10/21/2022 DATE
☑ REQUIRED COURSE
☐ ELECTIVE COURSE

TEC DIVISION
☐ NEW COURSE
☑ REVISION

Lake Land College

Course Information Form

COURSE NUMBER:	AUT-076		TITLE: *(30 Characters Max)*	Automatic Transmissions/Transaxles							
SEM CR HRS:	3	Lecture:	2	Lab:	2					ECH:	4
Course Level:	☐ Gen Ed / IAI ☐ Baccalaureate /Non-IAI ☑ Career/Technical ☐ Dev Ed/ Not in Degree Audit			Clinical Practicum:	0	Work-based Learning:	0			WBL ECH:	0
COURSE PCS #	12 - 47.0604		IAI Code	N/A				Contact Hours (Minutes/Week)			
Repeatable (Y/N):	N	Pass/Fail (Y/N):	N	Variable Credit (Y/N):	N	Min:		Max:		16 Wks	200	8 Wks	400
Prerequisites:	AUT-048 or consent of the instructor										
Corequisites:	None										
Catalog Description: (40 Word Limit)	This course is a study of automatic transmissions/transaxles maintenance, diagnosis and adjustment. On board and off board hydraulic control operations and repair are discussed.										

List the Major Course Segments (Units)	Contact Lecture Hours	Contact Lab Hours	Clinical Practicum	Work-based Learning
Safety, tools and transmission/transaxle fundamentals	7	1		
Transmission components, controls, construction and operation	8	0		
Troubleshooting mechanical, hydraulic, electrical and electronic control system problems	5	3		
Transmission in-vehicle service	2			
Transmission removal and installation	2			
Rebuilding transmission and transaxle final drive unit	6	28		
ASE certification and career preparation	2			
TOTAL	32	32	0	0

EVALUATION							
QUIZZES	☑	EXAMS	☑	ORAL PRES	☐	PAPERS	☐
LAB WORK	☑	PROJECTS	☐	COMP FINAL	☑	OTHER	☐

COURSE MATERIALS	
TITLE:	Automatic Transmissions and Transaxles
AUTHOR:	Johanson/Duffy
PUBLISHER:	Goodheart-Willcox
VOLUME/EDITION/URL:	5th
COPYRIGHT DATE:	2021

MAJOR COURSE SEGMENT	HOURS	LEARNING OUTCOMES
		The student will be able to:
Safety, tools and transmission/transaxle fundamentals	8	1. Identify and compare various transmission designs and tools while predicting safety concerns during the repair process.
Transmission components, controls, construction and operation	8	1. Validate the structural and electrical integrity of various transmission components.
Troubleshooting mechanical, hydraulic, electrical and electronic control system problems	8	1. Develop critical thinking skills when presented with a troubleshooting situation of the various systems in the automatic transmission.
Transmission in-vehicle service	2	1. Summarize the procedures to inspect, test, adjust, repair and/or replace electrical/electronic components and circuits, including computers, solenoids, sensors, relays, terminals, connectors, switches and harnesses.
Transmission removal and installation	2	1. Removal and reinstall the transmission/transaxle and torque converter, including the inspection of engine core plugs, rear crankshaft seal, dowel pins/holes and mounting surfaces.
Rebuilding transmission and transaxle final drive unit	34	1. Disassemble, inspect, adjust and/or replace transmission components. 2. Reassemble transmission/transaxle and final drive unit.

ASE certification and career preparation	2	1. Categorize the information and knowledge needed to become ASE certified in Automatic Transmissions/Transaxles. 2. Update their resume with automatic transmission/transaxle training/certification.
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Outcomes*	At the successful completion of this course, students will be able to:
Course Outcome	Demonstrate how to safely remove and reinstall a vehicle's automatic transmission/transaxle.
Course Outcome	Perform the ASE Education Foundation priority 1, 2 and 3 task for Automatic Transmission/Transaxle.
Course Outcome	Obtain the ASE Education Foundation Student Certification for Automatic Transmission/Transaxle.
Primary Laker Learning Competency	Information & Technology Literacy: Students not only identify when information is necessary, but they also find, evaluate and use that information effectively with the appropriate technological tools.
Secondary Laker Learning Competency	Creative Thinking & Problem Solving: Students think creatively and solve problems by successfully combining knowledge in new ways.

**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.*