

10/21/2022

DATE

TEC DIVISION



REQUIRED COURSE



NEW COURSE



ELECTIVE COURSE



REVISION

Lake Land College

Course Information Form

COURSE NUMBER:	AUT-080		TITLE: (30 Characters Max)		Automotive Suspension and Steering						
SEM CR HRS:	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 (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										
Corequisites:	None										
Catalog Description: (40 Word Limit)	This course is a study of vehicle suspension and steering systems, including their effect on handling, efficiency and tire life. As a student, you will successfully execute the alignment process, using a computerized vehicle alignment system.										

List the Major Course Segments (Units)	Contact Lecture Hours	Contact Lab Hours	Clinical Practicum	Work-based Learning
Basic overview, safety and special tools	2			
Basic suspension system	4	4		
Steering systems	4	4		
Driveline and wheel components and service	4	2		
Electronic suspension and steering systems and service	4	2		
Wheel alignment principles and procedures	8	16		
Suspension and steering troubleshooting	4	2		
ASE certification and career preparation	2	2		
TOTAL	32	32	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:	Auto Suspension and Steering
AUTHOR:	Johanson/Stockel
PUBLISHER:	Goodheart-Willcox
VOLUME/EDITION/URL:	5th edition
COPYRIGHT DATE:	2021

MAJOR COURSE SEGMENT	HOURS	LEARNING OUTCOMES
		<i>The student will be able to:</i>
Basic overview, safety and special tools	2	1. Identify and compare various suspension and steering system designs and tools while predicting safety concerns for repairing and/or modifying them.
Basic suspension system	8	1. Validate the structural integrity of various suspension system components. 2. Execute basic repair procedures for compromised suspension system components
Steering systems	8	1. Validate the structural integrity of various steering system components. 2. Execute basic repair procedures for compromised steering system components.
Driveline and wheel components and service	6	1. Validate the structural integrity of axles, wheels and tires. 2. Execute basic repair procedures for compromised driveline and wheel components.
Electronic suspension and steering systems and service	6	1. Test the sensors and actuators associated with the suspension and steering systems.
Wheel alignment principles and procedures	24	1. Align the suspension and steering of a vehicle using computerized equipment.

Suspension and steering troubleshooting	6	1. Test drive a vehicle while detecting abnormal ride and handling characteristics. 2. Detect failed components or systems using the vehicles built-in diagnostics system. 3. Reprogram/relearn various vehicle sensors.
ASE certification and career preparation	4	1. Categorize the information and knowledge needed to become ASE certified in suspension and steering. 2. Update their resume with suspension and steering training/certification.
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Outcomes*	At the successful completion of this course, students will be able to:
Course Outcome	Measure the vehicle's suspension alignment and assess its effect on vehicle handling and efficiency.
Course Outcome	Perform the ASE Education Foundation priority 1, 2 and 3 task for Suspension and Steering.
Course Outcome	Obtain the ASE Education Foundation Student Certification for Suspension and Steering.
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.