		I	ndustry and Technol	logy							
			Program (PLO), and C		nment						
Use t	he checklists provid	ed to evaluate your SLO sta				this	form	۱.			
Or, if you prefer to	make changes or	the electronic version co	ontact your Facilitators (Pati Fairchild or Sue	Ellen Warren) or your	Divis	ion	Adm	inist	rati	ve
		Assistant (Denis	e Spurlock) to have the g	grid emailed to you							
		When SLO, PLO and ILO al	ignment changes are made	e, please make chang	<u>es in red.</u>						
		Return the comple	eted grid to your Facilita	tor by Friday, Nov 8	th						
Program: Air Co	nditioning and	Refrigeration	Number of Courses:	Date Updated:	Subm	itted	by:				
			11	Fall 2012	Vic Cafarc		-				
				ating Rubric			-				
3 - An important part o2- Only a minor focus o	f the course. Some d f the course. Some i	uction is provided. Students and irect instruction is provided and nstruction is given in the area is not directly taught or evaluation	nd students are evaluated on but students are not formally	the concepts once or t vevaluated on the conc	wice within the course.	se.					
Institutional	I. Content	II. Critical, Creative, and	III. Communication and	IV. Professional	V. Community and	VI.	Infor	on a	nd		
Learning Outcomes (ILOs)	Knowledge	Analytical Thinking	Comprehension	and Personal Growth	Collaboration	Тео	hnol	logy I	Liter	асу	
Overall Rating Rate each from 1-4	3	2	2	1	1			1	,		
based on above rubric								+- D		<u> </u>	
have developed one overarching goals of	or two comprehens the program, they i	of 3 and maximum of 6 PLOS sive PLO statements that re- may present them to their E f the statements, the PLO s	flect the program mission Dean and Facilitator for ap	and covers the major proval as is. In cases	components and the where the facilitator or			to Pro Alignr ate ea	nent		
(ALC) for review and Ir		Title, and PLO statement.	Example: PLO #2 Ethics a	nd Professionalism		I	П	Ш	IV	v	VI
PIO #1 Safaty Knowl	adge and Chille C+1	Idents successfully complet	ing air conditioning and ro	frigeration program	whether in the						
certificate program c	or degree program,	will acquire and be able to u ble to apply those skills to s	use specific safety knowled			3	2	1	1	1	1
	•			r conditioning and re	frigeration a student						
-	vicing and hepairin			in conditioning and re	ingeration, a student	3	2	1	1	2	2
PLO #2 Installing Ser will be able to install	, service, and repair	ACR systems as required b	y the moustry guidennes.								
PLO #2 Installing Ser will be able to install PLO #3 Pressure Test	ting and Charging S	ystems Upon completion o ate, and charge ACR system	f a course of study, studen	nts in air conditioning	and refrigeration will	3	2	2	1	2	2
PLO #2 Installing Ser will be able to install, PLO #3 Pressure Test be able to properly p	ting and Charging S ressure test, evacu	ystems Upon completion o	f a course of study, studen n.	nts in air conditioning	and refrigeration will	3	2	2	1	2	2

Course Level SLOs A minimum of 3 and maximum of 6 SLOs. There are, however, exceptions. For example, if department faculty have developed one or two comprehensive SLO statements that cover the major components and the overarching goals of the course, they may present them to their Dean and Facilitator for approval as is. In cases where the facilitator or dean or faculty disagree with the rigor of the statements, the	will		course	you when	t	ILOs to Courses Alignment (Rate each 1-4)							
SLO statement will be forwarded to the Assessment of Learning Committee (ALC) for review and recommendations.Include SLO #, Short Title, and SLO StatementExample: Math 170 SLO #3 Vectors and Complex Numbers.	P1	Р2	Р3	Р4	I	Ш	ш	IV	v	VI			
ACR 5 Electrical Appliances: SLO#1 Troubleshooting Units After reading the textbook and participating in class discussions, students will apply their knowledge of appropriate lab practices, concepts and theories by troubleshooting a faulty air conditioning unit with the use of a wiring schematic and voltmeter. After finding the problem they will run the unit and make sure it is operating at the manufacturer's specifications.	x	x		х	2	3	1	1	1	1			
ACR 5 Electrical Appliances: SLO#2													
ACR 5 Electrical Appliances: SLO#3													
ACR 6 Refrigeration and Air Conditioning Control Systems: SLO #1 Electrical Control Relays After reading the textbook and participating in class discussions, students will apply their knowledge of appropriate lab practices, concepts and theories by observing and testing the proper operation of an air conditioning electrical control relay.	x	x		х	3	2	1	1	1	1			
ACR 6 Refrigeration and Air Conditioning Control Systems: SLO #2													
ACR 6 Refrigeration and Air Conditioning Control Systems: SLO #3													
ACR 20 Solar Energy Applications-Photovoltaics and Solar Thermal: SLO #1 Parts of Solar Thermal Units After reading the textbook and participating in class discussions, students will apply their knowledge of appropriate lab practices, concepts and theories by naming the parts of a Solar Thermal unit in correct sequence and know how a Solar Thermal unit converts solar energy into hot water. Naming the parts of a Photovoltaic (PV) unit in correct sequence and know how a PV unit converts solar energy into electrical energy. ACR 20 Solar Energy Applications-Photovoltaics and Solar Thermal: SLO #2	x	x	x	х	3	1	1	1	1	1			
ACR 20 Solar Energy Applications-Photovoltaics and Solar Thermal: SLO #3													

Course Level SLOs Minimum of 3 and maximum of 6 SLOs. Include SLO #, Short Title, and SLO Statement Example: Math 170 SLO #3 Vectors and Complex Numbers	M will a	ILOs to Courses Alignment (Rate each 1-4)								
Example. Wath 170 SEO #5 Vectors and complex Numbers	P1	P2	P3	P4	Т	П	ш	IV	v	VI
ACR 21 Air Conditioning Fundamentals: SLO #1 Window Airconditioning Manifold Gauges After reading the textbook and participating in class discussions, students will apply their knowledge of appropriate lab practices, concepts and theories placing refrigeration manifold gauges on a window air conditioning unit and check for correct charge of an operating system based on the type of refrigerant used in the system.	x		х	x	3	1	1	1	1	1
ACR 21 Air Conditioning Fundamentals: SLO #2										
ACR 21 Air Conditioning Fundamentals: SLO #3										
ACR 22 Basic Refrigeration: SLO #1 Refrigeration Manifold Gauges After reading the textbook and participating in class discussions, students will apply their knowledge of appropriate lab practices, concepts and theories placing refrigeration manifold gauges on a refrigerator and check for the correct charge of an operating refrigerator based on the type of refrigerant used in the system.	х		x	x	3	1	1	1	1	1
ACR 22 Basic Refrigeration: SLO #2										
ACR 22 Basic Refrigeration: SLO #3										

Course Level SLOs Minimum of 3 and maximum of 6 SLOs. Include SLO #, Short Title, and SLO Statement Example: Math 170 SLO #3 Vectors and Complex NumberS			to PLC ment an X if course your P	you when	ILOs to Courses Alignment (Rate each 1-4)							
	P1	P2	P3	P4	I	П	ш	IV	v	VI		
ACR 23 Commercial Refrigeration Applications: SLO #1 Proper Freezer Temperatures After reading the textbook and participating in class discussions, students will apply their knowledge of appropriate lab practices, concepts and theories to an operating low temperature walk-in freezer. Students will check proper freezer temperatures, amperage draw on the operating compressor, subcooling and superheat temperatures.	x	х		x	3	1	1	1	1	1		
ACR 23 Commercial Refrigeration Applications: SLO #2												
ACR 23 Commercial Refrigeration Applications: SLO #3												
ACR 25 Energy Efficient Residential, Commercial and Industrial Air Conditioning: SLO #1 Taking Readings and Applying Data After reading the textbook and participating in class discussions, students will apply their knowledge of appropriate lab practices, concepts and theories to an operating 2 ton 13 SEER Air Conditioning Package Unit. Students will take air temperature readings, compressor amperage draw, subcooling and superheat readings and apply the data to the appropriate lab exercise.	x	x		x	3	1	1	1	1	1		
ACR 25 Energy Efficient Residential, Commercial and Industrial Air Conditioning: SLO #2												
ACR 25 Energy Efficient Residential, Commercial and Industrial Air Conditioning: SLO #3												
ACR 27 Heating Technologies: SLO #1 High Efficiency Gas Furnaces After reading the textbook and participating in class discussions, students will apply their knowledge of appropriate lab practices, concepts and theories to an operating High Efficiency Gas Furnace. Students will take gas pressure readings with a manometer and record the readings with the appropriate lab assignment and compare the reading with manufacturer's specifications.	x			x	3	2	1	1	1	1		
ACR 27 Heating Technologies: SLO #2												
ACR 27 Heating Technologies: SLO #3												

Course Level SLOs					ILOs to Courses Alignment								
Minimum of 3 and maximum of 6 SLOs.	Course to Program SLOs					(Rate each 1-4)							
Include SLO #, Short Title, and SLO Statement		Align	ment										
Example: Math 170 SLO #3 Vectors and Complex NumberS	P1 P2 P3 P4			1	I II III IV V V								
ACR 30 Electric Controls: SLO #1 Control Boards After reading the textbook and participating in class discussions, students will apply their knowledge of appropriate lab practices, concepts and theories to an operating Air Conditioning Control Board. Students will check a A/C wire schematic for proper wiring of the board and energize the board taking electrical readings at each control device.	x			x	3	2	1	1	1	1			
ACR 30 Electric Controls: SLO #2													
ACR 30 Electric Controls: SLO #3													
ACR 32 Fundamentals of Pneumatic Controls: SLO #1 Calibrating Thermostats After reading the textbook and participating in class discussions, students will apply their knowledge of appropriate lab practices, concepts and theories to a pneumatic thermostat. Student will calibrate the thermostat to the manufacturer's specification and check the proper operation of thermostat and the pneumatic	x			x	3	1	1	1	1	1			
actuator. ACR 32 Fundamentals of Pneumatic Controls: SLO #2													
ACR 32 Fundamentals of Pneumatic Controls: SLO #3													
ACR 34 HVAC Customer Service: SLO #1 Irate Customer After reading the textbook and participating in class discussions, students will apply their knowledge of appropriate communication skills to calm down an irate customer who is complaining that it took too long for	x			x	3	1	3	1	1	1			
the technician to arrive and it is very hot due to an air conditioning system not cooling ACR 34 HVAC Customer Service: SLO #2													
ACR 34 HVAC Customer Service: SLO #3													