

8/27/2025

DATE

 REQUIRED COURSE
 ELECTIVE COURSE

TEC

 DIVISION
 NEW COURSE
 REVISION

Lake Land College

Course Information Form

COURSE NUMBER:	HVC-076	TITLE: (30 Characters Max)	Heat Pumps										
SEM CR HRS:	2.0	Lecture:	1.0			Lab:	3.0	ICCB Lab:	3.0	ECH:	4.0		
Course Level:	<input type="checkbox"/> Gen Ed / IAI <input checked="" type="checkbox"/> Career/Technical <input type="checkbox"/> Baccalaureate /Non-IAI <input type="checkbox"/> Dev Ed/ Not in Degree Audit					Clinical Practicum:	0.0	Work-based Learning:	0.0	WBL ECH:	0.0		
COURSE PCS #	12 - 15.1701			IAI Code			N/A			Contact Hours (Minutes/Week)			
Repeatable (Y/N):	Y	Pass/Fail (Y/N):	N	Variable Credit (Y/N):	N	Min:		Max:		16 Wks	200	8 Wks	400
Prerequisites:	None												
Corequisites:	None												
Catalog Description: (40 Word Limit)	This course covers heat pump fundamentals, electrical schematics, controls, operation and troubleshooting.												

List the Major Course Segments (Units)	Contact Lecture Hours	Contact Lab Hours	Clinical Practicum	Work-based Learning
Heat pump fundamentals	6	12		
Heat pump installation	2	8		
Typical operating conditions	6	12		
Troubleshooting and service	6	12		
TOTAL	20	44	0	0

EVALUATION

QUIZZES <input checked="" type="checkbox"/>	EXAMS <input checked="" type="checkbox"/>	ORAL PRES <input type="checkbox"/>	PAPERS <input type="checkbox"/>
LAB WORK <input checked="" type="checkbox"/>	PROJECTS <input type="checkbox"/>	COMP FINAL <input checked="" type="checkbox"/>	OTHER <input type="checkbox"/>

COURSE MATERIALS

TITLE:	Refrigeration & Air Conditioning Technology
AUTHOR:	Eugene Silberstein, Jason Obrzut, John Tomczyk, Bill Whitman, and Bill Johnson
PUBLISHER:	Cengage
VOLUME/EDITION/URL:	9th edition
COPYRIGHT DATE:	2021, 2017

MAJOR COURSE SEGMENT	HOURS	LEARNING OUTCOMES
		<i>The student will be able to:</i>
Heat pump fundamentals	18	1. Define heat pump components. 2. Explain heat pump operations. 3. Interpret heat pump controls.
Heat pump controls	10	1. Discuss control operations. 2. Compare operating controls and safety controls.
Typical operating conditions	18	1. Examine indoor and outdoor coil temperatures. 2. Check high and low pressures.
Troubleshooting and service	18	1. Perform service techniques. 2. Troubleshoot heat pumps.
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Outcomes*	Outcome Title	At the successful completion of this course, students will be able to:
Course Outcome 1	Service	Perform service techniques.
Course Outcome 2	Troubleshooting	Troubleshoot heat pumps.

Primary Laker Learning Competency Creative Thinking & Problem Solving: Students think creatively to solve problems.

Secondary Laker Learning Competency Scientific Literacy: Students apply the scientific process to real-life situations.

**Course and program outcomes will be used in the software for outcomes assessment and should include at least 1 primary and 1 secondary Laker Learning Competency. Limit to 3-5.*