6/8/2023 DATE
☑ REQUIRED COURSE
☐ ELECTIVE COURSE

TEC DIVISION
☐ NEW COURSE
☑ REVISION

Lake Land College

Course Information Form

COURSE NUMBER:	AUT-089	TITLE: *(30 Characters Max)*	ASE Test Review						
SEM CR HRS:	2	Lecture:	2	Lab:	0			ECH:	2
Course Level:	☐ Gen Ed / IAI ☐ Career/Technical ☐ Baccalaureate /Non-IAI ☐ Dev Ed/ Not in Degree Audit			Clinical Practicum:	0	Work-based Learning:	0	WBL ECH:	0
COURSE PCS #	12 - 470604	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	100	8 Wks	200
Prerequisites:	None								
Corequisites:	None								
Catalog Description: (40 Word Limit)	Review of subject material covered by National Institute Automotive Service Excellence Certificate tests. Assists the technician in psychology of how to take the tests.								

List the Major Course Segments (Units)	Contact Lecture Hours	Contact Lab Hours	Clinical Practicum	Work-based Learning
Introduction to ASE Certification	1			
Engine repair	3.75			
Automatic transmissions/transaxles	3.75			
Manual drive train and axles	3.75			
Suspension and steering	3.75			
Brakes	3.75			
Electrical systems	3.75			
Heating and air conditioning	3.75			
Engine performance	4.75			
TOTAL	32	0	0	0

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

COURSE MATERIALS		
TITLE:	Course Material in Canvas online learning program	
AUTHOR:	Kevin Miller	
PUBLISHER:	Lake Land College	
VOLUME/EDITION/URL:		
COPYRIGHT DATE:	2019	

MAJOR COURSE SEGMENT	HOURS	LEARNING OUTCOMES
		The student will be able to:
Introduction to ASE Certification	1	1. Understand the elements of the ASE Certification exam and basic test-taking strategies.
Engine repair	3.75	1. Explain: A. General engine diagnosis B. Cylinder head and valve train diagnosis and repair C. Engine block diagnosis and repair D. Lubrication and cooling system diagnosis and repair E. Fuel, Electrical, Ignition and Exhaust system Inspection
Automatic transmission/transaxles	3.75	1. Explain: A. General transmission/ transaxle diagnosis, Mechanical/Hydraulic Systems B. General Transmission/transaxle Diagnosis, Electronic Systems C. Transmission/Transaxle Maintenance and Adjustment D. In-vehicle transmission/ transaxle repair, E. Off-Vehicle, Transmission/Transaxle Repair, Removal, Disassembly, and Assembly F. Off-vehicle transmission/transaxle repair, Gear Train, Shafts, Bushings, Oil Pump, and Case G. Off-Vehicle Transmission/Transaxle Repair, Friction and Reaction Units

Manual drive trains and axles	3.75	1. Explain: A. Clutch diagnosis and repair B. Manual Transmission diagnosis and repair C. Manual transaxle diagnosis and repair D. Drive shaft/Half-Shaft and universal joint/Constant Velocity (CV) Joint diagnosis and repair (Front and Rear Wheel Drive) E. Rear drive axle diagnosis and repair, ring and pinion gears F. Rear drive axle diagnosis and repair, differential case/carrier assembly G. Rear drive axle diagnosis and repair, Limited slip/locking differential H. Rear wheel drive axle diagnosis and repair, axle shafts I. Four-Wheel-drive/all-wheel drive component diagnosis and repair
Suspension and steering	3.75	1. Explain: A. Steering systems diagnosis and repair 1. Steering columns 2. Steering units 3. Steering linkage B. Suspension systems diagnosis and repair 1. Front suspensions 2. Rear suspensions C. Related Suspension and Steering Service D. Wheel alignment diagnosis and adjustment and repair E. Wheel and tire diagnosis and repair
Brakes	3.75	1. Explain: A. Hydraulic system diagnosis and repair 1. Master cylinders 2. lines and hoses 3. Valves and switches 4. Bleeding, flushing and leak testing B. Drum brake diagnosis and repair C. Disc brake diagnosis and repair D. Power assist units diagnosis and repair E. Miscellaneous systems 1. Pedal linkage 2. wheel bearings, 3. parking brakes 4. electrical 5. etc. F. Electronic brake control systems; antilock brake systems (ABS) and traction control systems (TCS diagnosis and repair
Electrical systems	3.75	1. Explain: A. General electrical system diagnosis B. Battery diagnosis and service C. Starting system diagnosis and repair D. Charging system diagnosis and repair E. Lighting systems diagnosis and repair, headlights, parking lights, taillights, dash lights, and courtesy lights F. Lighting systems diagnosis and repair, stoplights, turn signals, hazard lights, and backup lights G. Gauges, warning devices and driver information systems diagnosis and repair H. Horn and wiper/ washers diagnosis and repair I. Accessories diagnosis and repair, body J. Accessories diagnosis and repair, miscellaneous
Heating and air conditioning	3.75	1. Explain: A. A/C systems service diagnosis and repair B. Refrigeration system component diagnosis and repair 1. Compressor and clutch 2. Evaporator, condenser, and related components C. Heating and engine cooling systems diagnosis and repair D. Operating systems and related control diagnosis and repair 1. Electrical 2. Vacuum/mechanical 3. Automatic and semi-automatic heating, ventilating and A/C systems E. Refrigerant recovery, recycling and handling and retrofit

Engine performance	4.75	1. Explain: A. General engine diagnosis B. Ignition system diagnosis and repair C. Fuel, air induction and exhaust system diagnosis and repair D. Emission control system diagnosis and repair 1. Positive crankcase ventilation 2. Exhaust gas recirculation 3. Secondary air injection 4. Catalytic converter 5 . Evaporative emissions controls E. Computerized engine controls diagnosis and repair F. Engine electrical systems diagnosis and repair 1. Battery 2. Starting system 3. Charging system
	32	

Outcomes*	At the successful completion of this course, students will be able to:
Course Outcome	Be prepared to take the ASE exam.
Course Outcome	
Course Outcome	
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.*