Advisory Committee Fall 2021 Agenda HVAC

9:00am – Wednesday, October 27, 2021 – Vernon College Skills Training Center Multipurpose Room 400

Members:

Chris Johns, Mike Graham Heating and AC Samuel Brooks, Magic Air Robb Havens, James Lane AC Darren Kirkpatrick, Ferguson Veresh Eddie Johnson, United Regional Ryan Ellett, Ellett Air Conditioning

Members not present:

Bin Ellett Lee Ritchie

Nick Pruitt welcomed the committee and began introductions.

Shana Drury reviewed the purpose of the committee and asked for nominations or volunteers for vice-chair and recorder.

Chair: Robb Havens Vice-Chair: Darren Kirkpatrick Recorder: Chris Johns

Old Business/Continuing Business.....Robb Havens

There was no old business to discuss so Robb Havens opened the meeting with new business.

New Business Robb Havens

* <u>Review program outcomes, assessment methods/results, and workplace competency</u>

Robb Havens asked the faculty member to briefly review the program outcomes with the committee. Nick Pruitt reviewed the following program outcomes.

Program outcomes

- 1. Analyze airflow, refrigerant flow, and electron flow to evaluate the operating efficiency of air conditioning systems; diagnose problems/inefficiencies, and make necessary adjustments, and/or perform service repairs as needed.
- 2. Analyze airflow, refrigerant flow, and electron flow to evaluate the operating efficiency of heat pumps; diagnose problems/inefficiencies; and make necessary adjustments and/or perform service repairs as needed.
- 3. Analyze airflow, gas flow, and electrical flow to evaluate the operating efficiency of gasfired heating systems; diagnose problems/inefficiencies, and make necessary adjustments, and/or perform service repairs as needed.

Vernon College faculty/staff:

Nick Pruitt Mark Holcomb Holly Scheller Colleen Moore Delilah Fowler Shana Drury Harli Adams

- 4. Evaluate the installation of air conditioning and heating units and associated ductwork as well as understand unit loads for optimum efficiency.
- 5. Recover charge and vacuum refrigeration systems to proper levels.

* <u>Approve program outcomes</u>

Robb Havens asked the committee for the motion to approve the program outcomes as presented. Chris Johns made a motion to approve the program outcomes as presented. Darren Kirkpatrick seconded the motion.

The motion has passed and the committee will approve the program outcomes as presented.

✤ <u>Approve assessment methods and results</u>

Robb Havens asked the faculty member, Nick Pruitt, to explain in more detail the assessment methods and results.

Course outcomes are evaluated through hands-on quizzes, paper quizzes, presentations, online midterm, and individuals working on a task with the instructor right there asking the student questions during hands-on procedures. During the hands-on procedures, if a student misses the concept of the question or gets the question wrong, Nick will go to the classroom and look through the books and re-evaluate where the student missed and try again. HVAC is a hands-on course and willingness to stay hands-on vs standing around not trying is another evaluation part for Nick. Nick wants to evaluate on a 5, 4, 3, 2, 1 scale. 5- master task, 4- acceptable, 3- borderline, 2- unacceptable, and 1- unsuccessful. This is just an evaluation to measure where that student is currently at.

Robb Havens asked the committee for a motion to approve the assessment methods as presented. Chris Johns made a motion to approve the assessment methods as presented. Darren Kirkpatrick seconded the motion.

The motion passed and the committee will approve the assessment methods as presented.

✤ <u>Approval of workplace competency (course or exam)</u>

Robb Havens asked the faculty member, Nick Pruitt, to please tell the committee about the competency and how the students have performed on the competency.

HART 2436 Air Conditioning Troubleshooting is the capstone course for the HVAC program. In this class, all previous classes are reviewed and lab competencies are performed to demonstrate student achievement of required skills. Students repeat the skills until an acceptable level is reached, making for a 100% pass rate, the program had 9 students in the HART 2436 class from the fall of 2019 with 8 in the spring of 2020 all passing with A's, except one who received a B.

The lab competencies are attached to the program outcomes.

- 1. Analyze airflow, refrigerant flow, and electron flow to evaluate the operating efficiency of air conditioning systems; diagnose problems/inefficiencies, and make necessary adjustments, and/or perform service repairs as needed.
 - a. Lab competency to be followed is comp 1-a, air conditioner system performance worksheet.
- 2. Analyze airflow, refrigerant flow, and electron flow to evaluate the operating efficiency of heat pumps; diagnose problems/inefficiencies; and make necessary adjustments and/or perform service repairs as needed.
 - a. Lab competency to be followed is comp 1-a, air conditioner system performance worksheet.
- 3. Analyze airflow, gas flow, and electrical flow to evaluate the operating efficiency of gasfired heating systems; diagnose problems/inefficiencies, and make necessary adjustments, and/or perform service repairs as needed.
 - a. Lab competency to be followed is lab 1-b, gas furnace Jobsite information sheet.
- 4. Evaluate the installation of air conditioning and heating units and associated ductwork as well as understand heat loads for optimum efficiency.
 - a. Lab competency to be followed is lab 1-c, HVAC system QI checklist.
- 5. Recover charge and vacuum refrigeration systems to proper levels.
 - a. Lab competencies to be followed are comp 55, active method of recovery and comp 60, evacuating and air conditioning system.

Program Outcome	Number of students	Results per student	Use of results
	who took the course		
	or licensure exam		
1. See above	17	All passed	Continue what is being
			done.
2. See above	17	All passed	
3. See above	17	All passed	
4. See above	17	All passed	
5. See above	17	All passed	

Verification of workplace competencies:

Certificate and A.A.S.

Capstone Experience: HART 2436 Air Conditioning Troubleshooting or HART 2468 Practicum (or Field Experience) – Heating, Air Conditioning, and Refrigeration Technology/Technician

Robb Havens asked the committee for a motion to approve the workplace competency as presented. Chris Johns made a motion to approve the workplace competency as presented. Eddie Johnson seconded the motion.

The motion passed and the committee will approve the workplace competency as presented.

* <u>Program Specific Accreditation Information and Requirements (if applicable)</u>

N/A

* <u>Review program curriculum/courses/degree plans</u>

Robb Havens asked the faculty member, Nick Pruitt, to please discuss with the committee on the program's curriculum and degree plans for 2022-2023.

Nick Pruitt and Mark Holcomb discussed breaking the certificate into a basic and advanced certificates for 2022-2023. This has worked well for Welding. Also gives another exit point for the students.

Basic Heat, Ventilation, and Air Conditioning, Level 1 Certificate

CIP 15.0501

Instructional Location - Skills Training Center **CERTIFICATE OF COMPLETION** (Probable Completion Time – 9 months or 32 weeks)

Major Requirements (24 SH)

HART 1401 or	Basic Electricity for HVAC	4
ELPT 1411	Basic Electrical Theory (A)	
LEAD 1100	Workforce Development with Critical Thinking	3
HART 1403	Air Conditioning Control Principles	4
HART 1407	Refrigeration Principles	4
HART 1441	Residential Air Conditioning	4
HART 1445	Gas and Electric Heating	4
	Total Credit Hours:	24
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Workplace Competency: HART 1441

Advanced Heat, Ventilation, and Air Conditioning, Level 1 Certificate

CIP 15.0501

Instructional Location - Skills Training Center **CERTIFICATE OF COMPLETION** (Probable Completion Time – 9 months or 32 weeks)

Major Requirements (18 SH)

HART 2441	Commercial Air Conditioning	4
HART 2436 or	Air Conditioning Troubleshooting	4
HART 2468	Practicum (Field Experience) HVAC and Refrigeration Technology/Technician	
HART 2445	Residential Air Conditioning Systems Design	4
HART 2438	Air Conditioning Installation and Startup	4
HART 1256	EPA Recovery Certification Preparation	2
	Total Credit Hours:	18

(A) Course included on the State's Advanced Technical Credit list. (See Advanced Technical Credit.) Workplace Competency: HART 2436

Heat, Ventilation, and Air Conditioning, A.A.S.

CIP 15.0501 Instructional Location - Skills Training Center ASSOCIATE IN APPLIED SCIENCE DEGREE (Probable Completion Time - 2 years) General Education Requirements (15 SH)

ENGL 1301	Composition I	3
GOVT 2305	Federal Government (Federal Constitution and Topics)	3
MATH 1314	College Algebra	3
SPCH 1315	Public Speaking	3
Humanities	Language, Philosophy, and Culture or Creative Arts Elective	3

Major Requirements (45 SH)

HART 1401 or	Basic Electricity for HVAC	4
ELPT 1411	Basic Electrical Theory (A)	

LEAD 1100	Workforce Development with Critical Thinking	3
HART 1403	Air Conditioning Control Principles	4
HART 1407	Refrigeration Principles	4
HART 1441	Residential Air Conditioning	4
HART 1445	Gas and Electric Heating	4
HART 2436 or	Air Conditioning Troubleshooting	4
HART 2468	Practicum (or Field Experience) - Heating, Air Conditioning, and Refrigeration Technology/Technician	
HART 2441	Commercial Air Conditioning	4
HART 2445	Residential Air Conditioning Systems Design	4
HART 2438	Air Conditioning Installation and Startup	4
TECM 1303	Technical Calculations	3
HART 1256	EPA Recovery Certification Preparation	2
BUSI 1301	Business Principles	3
	Total Credit Hours:	60

> To be selected from the following: <u>ARTS 1301</u>, <u>DRAM 1310</u>, <u>DRAM 2366</u>, <u>ENGL 2322</u>, <u>ENGL 2323</u>, <u>ENGL 2327</u>, <u>ENGL 2328</u>, <u>ENGL 2332</u>, <u>ENGL 2333</u>, <u>HIST 2311</u>, <u>HIST 2312</u>, <u>MUSI 1306</u> Verification of Workplace Competencies: HART 2436 or 2468

(A) Course included on the State's Advanced Technical Credit list. (See Advanced Technical Credit.)

Course descriptions and learning outcomes are provided as a separate document.

The committee discussed the addition of HART 1256, which will provide the students to get their credentials for recovery before they graduate from the program.

Approve program revisions (if applicable)

Robb Havens asked the committee for a motion to approve the program revisions as presented. Chris Johns made a motion to approve the program revisions as presented. Samuel Brooks seconded the motion.

The motion passed and the committee will approve the program revisions as presented.

* <u>Approve 2021-2022 SCANS, General Education, Program Outcomes, and Institutional</u> <u>Outcome Matrices.</u>

Chris Johns asked the faculty member to review the matrices with the committee. Scott McClure reviewed the matrices below.

SCANS Matrix: The SCANS (Secretary's Commission on Achieving Necessary Skills) Matrix represents the 8 Federal requirements that must be taught. The matrix shows how we are mapping them back to each of the courses in the program.

Program: Heating, Ventilation, and Air Conditioning												
Aw	ard:	Неа	ting,	Ven	tilat	ion,	and	Air Conditioning	Credential: Associate in Applied Science			
Ass	ocia	te in	Арр	blied	Scie	nce	(AAS) Degree	(AAS) Degree			
Cip	: 15.	050	1									
				LIS	ΤΟ	F ALL	. CO	URSES REQUIRED AND	IDENTIFIED COMPETENCIES			
	SC	ANS	CON	/IPET	ENC	CIES		Course Number	Course Title			
1	2	3	4	5	6	7	8					
X	Х	Х	Х	X	X	X		HART 1401* or	Basic Electricity for HVAC			
X	Х	Х	Х	Х	Х	Х		ELPT 1411*	Basic Electrical Theory			
X	Х	Х	Х	Х	Х	Х		HART 1403*	Air Conditioning Control Principles			
X	Х	Х	Х	Х	Х	X		HART 1407*	Refrigeration Principles			
X	Х	Х	Х	X	Х	X		HART 1441*	Residential Air Conditioning			
X	Х	Х	Х	X	X	Х		HART 1445*	Gas and Electric Heating			
								HART 2434	Advanced Air Conditioning Controls			
X	Х	Х	Х	Х	Х	X	Х	HART 2436** or	Air Conditioning Troubleshooting			
								HART 2468(*)	Practicum (or Field Experience) - Heating, Air Conditioning, & Refrigeration Technology/Technician			
X	Х	Х	Х	X	X	Х		HART 2441**	Commercial Air Conditioning			
								HART 2449	Heat Pumps			
x	х		х	x	x	x		LEAD 1100*	Workforce Development with Critical Thinking			
							8. 1	BASIC USE OF COMPUT	TERS			
						7. ۱	WOR	KPLACE COMPETENCI	ES			
					6. 1	PERS	ONA	L QUALITIES				
				5.1	THIN	KINC	G SKI	LLS				
			4. 9	SPEA	KING	G AN	D LIS	STENING				
		3. /	ARIT	HME	TIC	OR N	/ATH	IEMATICS				
	2. ۱	NRIT	ING									
1.6	READ	DING										
<u> </u>												

Courses with an * are part of the basic certificate level 1

Courses with an ** are part of the advanced certificate level 1

Courses with an (*) you can take either for the certificate but both are required for A.A.S

General Education Matrix: The General Education Matrix is state-mandated. You will see the 6 requirements that the college is tasked with teaching and how they map back to the courses.

Program: Heating, Ventilation, and Air Conditioning						entilation, and Air	
Av	varo	1: He	ati	۱g. ۱	Ven	tilation, and Air	
Cc	ndi	tion	ing	Asso	ocia	te in Applied Science	Credential: Associate in Applied Science (AAS) Degree
(A	AS)	Deg	ree				
Ċi); p: 1	5.05	01				
					L	ST OF ALL COURSES RE	QUIRED AND IDENTIFIED CORE OBJECTIVES
	G	GEN	ERA	L			
E	DUC	ATI	ON	COF	RE	Course Number	Course Title
	O	BJEC	TIV	ES		Course Number	Course little
1	2	3	4	5	6		
х	х		х		х	ENGL 1301	Composition I
х	х			х	х	GOVT 2305	Federal Government (Federal Constitution and Topics)
х	х	х				MATH 1314	College Algebra
х	х		х		х	SPCH 1315	Public Speaking
х	х	х	х	х	х	HART 1401* or	Basic Electricity for HVAC
						ELPT 1411*	Basic Electrical Theory
х	х	х	х	х	х	HART 1403*	Air Conditioning Control Principles
х	х	х	х	х	х	HART 1407*	Refrigeration Principles
х	х	х	х	х	х	HART 1441*	Residential Air Conditioning
х	х	х	х	х	х	HART 1445 *	Gas and Electric Heating
						HART 2434	Advanced Air Conditioning Controls
х	х	х	х	х	х	HART 2436 ** or	Air Conditioning Troubleshooting
						HART 2468 (*)	Practicum (or Field Experience) - Heating, Air Conditioning, &
							Refrigeration Technology/Technician
х	х	х	х	х	х	HART 2441**	Commercial Air Conditioning
				-		HART 2449	Heat Pumps
х	х		х	х	х	LEAD 1100*	Workforce Development with Critical Thinking
					6.	Personal Responsibility	
				5.	Soc	ial Responsibility	
			4.	Теа	mw	ork	
		3.	Emp	oiric	al a	nd Quantitative Skills	
	2.	Con	nmı	inic	atio	n Skills	
1.	Crit	ical	Thir	nkin	g Sl	kills	

Program Outcomes Matrix: The Outcomes Matrix represents the Vernon College mandated requirements. They are the Program outcomes just approved and how they map back to the courses.

Program: Heating, Ventilation, and Air Conditioning												
	onar	tior	iing ooti	ng \	Von	tilation and Air						
	ndi	л. п tion	ing	ng, Δςς	ocia	te in Annlied Science	Credential: Associate in Applied Science (AAS) Degree					
(A	AS)	Dee	ree	/ (35)	Jeiu							
Ci	p: 1!	5.05	, 501									
						LIST OF ALL COURS						
	0	итс	ОМ	FS								
					<u> </u>	Course Number	Course Title					
1	2	3	4	5	6							
		x	x	x	x	HART 1401* or	Basic Electricity for HVAC					
		х	х	х	х	ELPT 1411*	Basic Electrical Theory					
х	х	х	х	х	х	HART 1403*	Air Conditioning Control Principles					
х	х	х		х	х	HART 1407*	Refrigeration Principles					
х	х	х			х	HART 1441*	Residential Air Conditioning					
		х	х	х		HART 1445 *	Gas and Electric Heating					
						HART 2434	Advanced Air Conditioning Controls					
х	х	х	х	х	х	HART 2436** or	Air Conditioning Troubleshooting					
						HAPT 2468(*)	Practicum (or Field Experience) - Heating, Air					
							Conditioning, & Refrigeration Technology/Technician					
х	х	х	х		х	HART 2441**	Commercial Air Conditioning					
						HART 2449	Heat Pumps					
						LEAD 1100*	Workforce Development with Critical Thinking					
					6.	Analyze airflow, refrigera	ant flow, and electron flow to evaluate the operating					
					eff	ficiency of air conditionin	g systems; diagnose problems/inefficiencies, and make					
				_	ne	cessary adjustments, and	d/or perform service repairs as needed.					
				5.	Ana	ilyze airflow, refrigerant i	flow, and electron flow to evaluate the operating					
				en	incle	ments and/or perform s	nose problems/inefficiencies; and make necessary					
			Δ	Δna	Jusi	airflow gas flow and el	ectrical flow to evaluate the operating efficiency of gas-					
			fir	ed h	ieat	ing systems: diagnose pr	oblems/inefficiencies: and make necessary adjustments					
			an	d/o	r pe	erform service repairs as i	needed.					
		3.	Eva	luat	e th	e installation of air cond	itioning and heating units and associated ductwork as					
		w	ell a	s un	der	stand heat loads for opti	mum efficiency.					
	2.	Rec	ove	r ch	arge	e and vacuum refrigeration	on systems to proper levels					
1.	Und	ders	tan	d an	d a	pply current laws and pro	ocedures associated with section 608 of the Clean Air Act					

Institutional Outcomes Matrix: The Institutional Outcomes Matrix represents the Vernon College mandated requirements. This matrix represents how the program outcomes map back to the institutional outcomes/general education outcomes.

Program: Heating, Ventilation,						•					
and Air Conditioning											
Awa	ard: H	eating	, Ventil	ation,	and						
Air	Condit	tioning	, g Associ	iate in		Credential: Associate in Applied Science (AAS) Degree					
Арр	lied S	cience	e (AAS) I	Degre	e						
Cip:	15.05	501									
				LIS	T OF A	ALL COURSES REQUIRED AND OUTCOMES					
		OUT	COMES								
1	1 2 3 4 5 6				6	General Education Outcomes					
x	х	х	х	х	х	1. Critical Thinking Skills					
х	х	х	х	х	х	2. Communication Skills					
х	х	х	х	х	х	3. Empirical and Quantitative Skills					
	х	х	х	х	х	4. Teamwork					
х	х	х	х	х	x 5. Social Responsibility						
x	х	х	х	х	х	6. Personal Responsibility					
					Anal	ze airflow, refrigerant flow, and electron flow to evaluate the					
					oper	ting efficiency of air conditioning systems; diagnose					
					prob	ems/inefficiencies, and make necessary adjustments, and/or					
					perf	orm service repairs as needed.					
				Anal	yze aiı	flow, refrigerant flow, and electron flow to evaluate the operating					
				effic	iency o	of heat pumps; diagnose problems/inefficiencies, and make					
				nece	ssary	adjustments, and/or perform service repairs as needed.					
			Analy	ze airf	low, g	as flow, and electrical flow to evaluate the operating efficiency of					
			gas-fi	red he	ating	systems; diagnose problems/inefficiencies, and make necessary					
			adjust	tment	s, and,	/or perform service repairs as needed.					
		Evalı well	uate the as unde	e insta erstan	Ilatior d heat	of air conditioning and heating units and associated ductwork as loads for optimum efficiency.					
	Reco	ver ch	narge ar	nd vac	uum r	efrigeration systems to proper levels					
Unc	lersta	nd and	d apply	currer	nt laws	and procedures associated with section 608 of the Clean Air Act					

Robb Havens opened the floor for discussion and recommendations. Hearing none Robb asked the committee for a motion to approve the matrices as presented. Chris Johns made a motion to approve the matrices as presented. Samuel Brooks seconded the motion.

The motion passed and the committee will approve the matrices as presented.

Program statistics: Graduates (from previous year/semester), current majors, current enrollment

Robb Havens asked the faculty member, Nick Pruitt, to please discuss the program statistics with the committee.

Nick Pruitt reviewed the following information with the committee.

- Program Statistics:
 - Graduates 2020-2021: 10-12
 - Enrollment Summer 2021: 0
 - Majors Fall 2021-2022: 25
 - Enrollment Fall 2021: 60 total

✤ Local Demand

Chris Johns said he has two positions open but has room for a few more available positions.

Ryan Ellett has hired one person in the last year but could hire about 2-3 more.

Samuel Brooks said Magic Air has hired 5 in the coil plant in his department and 8 in the main plant. There is a major turn over so they are always hiring.

Robb Havens at James Lane said they have hired 11, HVAC services and installed, in the last year. They still have 9 of those 11 working, so 2 positions are available.

Darren Kirkpatrick has hired 10-12 in the last year and still has 8 positions available.

Eddie Johnson said United Regional has pretty steady work and once somebody is hired there, they stay. He did state that there are possibly 2 available positions open for the night shift.

Chris stated that he knows there is a high demand for technicians in their line of work, especially after the winter we had last year. Whether it be plumbers, electricians, HVAC, or heating and air conditioning, there is a lack of technicians out there. Many people went weeks or even a month without heat during the last ice storm because as few technicians as there are they couldn't keep up with the demand.

Evaluation of facilities, equipment, and technology. Recommendation for the <u>acquisition of new equipment and technology</u>.

Robb Havens reminded the committee if they have not done so the faculty would be happy to show the committee the lab facilities after the meeting.

Chris asked if our facility was going to get new equipment because it is a little out of date.

Mark Holcomb stated that he has a PO out right now for a new heat pump trainer. Mark said we are getting there and updating this facility is on our to-do list.

Ryan stated that ductless units are becoming more popular and need to be trained on more.

Robb Havens asked if there was any discussion or recommendations for new equipment.

***** External learning experiences, employment, and placement opportunities

"Vernon College offers a job board on the website. Businesses can contact Chelsey Henry, Coordinator of Career Services, <u>chenry@vernoncollege.edu</u>, to add jobs or you can post yourself. VC also subscribes to a service called GradCast. Within this program, over 600,000 business and industry contacts are available to the graduates to send up to 100 free resumes within a set zip code. If you would like to have your business as part of that database, please contact Judy Ditmore, <u>jditmore@vernoncollege.edu</u>."

	Placement Rate of Program Completers by Reporting Year [1]														
		2016-2017 2017-2018 2018-2019									3-Year Average				
Program	Plc	Cmp	%	Plc	Cmp	%	Plc	Cmp	%	Plc	Cmp	%			
15050000-Environmental	14	16	87.5%	15	16	93.75%	7	8	87.5%	36	40	90%			
Control Technologies/															
Technicians															

Robb Havens asked the committee if there was any further discussion. Hearing none Robb moved on to professional development.

* <u>Professional development of faculty and recommendations</u>

Robb Havens asked the committee to please take time to review the professional development opportunities the faculty have attended. Canvas Training Looking for other recommendations

Robb Havens asked the committee if there is any discussion or do you have any recommendations for professional development for the staff. Hearing none Robb moved to promotion and publicity.

Promotion and publicity (recruiting) about the program to the community and business and industry

Robb Havens asked the committee to please take time to review the promotion and publicity.

Abilene High School Career Fair Archer City High School Career Fair CTE Navigator Small Tours CEC Preview Day

Robb Havens asked if there was any further discussion or recommendations. Hearing none Robb moved to serving students from special populations.

Serving students from special populations:

Robb Havens asked the committee to please note the federal definition of special populations below.

Vernon College is an open-enrollment college. The Proactive Assistance for Student Services (PASS) department offers many services for documented disabilities such as but not limited to quiet testing, longer testing times, interpreters, and special equipment.

Vernon College has a program titled "New Beginnings" for students who qualify to receive transportation, childcare, and/or textbook loans. Perkins funding is also offering assistance to break down barriers such as uniform, supply, equipment costs.

Peer to Peer mentoring, tutoring (online and in-person), resume building, student success series, and counseling are just a few of the other options/services available to students.

- 1. Special populations new definitions:
 - a. Individuals with disabilities;
 - b. Individuals from economically disadvantaged families, including low-income youth and adults;
 - c. Individuals preparing for nontraditional fields; all male
 - d. Single parents, including single pregnant women;
 - e. Out-of-workforce individuals;
 - f. English learners;
 - g. Homeless individuals described in section 725 of the McKinney-Vento Homeless Assistance Act (42 U.S.C. 11434a);
 - h. Youth who are in, or have aged out of, the foster care system; and
 - i. Youth with a parent who—
 - i. is a member of the armed forces (as such term is defined in section 101(a)(4) of title 10, United States Code);
 - ii. is on active duty (as such term is defined in section 101(d)(1) of such title).

Comprehensive Local Needs Assessment (Discussion led by Shana Drury):

-Labor Market Outlook

Occupation	TWC Target Occupation	Share of local jobs (%)	Quality Index (-5 to 5)	Demand Index (-5 to 5)	Quality and demand quadrant	National Median Wage (\$)	Local Median Wage (\$)	Projected national growth 2019- 2029 (%)	Projected state-level growth 2018- 2028 (%)
HVAC	Yes	0.25388	-0.283757812	1.18212207	Low	23.43	22.8	4.667651403	18.15181518
Technicians		6764			quality -				
					High				
					demand				

-Living Wage

Occupational	Occupation	Prevailing Hourly	Prevailing Annual
Code		Wage	Wage
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	\$ 20.24	\$ 4 2,102.00

Shana Drury went through a list of questions regarding the CLNA and access to Vernon College for all participants, not just HVAC students. Discussion ensued about access, marketing, and new occupations/training needs.

Shana thanked the committee for attending and for their participation.

Robb Havens asked if there was any further discussion, hearing none Robb adjourned the meeting at 10:40 am.

Recorder Signature: Chris Johns	Date	Next Meeting: Fall 2022	
Chris Johns	1/4/2022		