



Industrial Maintenance Technology Student Learning Outcomes

February, 2017

FDTC Curriculum Map

Program: Industrial Maintenance Technology

Course #	Course Title	Credits	Hours		Program Outcomes	General Education Outcomes
			Lecture	Lab		
IMT 131	Hydraulics & Pneumatics	4	3	3	1,2,3,4,5	
IMT 140	Industrial Electricity	5	4	3	1,2,3,4,5	
IMT 141	Electrical Control Devices	5	4	3	1,2,3,4,5	
IMT 160	Preventive Maintenance	3	2	3	1,2,3,4,5	
IMT 161	Mechanical Power Applications	4	3	3	1,2,3,4,5	
IMT 202	Electrical Troubleshooting	4	3	3	1,2,3,4,5	
IMT 203	Mechanical Troubleshooting	4	3	3	1,2,4,5	
IMT 210	Basic Industrial Skills I	3	3	0	1,2,4,5	
IMT 211	Basic Industrial Skills II	3	3	0	1,2,4,5	
IMT 212	Electrical Theory	3	2	3	1,2,3,4,5	
IMT 233	Programmable Logic Controllers	3	2	3	1,2,3,4,5	

Program Outcomes

1	The IMT graduate demonstrates the proper use of safety equipment, devices, and procedures in classroom and lab environments.
2	The IMT graduate combines basic theoretical knowledge and understanding of the Industrial Maintenance Field and practical laboratory experience to set up and repair industrial equipment and facilities.
3	The IMT graduate compares and contrasts the operations of various industrial circuits in outline form.
4	The IMT graduate applies theoretical study and the knowledge of metering tools to troubleshoot mechanical, electrical, and electromechanical systems and repair them.
5	The IMT graduate determines the proper publication for guidance in the performance of the specific task assigned.

General Education Outcomes

1	Computer Literacy
2	Mathematics
3	Oral & Written Communications
4	Reading
5	Applied Technology
6	Problem-Solving Skills
7	Information Literacy

Course #	Course Title	Credits	Hours		Program Outcomes	General Education Outcomes
			Lecture	Lab		
Mat 170	Algebra, Geometry, and Trigonometry I	3	3	0		2,3,4,6,7
Eng 160	Technical Communications	3	3	0		1,3,4,5,6,7
Psy 103	Human Relations	3	3	0		3,4,6,7
HSS 205	Technology and Society	3	3	0		1,3,4,5,6,7
Eco 201	Economics Concepts	3	3	0		2,3,4,5,6,7

Florence-Darlington Technical College
Industrial Maintenance Technology
Program and Course Student Learning Outcomes

PSLO's

- 1 The IMT graduate demonstrates the proper use of safety equipment, devices, and procedures in classroom and lab environments.
- 2 The IMT graduate combines basic theoretical knowledge and understanding of the Industrial Maintenance Field and practical laboratory experience to set up and repair industrial equipment and facilities.
- 2 The IMT graduate compares various electrical and hydraulic circuits and outline the differences between them.
- 3 The IMT graduate applies theoretical study and the knowledge of metering tools to troubleshoot mechanical, electrical, and electromechanical systems and repair them.
- 4 The IMT graduate determines the proper publication for guidance in the performance of the specific task assigned.

CSLO's

IMT 131 - Hydraulics and Pneumatics

- 1 The IMT student recognizes pneumatic and hydraulic safety hazards and how to reduce the risk of exposure to those risks.
- 2 The IMT student identifies, associates, and computes pneumatic and hydraulic theory and law and apply.
- 3 The IMT student identifies components of pneumatic and hydraulic circuits.
- 4 The IMT student explores different types and configurations of pneumatic and hydraulic circuits.
- 5 The IMT student designs, installs, and tests basic pneumatic and hydraulic circuits.
- 6 The IMT student practices pneumatic and hydraulic maintenance procedures.

IMT 140 - Industrial Electricity

- 1 The IMT student recognizes electrical safety hazards and how to reduce the risk of exposure to those risks.
- 2 The IMT student identifies, associates, and computes which electrical theory and law and apply.
- 3 The IMT student identifies components of electrical circuits and how to measure them.
- 4 The IMT student examines the principles of AC circuits and understand how certain components react.
- 5 The IMT student calculates the effects of AC components in circuits.
- 6 The IMT student explores the different types of electrical motors.
- 7 The IMT student practices electrical motor maintenance procedures.

IMT 141 - Electrical Control Devices

- 1 The IMT student recognizes electrical safety hazards and how to reduce the risk of exposure to those risks.
- 2 The IMT student explores different types of switching devices.
- 3 The IMT student examines the characteristics of overload protection devices.
- 4 The IMT student explains the characteristics of solenoids and relays.
- 5 The IMT student demonstrates how to install AC and DC controllers.
- 6 The IMT student practices troubleshooting common electrical control device issues.

IMT 160 - Preventive Maintenance

- 1 The IMT student recognizes various safety hazards and how to reduce the risk of exposure to those risks.
- 2 The IMT student explores and compares preventive and predictive maintenance.
- 3 The IMT student will be introduced to typical equipment failure areas and how preventive maintenance can reduce those failures.
- 4 The IMT student develops preventive maintenance task lists for various equipment.
- 5 The IMT student utilizes manufacturer's specifications in the selection of proper tools and materials for various preventive maintenance tasks.
- 6 The IMT student demonstrates their ability to perform preventive maintenance.

IMT 161 - Mechanical Power Applications

- 1 The IMT student recognizes mechanical safety hazards and how to reduce the risk of exposure to those risks.
- 2 The IMT student explores various mechanical components found in industrial facilities.
- 3 The IMT student examines the characteristics of differing bearings and how to identify them.
- 4 The IMT student classifies pumps and their uses.
- 5 The IMT student identifies gear types and applications.
- 6 The IMT student demonstrates proper gear reducer disassembly and reassembly.

IMT 202 - Electrical Troubleshooting

- 1 The IMT student recognizes electrical safety hazards and how to reduce the risk of exposure to those risks.
- 2 The IMT student identifies various drawings used by electrical technicians.
- 3 The IMT student compares normal electrical conditions in troubleshooting diagrams to actual field components.
- 4 The IMT student examines the function of various switches and switching devices used in electrical devices.
- 5 The IMT student demonstrates how to test for open and shorted electrical circuits.
- 6 The IMT student examines faulty electrical equipment and uses the proper test equipment, tools, and troubleshooting guides and schematics to correct the issue.

IMT 203 - Mechanical Troubleshooting

- 1 The IMT student recognizes mechanical safety hazards and how to reduce the risk of exposure to those risks.
- 2 The IMT student identifies various drawings used by mechanical technicians.
- 3 The IMT student compares normal mechanical conditions in troubleshooting diagrams to actual field components.
- 4 The IMT student examines the function of various mechanical devices.
- 5 The IMT student demonstrates how to test and align various mechanical devices.
- 6 The IMT student examines faulty mechanical equipment and uses the proper test equipment, tools, and troubleshooting guides and schematics to correct the issue.

IMT 210 - Basic Industrial Skills I

- 1 The IMT student recognizes various safety hazards and how to reduce the risk of exposure to those risks.
- 2 The IMT student applies basic mathematics to the Industrial Maintenance Field.
- 3 The IMT student recognizes basic shapes used in the Industrial Maintenance Field and uses geometry to calculate their area and volume.
- 4 The IMT student identifies and operates basic hand tools used in an industrial environment.

IMT 211 - Basic Industrial Skills II

- 1 The IMT student recognizes various safety hazards and how to reduce the risk of exposure to those risks.
- 2 The IMT student applies basic mathematics to the Industrial Maintenance Field.
- 3 The IMT student recognizes basic shapes used in the Industrial Maintenance Field and uses geometry to calculate their area and volume.
- 4 The IMT student demonstrates how to use various hand tools.

IMT 212 - Electrical Theory

- 1 The IMT student recognizes electrical safety hazards and how to reduce the risk of exposure to those risks.
- 2 The IMT student demonstrates the safe employment of the tools of the trade.
- 3 The IMT student determines which electrical test equipment to use and demonstrate their proper use.
- 4 The IMT student explains how to navigate various codes and regulations, relating to the electrical field.
- 5 The IMT student utilizes blue prints and drawings and understand their importance.
- 6 The IMT student constructs sample industrial wiring circuits.

IMT 214 - Industrial Wiring

- 1 The IMT student recognizes electrical safety hazards and how to reduce the risk of exposure to those risks.
- 2 The IMT student identifies components by NEMA and IEC size and ratings.
- 3 The IMT student demonstrates their ability to wire various switches and switching devices.
- 4 The IMT student demonstrates their ability to wire various motor control devices.
- 5 The IMT student explains various motor starting and operation techniques.
- 6 The IMT student constructs and tests motor starting circuits.

IMT 233 - Programmable Logic Controllers

- 1 The IMT student recognizes the basic function of Programmable Logic Controllers.
- 2 The IMT student understands the fundamentals of logic.
- 3 The IMT student examines the basics of programming the Programmable Logic Controllers.
- 4 The IMT student develops and composes basic Ladder Logic Programs.
- 5 The IMT student manipulates data and programs for Programmable Logic Controllers.
- 6 The IMT student installs, edits, and troubleshoots Programmable Logic Controllers.

Count of Students	Student Identification				Industrial Maintenance Technology - Program Outcome #1			
	Name		Sex	ID NO	The IMT graduate demonstrates the proper use of safety equipment, device, and procedures in the classroom and lab environments.			
	Last	First			IMT 210: The IMT student recognizes various safety hazards and how to reduce the risk of exposure to those risks.		IMT 140: The IMT student recognizes electrical safety hazards and how to reduce the risk of exposure to those risks.	
			Summative	Formative	Summative	Formative		
					NCCER Module 00101-09 Exam Basic Safety	The class will review the Core Curriculum text book, Unit 1 and perform a hands-on exercise.	Chapter 1 Test Current, Resistance, and Voltage	The class will review the text book and perform hands-on exercises, regarding electrical hazards.
1	XXXX	XXXX	M	XXXX	93.3	100	88	100
2	XXXX	XXXX	M	XXXX	70	100	84	100
3	XXXX	XXXX	M	XXXX	92.5	100	88	100
4	XXXX	XXXX	M	XXXX	72.5	100	84	100
5	XXXX	XXXX	M	XXXX	80	100	80	100
6	XXXX	XXXX	M	XXXX	80	100	92	100
7	XXXX	XXXX	M	XXXX	93.3	100	100	100
8	XXXX	XXXX	M	XXXX	82.5	100	88	100
9	XXXX	XXXX	M	XXXX	80	100	88	100
10	XXXX	XXXX	M	XXXX	82.5	100	0	100
11	XXXX	XXXX	M	XXXX	87.5	100	92	100
12	XXXX	XXXX	M	XXXX	77.5	100	88	100
13	XXXX	XXXX	M	XXXX	70	100	92	100
14	XXXX	XXXX	M	XXXX	90	100	84	100
15	XXXX	XXXX	M	XXXX	93.3	100	88	100
16	XXXX	XXXX	M	XXXX	73.3	100	84	100
17	XXXX	XXXX	M	XXXX	90	100	88	100
18	XXXX	XXXX	M	XXXX	60	100	92	100
19	XXXX	XXXX	M	XXXX	93.3	100	92	100
20	XXXX	XXXX	M	XXXX	86.7	100	100	100
					E.g. 75% of the students will....		score 70% or higher*	
Course Benchmark %*					75	75	75	75
Minimum Student Score*					70	70	70	70
Actual Percentage Met					95	100	95	100
Course Benchmark Achieved?					Exceed	Exceed	Exceed	Exceed

Count of Students	Student Identification				Industrial Maintenance Technology - Program Outcome #4			
	Name		Sex	ID NO	The IMT graduate applies theoretical study and the knowledge of metering tools to troubleshoot mechanical, electrical, and electromechanical systems and repair them.			
	Last	First			IMT 210: The IMT student demonstrates how to use various hand tools.		IMT 212: The IMT student demonstrates the safe employment of the tools of the trade.	
			Summative	Formative	Summative	Formative		
					NCCER Module 00103-09 Exam Introduction to Hand Tools	The class will review the Core Curriculum text book, Unit 3 and perform a hands-on exercise.	NCCER Module 40110-07 Exam Introduction to Test Instruments	The class will review the Industrial Maintenance E&I text book, Unit 10 and perform a hands-on exercise.
1	XXXX	XXXX		XXXX	90	100	95	100
2	XXXX	XXXX		XXXX	90	100	75	100
3	XXXX	XXXX		XXXX	100	100	100	100
4	XXXX	XXXX		XXXX	90	100	86.7	100
5	XXXX	XXXX		XXXX	75	100	73.3	100
6	XXXX	XXXX		XXXX	90	100	95	100
7	XXXX	XXXX		XXXX	95	100	66.7	100
8	XXXX	XXXX		XXXX	70	100	80	100
9	XXXX	XXXX		XXXX	90	100	70	100
10	XXXX	XXXX		XXXX	90	100	85	100
11	XXXX	XXXX		XXXX	90	100	100	100
12	XXXX	XXXX		XXXX	70	100	90	100
13	XXXX	XXXX		XXXX	0	100	53.3	100
14	XXXX	XXXX		XXXX	90	100	85	100
15	XXXX	XXXX		XXXX	85	100	93.3	100
16	XXXX	XXXX		XXXX	75	100	73.3	100
17	XXXX	XXXX		XXXX	85	100	93.3	100
18	XXXX	XXXX		XXXX	70	100	65	100
19	XXXX	XXXX		XXXX	90	100	93.3	100
20	XXXX	XXXX		XXXX	95	100	86.7	100
					E.g. 75% of the students will...		score 70% or higher*	
Course Benchmark %*					75	75	75	75
Minimum Student Score*					70	70	70	70
Actual Percentage Met					95	100	85	100
Course Benchmark Achieved?					Exceed	Exceed	Exceed	Exceed

Florence-Darlington Technical College
Industrial Maintenance Technology - Program
Assessment - Systematic Evaluation Plan

Course Category: Traditional Hybrid/Blended Online Web Facilitated Dual Enrollment DL

Program Student Learning Outcome:

1 The IMT graduate will demonstrate the proper use of safety equipment, device, and procedures in the classroom and lab environments.

Course Number	Course Student Learning Outcome	Assessment Method	Benchmark	Actual Level of Achievement	Action Plan	Time Interval
IMT 210	CSLO #1 The IMT student recognizes various safety hazards and how to reduce the risk of exposure to those risks.	Formative: The class will review the Core Curriculum text book, Unit 1 and perform a hands-on exercise to demonstrate competency.	All students will operate various safety gear, including lock-out and tag-out gear, to the standards of the manufacturer of the equipment.	100% of students demonstrated their understanding of various safety gear.	Review any unfamiliar safety devices and/or procedures.	Initial course subject and prior to any following units.
IMT 210	CSLO #1 The IMT student recognizes various safety hazards and how to reduce the risk of exposure to those risks.	Summative: The student will complete a written test, as arranged by NCCER and the publishers of the text.	75% will pass the test with a 70% or higher.	95% of students met the benchmark.	The test will be reviewed and the correct answers will be identified and discussed, to clarify any misunderstandings.	Initial course subject and prior to any following units.
IMT 140	CSLO #1 The IMT student recognizes electrical safety hazards and how to reduce the risk of exposure to those risks.	Formative: The class will review the text book and perform hands-on exercises, regarding electrical hazards to demonstrate competency.	All students will employ various electrical safety gear and procedures, to the standards of the manufacturer of the equipment.	100% of students demonstrated their understanding of various safety gear.	Review any unfamiliar test equipment and/or procedures.	Initial course subject and prior to any following units.
IMT 140	CSLO #1 The IMT student recognizes electrical safety hazards and how to reduce the risk of exposure to those risks.	Summative: The student will complete a written test, as arranged by NCCER and the publishers of the text.	75% will pass the test with a 70% or higher.	95% of students met the benchmark	The test will be reviewed and the correct answers will be identified and discussed, to clarify any misunderstandings.	Initial course subject and prior to any following units.

Florence-Darlington Technical College
Industrial Maintenance Technology - Program
Assessment - Systematic Evaluation Plan

Course Category: Traditional Hybrid/Blended Online Web Facilitated Dual Enrollment DL

Program Student Learning Outcome:

4 The IMT graduate applies theoretical study and the knowledge of metering tools to troubleshoot mechanical, electrical, and electromechanical systems and repair them.

Course Number	Course Student Learning Outcome	Assessment Method	Benchmark	Actual Level of Achievement	Action Plan	Time Interval
IMT 210	CSLO #4 The IMT student identifies and operates basic hand tools used in an industrial environment.	Formative: The class will review the Core Curriculum text book, Unit 3 and perform a hands-on exercise.	All students will safely operate various hand tools in accordance to manufacturer's instructions.	100% of students demonstrated their understanding of various safety gear.	Review any unfamiliar safety devices and/or procedures.	Between the ninth or tenth week to the eleventh or twelfth week of the semester.
IMT 210	CSLO #4 The IMT student identifies and operates basic hand tools used in an industrial environment.	Summative: The student will complete a written test, as arranged by NCCER and the publishers of the text.	75% will pass the test with a 70% or higher.	95% of students met the benchmark.	The test will be reviewed and the correct answers will be identified and discussed, to clarify any misunderstandings.	Between the ninth or tenth week to the eleventh or twelfth week of the semester.
IMT 212	CSLO #3 The IMT student determines which electrical test equipment to use and demonstrate their proper use.	Formative: The class will review the Industrial Maintenance E&I text book, Unit 10 and perform a hands-on exercise.	All students will safely operate various electrical test equipment in accordance to manufacturer's instructions.	100% of students demonstrated their understanding of various safety gear.	Review any unfamiliar test equipment and/or procedures.	During the initial three weeks of the semester.
IMT 212	CSLO #3 The IMT student determines which electrical test equipment to use and demonstrate their proper use.	Summative: The student will complete a written test, as arranged by NCCER and the publishers of the text.	75% will pass the test with a 70% or higher.	85% of students met the benchmark.	The test will be reviewed and the correct answers will be identified and discussed, to clarify any misunderstandings.	During the initial three weeks of the semester.

**Florence-Darlington Technical College
Assessment-Systematic Evaluation Plan
Detailed Report**

Course Name: 2016 FA IMT 140-01 Industrial Electricity

[Division] Technical

Faculty: William J Hargrove

Semester(s) Reported: 2016 Fall

Course Category:

Traditional Hybrid/Blended Online Web Facilitated Dual Enrollment DL

Program Student Learning Outcome: #1 The IMT graduate will demonstrate the proper use of safety equipment, device and procedures in the classroom and lab environments.

Course Student Learning Outcome: #1 The IMT student recognizes electrical safety hazards and how to reduce the risk of exposure to those risks.

Analysis of Results: All students scored at 100% on the formative hands-on exercise. Students must score at the 100% in safety hazards to proceed in the course. On the summative Chapter 1 Test, 95% of the students scored at the 70% benchmark or above. At the time of the reporting, one student was absent and scored a 0%. The remaining students scored an 80% or higher.

Strength in student performances: The students recognized the importance of protecting for electrical safety hazards associated with basic industrial work.

Weaknesses in student performances: The students showed a little weakness in the use of the multi-meter as a tool for electrical safety.

Recommended Action(s): Additional videos will be provided that highlight the importance of checking for voltage, prior to working with circuits.

When Action will be implemented: Fall 2017

Data Comparison:

	2016 Spring- Startup	20__	20__	20__
Measurement Instrument	Benchmark	Benchmark	Benchmark	Benchmark
Summative: The student will complete a written test, as arranged by NCCER and the publisher of the text.	75% of students will make a 70 or better on the NCCER Basic Safety Exam			
Formative: The class will review the Core Curriculum textbook, Unit 1 and perform a hands-on exercise.	75% of students will make a 70 or better on the hands-on exercise.			

Impact of Changes Implemented As a Result of Previous Assessment Cycle: N/A

**Florence-Darlington Technical College
Assessment-Systematic Evaluation Plan
Detailed Report**

Course Name: 2016 FA IMT 210-01 Basic Industrial Skills I

[Division] Technical

Faculty: William J Hargrove

Semester(s) Reported: 2016 Fall

Course Category:

Traditional Hybrid/Blended Online Web Facilitated Dual Enrollment DL

Program Student Learning Outcome: #1 The IMT graduate will demonstrate the proper use of safety equipment, device and procedures in the classroom and lab environments.

Course Student Learning Outcome: #1 The IMT student recognizes various safety hazards and how to reduce the risk of exposure to those risks.

Analysis of Results: All students scored at 100% on the formative hands-on exercise. Students must score at the 100% in safety hazards to proceed in the course. On the summative NCCER Module Basic Safety Exam 85% of the students scored at the 70% benchmark or above. However; at the time of the reporting, one student was absent and scored a 0, two others scored in the 60's% with three other students scoring at the benchmark of 70%.

Strength in student performances: The students seemed to recognize the common safety hazards associated with basic industrial work and how to mitigate them.

Weaknesses in student performances: The students struggled with the written exam. Since the exam was the first by this publisher and the unit so large, it was a struggle for many to score well.

Recommended Action(s): Future classes will see a preparatory written exam (quiz) given, prior to the delivery of the actual unit exam. This should help set the mindset of the students.

When Action will be implemented: Fall 2017

Data Comparison:

	2016 Spring- Startup	20__	20__	20__
Measurement Instrument	Benchmark	Benchmark	Benchmark	Benchmark
Summative: The student will complete a written test, as arranged by NCCER and the publisher of the text.	75% of students will make a 70 or better on the NCCER Basic Safety Exam			
Formative: The class will review the Core Curriculum textbook, Unit 1 and perform a hands-on exercise.	75% of students will make a 70 or better on the hands-on exercise.			

Impact of Changes Implemented As a Result of Previous Assessment Cycle: N/A

**Florence-Darlington Technical College
Assessment-Systematic Evaluation Plan
Detailed Report**

Course Name: 2016 FA IMT 210-01 Basic Industrial Skills I

[Division] Technical

Faculty: William J Hargrove

Semester(s) Reported: 2016 Fall

Course Category:

Traditional Hybrid/Blended Online Web Facilitated Dual Enrollment DL

Program Student Learning Outcome: #4 The IMT graduate applies theoretical study and the knowledge of metering tools to troubleshoot mechanical, electrical, and electromechanical systems and repair them.

Course Student Learning Outcome: #4 The IMT student identifies and operates basic hand tools used in an industrial environment.

Analysis of Results: All students scored at 100% on the formative hands-on exercise. On the summative NCCER Module Introduction to Hand Tools Exam 95% of the students scored at the 70% benchmark or above. However; at the time of the reporting, one student was absent and scored a 0% and three other students scored at the benchmark of 70%.

Strength in student performances: The students recognized the basic hand tools associated with basic industrial work and how to properly use and inspect them.

Weaknesses in student performances: Some of the students struggled with the written exam. Trade terminology threw off some of the student's understanding of the referenced tools.

Recommended Action(s): Future classes will have a greater emphasis on trade terminology for the tools of the trade.

When Action will be implemented: Fall 2017

Data Comparison:

	2016 Spring- Startup	20__	20__	20__
Measurement Instrument	Benchmark	Benchmark	Benchmark	Benchmark
Summative: The student will complete a written test, as arranged by NCCER and the publisher of the text.	75% of students will make a 70 or better on the NCCER Basic Safety Exam			
Formative: The class will review the Core Curriculum textbook, Unit 1 and perform a hands-on exercise.	75% of students will make a 70 or better on the hands-on exercise.			

Impact of Changes Implemented As a Result of Previous Assessment Cycle: N/A

**Florence-Darlington Technical College
Assessment-Systematic Evaluation Plan
Detailed Report**

Course Name: 2016 FA IMT 212-01 Electrical Theory

[Division] Technical

Faculty: William J Hargrove

Semester(s) Reported: 2016 Fall

Course Category:

Traditional Hybrid/Blended Online Web Facilitated Dual Enrollment DL

Program Student Learning Outcome: #4 The IMT graduate applies theoretical study and the knowledge of metering tools to troubleshoot mechanical, electrical, and electromechanical systems and repair them.

Course Student Learning Outcome: #3 The IMT student determines which electrical test equipment to use and demonstrate their proper use.

Analysis of Results: All students scored at 100% on the formative hands-on exercise. On the summative NCCER Module 40110 Exam, 45% of the students scored at the 70% benchmark or above. At the time of the reporting, the remaining breakdown was one student was absent and scored a 0%, three students scored a 60% or below, and five scored a 66.7%.

Strength in student performances: The students recognized and employed the tools associated with basic industrial electrical work and how to properly use and inspect them.

Weaknesses in student performances: The students showed a weakness with the written test. The exam only had 15 questions to it, so the point values were quite high.

Recommended Action(s): Focus the student's attention on tools by using more visual cues (projected images and actual items) and associating them with the key terminology, as written in the course material.

When Action will be implemented: Fall 2017

Data Comparison:

	2016 Spring- Startup	20__	20__	20__
Measurement Instrument	Benchmark	Benchmark	Benchmark	Benchmark
Summative: The student will complete a written test, as arranged by NCCER and the publisher of the text.	75% of students will make a 70 or better on the NCCER Basic Safety Exam			
Formative: The class will review the Core Curriculum textbook, Unit 1 and perform a hands-on exercise.	75% of students will make a 70 or better on the hands-on exercise.			

Impact of Changes Implemented As a Result of Previous Assessment Cycle: N/A