

**INDUSTRY AND TECHNOLOGY**  
**Institutional (ILO), Program (PLO), and Course (SLO) Alignment**

<b>Program:</b> <b>Automotive Technology</b>	<b>Number of Courses:</b> 19	<b>Date Updated:</b> 09.21.2014	<b>Submitted by:</b> SueEllen Warren, ext. 4519 Renee Newell, ext. 3308
--	---------------------------------	------------------------------------	---

<b>ILOs</b>	<b>1. Critical Thinking</b> <i>Students apply critical, creative and analytical skills to identify and solve problems, analyze information, synthesize and evaluate ideas, and transform existing ideas into new forms.</i>	<b>2. Communication</b> <i>Students effectively communicate with and respond to varied audiences in written, spoken or signed, and artistic forms.</i>	<b>3. Community and Personal Development</b> <i>Students are productive and engaged members of society, demonstrating personal responsibility, and community and social awareness through their engagement in campus programs and services.</i>	<b>4. Information Literacy</b> <i>Students determine an information need and use various media and formats to develop a research strategy and locate, evaluate, document, and use information to accomplish a specific purpose. Students demonstrate an understanding of the legal, social, and ethical aspects related to information use.</i>
-------------	--	---	--	--

**SLO-PLO-ILO ALIGNMENT NOTES:**

*Mark boxes with an 'X' if: SLO/PLO is a major focus or an important part of the course/program; direct instruction or some direct instruction is provided; students are evaluated multiple times (and possibly in various ways) throughout the course or are evaluated on the concepts once or twice within the course.*

*DO NOT mark with an 'X' if: SLO/PLO is a minor focus of the course/program and some instruction is given in the area but students are not formally evaluated on the concepts; or if the SLO/PLO is minimally or not at all part of the course/program.*

<b>PLOs</b>	<b>PLO to ILO Alignment</b>			
	<i>(Mark with an X)</i>			
	1	2	3	4
<b>PLO #1 ASE Certification Test Exam</b> Given an in class exam, based on readings, classroom discussions and demonstrations, the student will be able to take a Pass/No Pass practice exam, or an official ASE Certification Test exam with a grade equivalent of "pass".				X
<b>PLO #2 Skills for Entry Level Positions</b> Upon completion of a course of study in ATEC, the student will develop knowledge and skills for job entry positions in the automotive field.				X
<b>PLO #3 Updated Knowledge and Skills</b> Upon completion of a course of study in ATEC, the student working in the field will develop updated knowledge and skills in the automotive field.				X

SLOs	SLO to PLO Alignment <i>(Mark with an X)</i>			COURSE to ILO Alignment <i>(Mark with an X)</i>			
	P1	P2	P3	1	2	3	4
<b>ATEC 1 Introduction to Automotive Service: SLO #1 Safety Exam</b> Given an in class exam, based on readings, classroom discussions and demonstrations, the student will be able to work in the Automotive Shop safely and pass the Automotive Safety Exam with 100% accuracy.		X					
<b>ATEC 1 Introduction to Automotive Service: SLO #2 Under Hood Inspection</b> The student will perform a vehicle under hood inspection and complete a Vehicle Under Hood Inspection lab sheet.		X					X
<b>ATEC 1 Introduction to Automotive Service: SLO #3 Under Vehicle Inspection</b> The student will perform an under vehicle inspection and complete and Under Vehicle Inspection lab sheet.		X					
<b>ATEC 11 Brakes, Suspension and Four Wheel Alignment: SLO #1 Safety Exam</b> Given an in class exam, based on readings, classroom discussions and demonstrations, the student will be able to work in the Automotive Shop safely and pass the Automotive Safety Exam with 100% accuracy.		X					
<b>ATEC 11 Brakes, Suspension and Four Wheel Alignment: SLO #2 Brake System Inspection</b> The student will perform a brake system inspection on a vehicle and complete a Vehicle Brake Inspection lab worksheet.		X					X
<b>ATEC 11 Brakes, Suspension and Four Wheel Alignment: SLO #3 Suspension Inspection</b> The student will perform a front and rear suspension inspection on a vehicle and complete a Vehicle Suspension Inspection lab sheet.		X					
<b>ATEC 14 Brakes: SLO #1 Safety Exam</b> Given an in class exam, based on readings, classroom discussions and demonstrations, the student will be able to work in the Automotive Shop safely and pass the Automotive Safety Exam with 100% accuracy.		X					
<b>ATEC 14 Brakes: SLO #2 Brake Inspection</b> The student will perform a brake system inspection on a vehicle and complete a Vehicle Brake Inspection lab worksheet.		X					X
<b>ATEC 14 Brakes: SLO #3 Drum Brake Service &amp; Adjustment</b> The student will perform a drum brake system service and adjustment and complete a Vehicle Brake Service lab sheet.		X					
<b>ATEC 16 Suspension and Four Wheel Alignment: SLO #1 Safety Exam</b> Given an in class exam, based on readings, classroom discussions and demonstrations, the student will be able to work in the Automotive Shop safely and pass the Automotive Safety Exam with 100% accuracy.		X					
<b>ATEC 16 Suspension and Four Wheel Alignment: SLO #2 Suspension Inspection</b> The student will perform a front and rear suspension inspection on a vehicle and complete a Vehicle Suspension Inspection lab sheet.		X					X
<b>ATEC 16 Suspension and Four Wheel Alignment: SLO #3 Four Wheel Alignment</b> The student will perform a four-wheel alignment on a vehicle and complete a 4-Wheel Alignment Data lab sheet.		X					

SLOs	SLO to PLO Alignment <i>(Mark with an X)</i>			COURSE to ILO Alignment <i>(Mark with an X)</i>			
	P1	P2	P3	1	2	3	4
<b>ATEC 21 Introduction to Engine Tune-Up: SLO #1 Safety Exam</b> Given an in class exam, based on readings, classroom discussions and demonstrations, the student will be able to work in the Automotive Shop safely and pass the Automotive Safety Exam with 100% accuracy.		X					X
<b>ATEC 21 Introduction to Engine Tune-Up: SLO #2 Engine Analysis</b> The student will perform and analysis of an engine using the Automotive Compression/Cylinder Leakage Test/Vacuum Testing lab worksheet to manufacturer specifications.		X					
<b>ATEC 21 Introduction to Engine Tune-Up: SLO #3 Battery System Test</b> The student will be able to test the performance of the automotive battery charging and starting systems using the Automotive Battery/ Charging/Starting Systems Testing lab worksheet and manufacturer specifications.		X					
<b>ATEC 22A Introduction to Tune-Up, Electrical and Fuel Systems: SLO #1 Safety Exam</b> Given an in class exam, based on readings, classroom discussions and demonstrations, the student will be able to work in the Automotive Shop safely and pass the Automotive Safety Exam with 100% accuracy.		X					X
<b>ATEC 22A Introduction to Tune-Up, Electrical and Fuel Systems: SLO #2 Engine Analysis</b> The student will perform and analysis of an engine using the Automotive Compression/Cylinder Leakage Test/Vacuum Testing lab worksheet to manufacturer specifications.		X					
<b>ATEC 22A Introduction to Tune-Up, Electrical and Fuel Systems: SLO #3 Engine Condition &amp; Performance</b> The student will test and evaluate engine condition and performance using an Engine Analyzer/Scanner lab worksheet to manufacturer specifications.		X					
<b>ATEC 22A Introduction to Tune-Up, Electrical and Fuel Systems: SLO #4 Fuel System Test</b> The student will be able to test the performance of an automotive fuel system using the Fuel System Performance Testing lab worksheet and manufacturer specifications.		X					
<b>ATEC 22B Advanced Tune-Up, Electrical and Fuel Systems: SLO #1 Safety Exam</b> Given an in class exam, based on readings, classroom discussions and demonstrations, the student will be able to work in the Automotive Shop safely and pass the Automotive Safety Exam with 100% accuracy.		X					X
<b>ATEC 22B Advanced Tune-Up, Electrical and Fuel Systems: SLO #2 Battery System Test</b> The student will be able to test the performance of the automotive battery charging and starting systems using the Automotive Battery/ Charging/Starting Systems Testing lab worksheet and manufacturer specifications.		X					
<b>ATEC 22B Advanced Tune-Up, Electrical and Fuel Systems: SLO #3 Powertrain Control Module</b> The student will be able to test the performance of the automotive computer controlled system using the Automotive Powertrain Control Module Data lab worksheet and manufacturer specifications.		X					

SLOs	SLO to PLO Alignment <i>(Mark with an X)</i>			COURSE to ILO Alignment <i>(Mark with an X)</i>			
	P1	P2	P3	1	2	3	4
<b>ATEC 23 Major Tune-Up and Emission Controls: SLO #1 Safety Exam</b> Given an in class exam, based on readings, classroom discussions and demonstrations, the student will be able to work in the Automotive Shop safely and pass the Automotive Safety Exam with 100% accuracy.		X					
<b>ATEC 23 Major Tune-Up and Emission Controls: SLO #2 Engine Analysis</b> The student will perform and analysis of an engine using the Automotive Compression/Cylinder Leakage Test/Vacuum Testing lab worksheet to manufacturer specifications.		X					X
<b>ATEC 23 Major Tune-Up and Emission Controls: SLO #3 Engine Condition &amp; Performance</b> The student will test and evaluate engine condition and performance using an Engine Analyzer/Scanner lab worksheet to manufacturer specifications.		X					
<b>ATEC 24 Fuel Systems and Emissions: SLO #1 Safety Exam</b> Given an in class exam, based on readings, classroom discussions and demonstrations, the student will be able to work in the Automotive Shop safely and pass the Automotive Safety Exam with 100% accuracy.		X					
<b>ATEC 24 Fuel Systems and Emissions: SLO #2 Engine Condition &amp; Performance</b> The student will test and evaluate engine condition and performance using an Engine Analyzer/Scanner lab worksheet to manufacturer specifications.		X					X
<b>ATEC 24 Fuel Systems and Emissions: SLO #3 Fuel System Test</b> The student will be able to test the performance of an automotive fuel system using the Fuel System Performance Testing lab worksheet and manufacturer specifications.		X					
<b>ATEC 25 Automotive Electrical Systems: SLO #1 Safety Exam</b> Given an in class exam, based on readings, classroom discussions and demonstrations, the student will be able to work in the Automotive Shop safely and pass the Automotive Safety Exam with 100% accuracy.		X					
<b>ATEC 25 Automotive Electrical Systems: SLO #2 Battery System Test</b> The student will be able to test the performance of the automotive battery charging and starting systems using the Automotive Battery/ Charging/Starting Systems Testing lab worksheet and manufacturer specifications.		X					X
<b>ATEC 25 Automotive Electrical Systems: SLO #3 Engine Condition &amp; Performance</b> The student will test and evaluate engine condition and performance using an Engine Analyzer/Scanner lab worksheet to manufacturer specifications.		X					
<b>ATEC 26 Automotive Testing and Diagnosis: SLO #1 Safety Exam</b> Given an in class exam, based on readings, classroom discussions and demonstrations, the student will be able to work in the Automotive Shop safely and pass the Automotive Safety Exam with 100% accuracy.		X					
<b>ATEC 26 Automotive Testing and Diagnosis: SLO #2 Powertrain Control Module</b> The student will be able to test the performance of the automotive computer controlled system using the Automotive Powertrain Control Module Data lab worksheet and manufacturer specifications.		X					X
<b>ATEC 26 Automotive Testing and Diagnosis: SLO #3 Engine Condition &amp; Performance</b> The student will test and evaluate engine condition and performance using an Engine Analyzer/Scanner lab worksheet to manufacturer specifications.		X					

SLOs	SLO to PLO Alignment <i>(Mark with an X)</i>			COURSE to ILO Alignment <i>(Mark with an X)</i>			
	P1	P2	P3	1	2	3	4
<b>ATEC 33 Transmission, Drive Train and Drive Axles: SLO #1 Safety Exam</b> Given an in class exam, based on readings, classroom discussions and demonstrations, the student will be able to work in the Automotive Shop safely and pass the Automotive Safety Exam with 100% accuracy.		X					X
<b>ATEC 33 Transmission, Drive Train and Drive Axles: SLO #2 Automatic Transmission Inspection</b> The student will inspect, test and evaluate operation of an automatic transmission using manufacturer testing procedures and specifications.		X					
<b>ATEC 33 Transmission, Drive Train and Drive Axles: SLO #3 Manual Transmission Inspection</b> The student will inspect, test and evaluate operation of a manual transmission using manufacturer testing procedures and specifications.		X					
<b>ATEC 33 Transmission, Drive Train and Drive Axles: SLO #4 Manual Transmission Performance</b> The student will disassemble, inspect, measure and evaluate the parts of a manual transmission, then reassemble and test the transmission using manufacturer procedures and specifications.		X					
<b>ATEC 33 Transmission, Drive Train and Drive Axles: SLO #5 Automatic Transmission Performance</b> The student will disassemble, inspect, measure and evaluate the parts of an automatic transmission, then reassemble and test the automatic transmission using manufacturer procedures and specifications.		X					
<b>ATEC 34 Automatic Transmissions: SLO #1 Safety Exam</b> Given an in class exam, based on readings, classroom discussions and demonstrations, the student will be able to work in the Automotive Shop safely and pass the Automotive Safety Exam with 100% accuracy.		X					X
<b>ATEC 34 Automatic Transmissions: SLO #2 Automatic Transmission Inspection</b> The student will inspect, test and evaluate operation of an automatic transmission using manufacturer testing procedures and specifications.		X					
<b>ATEC 34 Automatic Transmissions: SLO #3 Automatic Transmission Performance</b> The student will disassemble, inspect, measure and evaluate the parts of an automatic transmission, then reassemble and test the automatic transmission using manufacturer procedures and specifications.		X					
<b>ATEC 35 Manual Transmission, Drive Train and Drive Axles: SLO #1 Safety Exam</b> Given an in class exam, based on readings, classroom discussions and demonstrations, the student will be able to work in the Automotive Shop safely and pass the Automotive Safety Exam with 100% accuracy.		X					X
<b>ATEC 35 Manual Transmission, Drive Train and Drive Axles: SLO #2 Manual Transmission Inspection</b> The student will inspect, test and evaluate operation of a manual transmission using manufacturer testing procedures and specifications.		X					
<b>ATEC 35 Manual Transmission, Drive Train and Drive Axles: SLO #3 Manual Transmission Performance</b> The student will disassemble, inspect, measure and evaluate the parts of a manual transmission, then reassemble and test the transmission using manufacturer procedures and specifications.		X					

SLOs	SLO to PLO Alignment <i>(Mark with an X)</i>			COURSE to ILO Alignment <i>(Mark with an X)</i>			
	P1	P2	P3	1	2	3	4
<b>ATEC 41 Engine Rebuilding: SLO #1 Safety Exam</b> Given an in class exam, based on readings, classroom discussions and demonstrations, the student will be able to work in the Automotive Shop safely and pass the Automotive Safety Exam with 100% accuracy.		X					
<b>ATEC 41 Engine Rebuilding: SLO #2 Cylinder Head Recondition</b> The student will recondition an automotive cylinder head using manufacturer procedures and specifications, then complete a lab sheet.		X					X
<b>ATEC 41 Engine Rebuilding: SLO #3 Engine Inspection &amp; Test</b> The student will disassemble, inspect, measure and evaluate the parts of an automotive engine, then reassemble and test the engine using manufacturer procedures and specifications.		X					
<b>ATEC 42 Engine Repair: SLO #1 Safety Exam</b> Given an in class exam, based on readings, classroom discussions and demonstrations, the student will be able to work in the Automotive Shop safely and pass the Automotive Safety Exam with 100% accuracy.		X					
<b>ATEC 42 Engine Repair: SLO #2 Engine Analysis</b> The student will perform an analysis of an engine to manufacturer specifications and complete Automotive Compression/Cylinder Leakage Test/Vacuum and Oil Pressure lab worksheets.		X					X
<b>ATEC 42 Engine Repair: SLO #3 Cooling System Analysis</b> The student will test and analyze an automotive engine cooling system using manufacturer procedures and specifications, then complete a lab sheet.		X					
<b>ATEC 43 Introduction to Engine Repair: SLO #1 Safety Exam</b> Given an in class exam, based on readings, classroom discussions and demonstrations, the student will be able to work in the Automotive Shop safely and pass the Automotive Safety Exam with 100% accuracy.		X					
<b>ATEC 43 Introduction to Engine Repair: SLO #2 Engine Analysis</b> The student will perform an analysis of an engine to manufacturer specifications and complete Automotive Compression/Cylinder Leakage Test/Vacuum and Oil Pressure lab worksheets.		X					X
<b>ATEC 43 Introduction to Engine Repair: SLO #3 Cooling System Analysis</b> The student will test and analyze an automotive engine cooling system using manufacturer procedures and specifications, then complete a lab sheet.		X					

SLOs	SLO to PLO Alignment <i>(Mark with an X)</i>			COURSE to ILO Alignment <i>(Mark with an X)</i>			
	P1	P2	P3	1	2	3	4
<b>ATEC 45 Automotive Machining: SLO #1 Safety Exam</b> Given an in class exam, based on readings, classroom discussions and demonstrations, the student will be able to work in the Automotive Shop safely and pass the Automotive Safety Exam with 100% accuracy.		X					X
<b>ATEC 45 Automotive Machining: SLO #2 Cylinder Head Recondition</b> The student will recondition an automotive cylinder head using manufacturer procedures and specifications, then complete a lab sheet.		X					
<b>ATEC 45 Automotive Machining: SLO #3 Machining Engine Components</b> The student will measure, inspect and analyze automotive components with precision instruments, perform varied machine work as required to recondition the components using manufacturer procedures and specifications, and complete a lab sheet.		X					
<b>ATEC 81 Automotive Air Conditioning: SLO #1 Safety Exam</b> Given an in class exam, based on readings, classroom discussions and demonstrations, the student will be able to work in the Automotive Shop safely and pass the Automotive Safety Exam with 100% accuracy.		X					X
<b>ATEC 81 Automotive Air Conditioning: SLO #2 A/C System Analysis</b> The student will perform an analysis of automotive system using an air conditioning gauge set to manufacturer specifications and complete a lab sheet.		X					
<b>ATEC 81 Automotive Air Conditioning: SLO #3 Evacuation &amp; Recharge</b> The student will perform an evacuation and recharge of the refrigerant from the automotive air conditioning system according to industry standards and complete a lab sheet.		X					