

10/11/2024 DATE

☒ REQUIRED COURSE
☐ ELECTIVE COURSE

TEC

DIVISION

☐ NEW COURSE
☒ REVISION

Lake Land College

Course Information Form

COURSE NUMBER:	AUT-050		TITLE: (30 Characters Max)		Automotive Engine Repair										
SEM CR LECT.	3		Lecture:	2		Lab:	2				ECH:	4			
Course Level:	<input type="checkbox"/> Gen Ed / IAI <input type="checkbox"/> Baccalaureate /Non-IAI		<input checked="" type="checkbox"/> Career/Technical <input type="checkbox"/> 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 Per Week						
Repeatable (Y/N)	N	Pass/Fail (Y/N):	N	Variable Credit	N	Min:		Max:		16 Wks.	200	8 wks.	400		
Prerequisites:	None														
Corequisites:	None														
Catalog Description: (40 Word Limit)	This course is a study of automotive engine design, diagnosis and removal/installation will be discussed, as well as cylinder head and valve train repair, short block repair, lubrication and cooling systems diagnostics. Hands-on engine disassembly, diagnostics and reassembly is included.														

List the Major Course Segments (Units)	Contact Lecture Hours	Contact Lab Hours	Clinical Practicum	Work-based Learning
Tools, fasteners, and safety measuring systems	3	1		
Engine operation, cooling and lubrication systems, intake and exhaust manifolds	4			
Engine condition diagnosis	2	2		
Engine disassembly, cleaning, crack detection and repair	19	13		
Engine installation and in-vehicle service	4	16		
TOTAL	32	32	0	0

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

COURSE MATERIALS	
TITLE:	Auto Engine Repair
AUTHOR:	Duffy
PUBLISHER:	Goodheart-Willcox
VOLUME/EDITION/URL:	7th
COPYRIGHT DATE:	2021

MAJOR COURSE SEGMENT	HOURS	LEARNING OUTCOMES
		<i>The student will be able to:</i>
Tools, fasteners, and safety measuring systems	4	1. Identify and recognize uses for tools and fasteners used in vehicle engines, including measuring equipment while predicting safety concerns while operating them.
Engine operation, cooling and lubrication systems, intake and exhaust manifolds	4	1. Validate the structural and operational integrity of mechanical systems of an engine, including the cooling, lubrication and both intake and exhaust manifold systems.
Engine condition diagnosis	4	1. Assess the condition of the engine, mechanical components without engine disassembly.
Engine disassembly, cleaning, crack detection and repair	32	1. Assess the condition of engine, mechanical components as engine is disassembled. 2. Devise a plan to repair compromised components if they are repairable.

Engine installation and in-vehicle service	20	1. Remove and reinstall an engine in a vehicle.
	64	

Outcomes*	At the successful completion of this course, students will be able to:
Course Outcome	Demonstrate how to remove and reinstall a vehicle's engine safely.
Course Outcome	Perform the ASE Education Foundation priority 1, 2 and 3 task for Engine Repair.
Course Outcome	Obtain the ASE Education Foundation Student Certification for Engine Repair.
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.