.3	0.3	1.0	0.7	0.3	0.3	1.3									2.3
BLDC 130					0.5	0.5	0.5	1.6									1.6

BLDC 140	0.3	0.3		0.7													0.7
BLDC 145	0.3	0.3	0.3	1.0	0.3			0.3									1.3
BLDC 150			0.5	0.5													0.5
BLDC 160					0.3			0.3									0.3
BLDC 180	0.3	0.3	0.3	1.0													1.0
BLDC 185							0.5	0.5									0.5
BLDC 190							0.5	0.5	0.5			0.5					0.9
BLDC 200	0.4			0.4													0.4
BLDC 201										0.3		0.3					0.3
BLDC 210		0.3		0.3									0.3			0.3	0.7
Total	1.7	1.7	1.5	4.9	1.9	0.9	1.9	4.6	0.5	0.3		0.8	0.3			0.3	10.7

Building Construction 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.	
BLDC 110	9.4	9.5	8.5	9.1	4.2	6.0	4.5	4.7									6.6
BLDC 130					4.9	7.4	4.4	5.6									5.6
BLDC 140	8.4	4.4		6.4													6.4
BLDC 145	6.9	2.8	3.7	4.5	5.9			5.9									4.8
BLDC 150			8.2	8.2													8.2
BLDC 160					3.5			3.5									3.5
BLDC 180	7.9	9.5	4.1	7.2													7.2
BLDC 185							10.4	10.4									10.4
BLDC 190							9.0	9.0	6.6			6.6					7.8
BLDC 200	6.9			6.9													6.9
BLDC 201										6.9		6.9					6.9
BLDC 210		2.5		2.5									6.3			6.3	4.4
Avg.	7.9	5.8	6.4	6.7	4.6	6.9	7.3	6.1	6.6	6.9		6.7	6.3			6.3	6.4

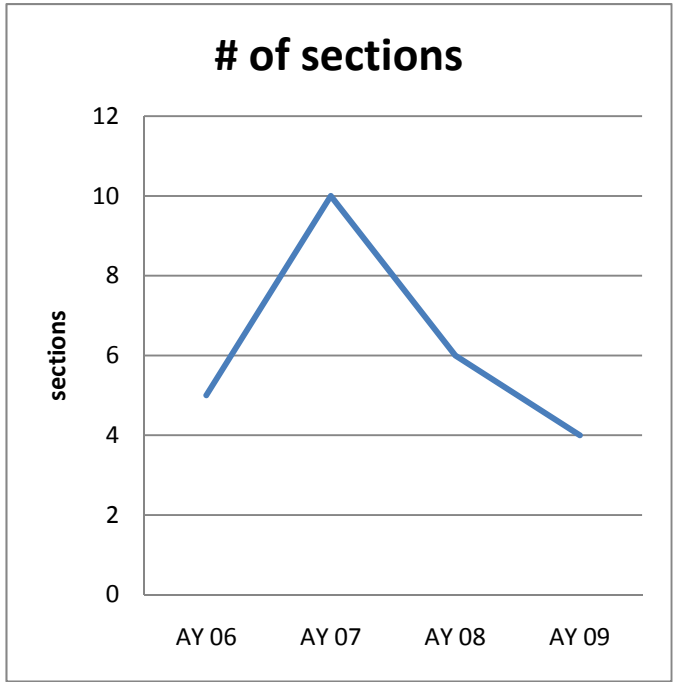
3. Present student learning or service area outcomes data that demonstrate the program's continuous educational and/or service quality improvement. Include the following standard information and metrics as well as additional program specific metrics, if any.

   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.

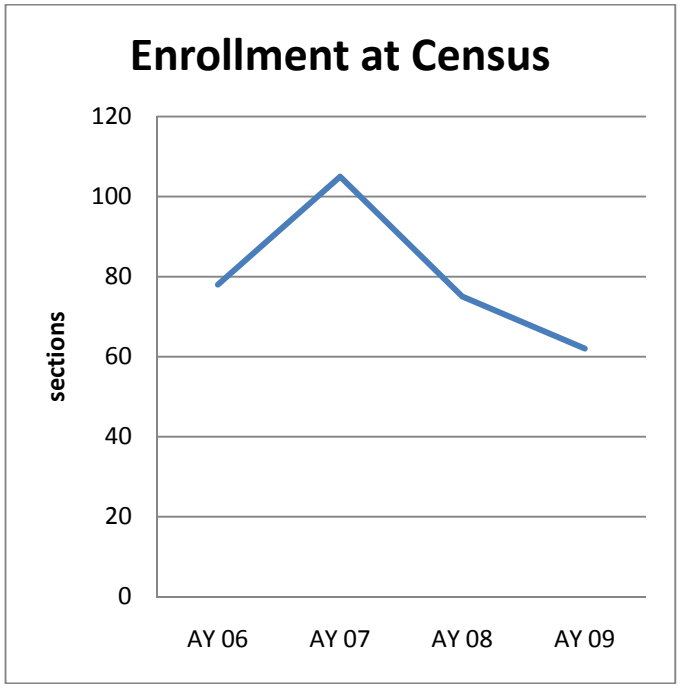
1. One of the program goals is to develop an articulation with our local high schools. This program goal supports the institutional goal of: Developing collaboration with high schools regarding vocational education.
2. Another program goal is develop a new program in green building and energy conservation. This program goal supports the institutional goal of: IVC will respond to community needs that address our evolving economic diversification.
3. Another program goal is to schedule classes on a six day that will cater to both new and returning students by having day time classes as well as evening classes. This program goal supports the institutional goal of: Develop, implement and manage a six day per week balanced class schedule applicable district-wide to meet the needs of our community.
4. Another program goal is to offer classes in various sites around the community to make and establish a presence in the eyes of the community. This program goal supports the institutional goal of: Use external instructional sites throughout Imperial County.

   The learning outcomes of the program are the following: To prepare students more for their jobs or new jobs, to prepare students with the use of new technology in the construction industry. The methods of assessment will vary depending on the classes, because each class will have institutional learning outcomes that will be assessed independently for example some of the learning outcomes will be asses with rubric, others will be asses with visual identification, written and verbal identification and the most important assessment will the gainful employment at the end of the program or certificate, which can easily be tracked, with the help of our employment specialist and the EDD.

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.)

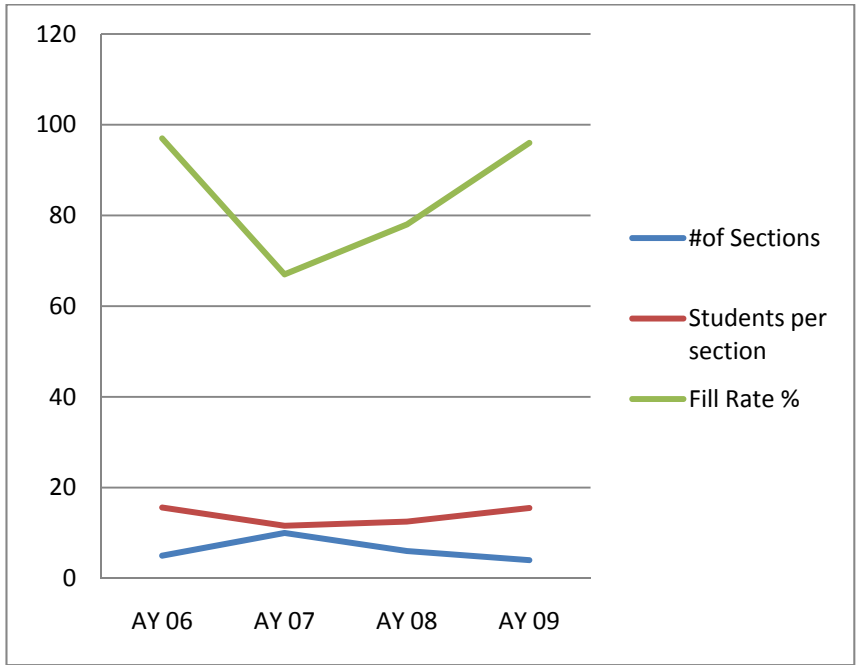


Graph 1



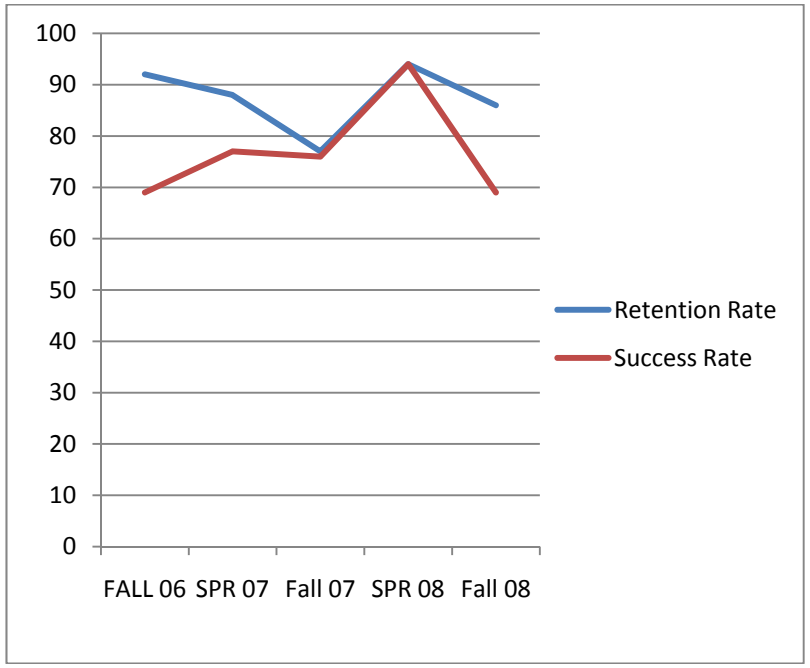
Graph2

The number of sections and enrollment at census seem to be following the same trend. The number of sections available has been declining due to the need of an additional adjunct instructor and enrollment has been experiencing a decline in students partially because of class scheduling. We found that courses offered in the afternoon have higher enrollment than courses offered in the morning, partially due to students that work during the day time and attend school in the afternoon to upgrade their skills. So the plan to increase enrollment at census is to offer more courses in the afternoon. In addition the building construction technology program is relatively new to the college and it has not been adequately diffused to the community. Another factor that might influence the incline in enrollment at census is that in the spring semester of 07' we decrease the enrollment quota to all classes from 25 to 18 due to limited lab space and safety reasons for the students. Overall our fill rate is good at 81.5% and our student success rate was 79% for the previous three years, and our student retention rate was 89% for the previous three years, our total FTEs per FTEf was 6.4.



Graph3

Graph three indicates that the number of students per section is slightly increasing despite the fact that the number of sections has decreased in the 08'and 09' semesters. Another important indicator to consider is that despite the fact that there are fewer sections offered the fill rate percentage is increasing.



Graph 4 Retention &Success Fall & Spring

In the program we believe that retention and student success rate is attributed to student motivation as well as instructor motivation. During the fall 06' and spring 07' semesters we can see a decrease in our retention rates but simultaneously our success rate increased. During the fall of 07' and spring 08' our retention rates and success rates were almost identical proving that this trend can also happen during normal semesters and not necessary during the winter and the summer when students seem to be more motivated and serious about the classes. In the fall 08'semester the success and retention rates slightly dropped but that can be attributed to the drop in sections offered that can clearly be identified in graph 3.

Graph 5 Retention &Success Summer & Winter

Graph 5 indicates the retention and success rates for the summer and winter semester. Apparently the graph only show one line, but that is because the retention and success rates were identical thus the appearance of a single line. Normally the winter and summer semester are always very successful because students that enroll in these classes can't normally attend during the regular semester and that factor makes or retention rates and success rates very similar. Our retention is high during these semester because students realize there short semesters and take them very seriously when it comes to instruction.

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.

Currently the building construction classes are being taught by one full time faculty member that teaches 3-4 sections per semester and one adjunct faculty member that teaches one section per semester. However at 81.5% average fill rate there is additional room for students and enrollment growth, but with the limited lab space and limited teaching resources we will not be able to offer additional sections to meet expanding student needs without hiring more adjunct faculty.

We currently offer two certificates in building construction but are pending the approval of a degree and three specializations in building construction to be able to expand our program. Once the pending degree is approved it will be more viable to increase our adjunct teaching resources.

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.)

   Currently the statewide employment rate in residential construction has fallen by due to several factors. However there is a change in the job market from residential construction type employees to retrofitting and energy efficiency technicians along with renewable energy type jobs in solar, wind, and thermal technologies which all have a common field which is the construction industry. There is an eminent need for green building specialists which are all based on construction knowledge.

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

   The immediate problem that the program is currently facing in the lack of adequate lab space to impart the hands on component to the classes currently offered. Currently the construction program shares the lab spaces of auto body, welding and automotive. Lack of qualified, degreed adjunct faculty places a burden on the programs ability to offer enough sections to meet the current needs of the students; specifically in new technologies, such as energy efficiency/conservation, retrofitting and weatherization.

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.

   Improve student success rates trough the development of more courses on green building and energy conservation

Objective	Completion Indicators	Completion Date
Improve student success rate trough: Innovative classes in green building & Energy conservation	Institutional success and retention data	Fall 2012
Hire an additional adjunct faculty Member	Employment data	Fall 2011
Develop three SLOS for each course	SLO Data	Fall 2012
Establish an articulation agreement with the local high schools	Agreement Document	Fall 2012

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.

   Learning outcomes are being implemented in all of the building construction courses however not all courses have multiple SLO's therefore the goal of the construction program will be to verify that all course have at least three SLO's along with the corresponding assessment and evaluation criteria an data that will indicate the learning outcome of the students in each course.

Time line	
Fall 2008	Initial SLO's identified for all classes BLDC 110,130,140,145,150,160,165,180,185, 190, 200,201.
Spring 2009	Assessment evaluation & modification recommendations for BLDC110&130
Fall 2009	Assessment evaluation & modification recommendations for BLDC140&145
Spring 2010	Assessment evaluation & modification recommendations for BLDC150&160
Fall 2010	Assessment evaluation & modification recommendations for BLDC165&180
Spring 2011	Assessment evaluation & modification recommendations for BLDC185&190
Fall 2011	Assessment evaluation & modification recommendations for BLDC200&201
Spring 2012	Begin integration to SLO master plan course level SlO and curriculum changes as needed based on assessment cycle.

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

One of the factors that will influence our program during the next three years is the stimulus monies that are being offered through ARRA. Currently our program was awarded a grant (B-Green) to train a cohort of twenty five students in the areas of energy efficiency, weatherization, retrofitting of buildings and alternative energy. These grants will cause our program to expand along with our student enrollment and the need to hire additional teaching resources. The only obstacles that might be a problem is the fact that grant based education most of the time will be catered to a specific cohort and will be done with closed enrollment limiting the student that are already in the program. Once the grants are finalized additional resources might be needed to continue instruction as open enrollment to the whole community.

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

Over the course of the next three years we can see a trend in more grant instruction programs that will lead to the creation of additional curriculum that will have to be adopted by the building construction program. The acquisition of future grants will help strengthen the building construction program and will be influential in keeping the program instruction current with new building techniques and technology. A factor that might affect or influence the program is the lack of qualified instructors in our area many applicants posses the experience but lack the education. When the program expands due to new classes or program we might face a deficit of qualified instructors. Finally one factor that not only affects this program but IVC as a whole is the challenge of instructing students who are deficient in basic skills. Therefore we face an important role as instructors in filling in the education gap between those students in order to keep them motivated and keep them from dropping the courses.