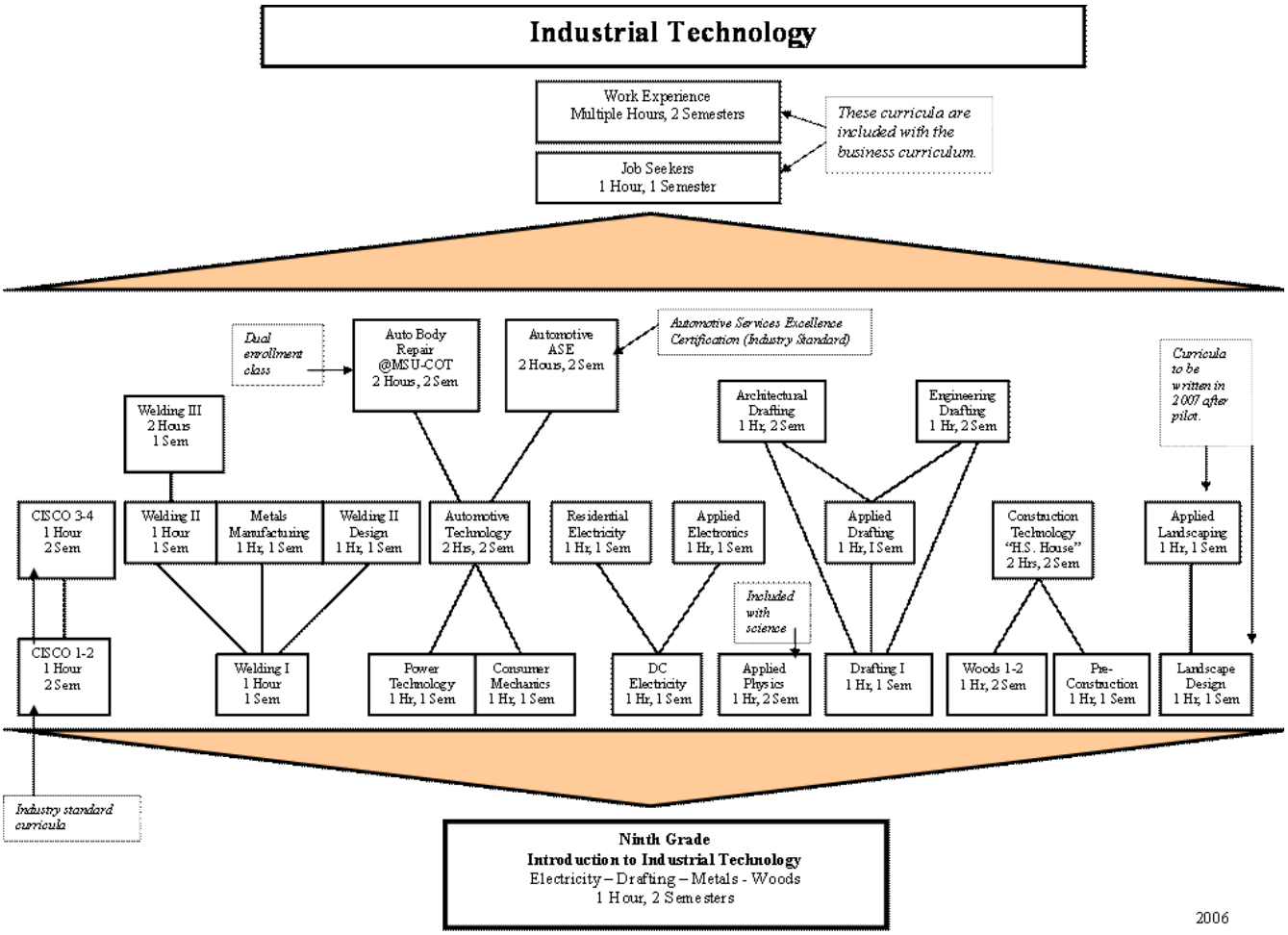

Woods/Construction Content Standards and Benchmarks

Introduction to Woods, Woods 1-2, Preconstruction, Construction Technology

In the woods/construction curriculum strand, the content standards and benchmarks are the underpinnings of each class. The differentiated knowledge and skill levels occur as the complexity of the projects increase. This is reflected in the learning targets.

Standard 1.0 Students will know various career opportunities and assess personal career pathways related to woods and construction.

Benchmark:
At all levels students will:

1.1 Identify careers related to building trades, lumber, and hardware.
1.2 Identify level of education/experience necessary for careers related to building trades, lumber, and hardware.

Standard 2.0 Students will demonstrate an understanding of and apply principles of Resource Management (i.e., financial, materials, time) to woods/construction projects.

Benchmark:
At all levels students will:

2.1 Apply mathematical skills to create a materials list and budget for construction projects.
2.2 Analyze a project in order to prioritize, prepare, and follow a plan of procedure to complete a woods/construction project.
2.3 Analyze woods/construction related projects and choose appropriate materials.

Standard 3.0 Students will acquire and utilize personal and leadership skills to become successful, productive employees in a construction environment.

Benchmark:
At all levels students will:

3.1 Demonstrate positive work ethics, punctuality, attendance, and preparedness for work.
3.2 Apply appropriate time to task.

In Construction Technology students will:

3.3 Successfully perform leadership skills in an authentic construction setting.

Standard 4.0 Students will acquire and demonstrate current technical skills leading to an occupation in the field of wood working and

construction.

Benchmark:
At all levels students will:

4.1 Know and apply procedures for safe use of tools and safety equipment related to woods/construction.
4.2 Know the appropriate tools, equipment, and procedures needed for an entry-level job in woods/construction.
4.3 Use acceptable industry standard equipment in woods/construction in a school setting.
4.4 Evaluate quality of woods/construction project.

Standard 5.0 Students will demonstrate mathematics and communication skills necessary in a construction environment.

Benchmark:
At all levels students will:

5.1 Practice and demonstrate mathematical concepts and formulas in a workplace setting related to woods/construction.
5.2 Apply technical reading skills through interpretation of text and schematics reflective of construction industry standards.
5.3 Demonstrate effective oral and written communication skills in a construction environment.

Drafting Content Standards and Benchmarks

Introduction to Drafting, Drafting I, Applied Drafting, Architectural, and Engineering Drafting

In the Drafting curriculum strand, the content standards and benchmarks are the underpinnings of each class. The differentiated knowledge and skill levels occur as the complexity of the projects increase. This is reflected in the learning targets.

Standard 1.0 Students will know various career opportunities and assess personal career pathways related to drafting.

Benchmark:
At all levels students will:

1.1 Identify personal interests and abilities in the drafting trades.
1.2 Identify specialized drafting career with respect to specific knowledge, skills, and problem solving situations.
1.3 Know education and certification requirements of career plans in drafting related occupations.

Standard 2.0 Students will demonstrate an understanding of and apply principles of time management and work ethic.

Benchmark:
At all levels students will:

2.1 Students will apply drafting industry work ethics of punctuality, time on task, and meeting deadlines.
2.2 Demonstrate the ability to self-start and work independently on drafting assignments.

Standard 3.0 Students will acquire and utilize personal and interpersonal communication to become effective drafts persons.

Benchmark:
At all levels students will:

3.1 Know and appropriately use industry standard terminology related to drafting.
3.2 Demonstrate an understanding of how working drawings are used as a method of communication.
3.3 Apply technical reading skills to analyze text and drawings.

In Applied, Architectural, and Engineering Drafting students will:

3.4 Accurately read and interpret drafting symbols in order to effectively communicate design concepts.
3.5 Identify web-based resources to solve problems in drafting.

Automotive Content Standards and Benchmarks

Consumer Mechanics, Power Technology, Automotive Technology

In the Automotive curriculum strand, the content standards and benchmarks are the underpinning of each class. The differentiated knowledge and skill levels occur as the complexity of the projects increase. This is reflected in the learning targets.

Standard 1.0 Students will know various career opportunities and assess personal career pathways related to the automotive field.

Benchmark:
At all levels students will:

1.1 Identify career opportunities in the area of automotive technology.
1.2 Comprehend the working conditions, pay structure, salary and educational requirements of automotive careers.

Standard 2.0 Students will demonstrate an understanding of and apply principles of resource management, (i.e., financial, materials, time) to automotive projects.

Benchmark:
At all levels students will:
2.1 Prepare written documentation of completed tasks (automotive work order).
2.2 Demonstrate responsible behavior when operating tools and equipment in the automotive shop.
2.3 Select and properly use tools or equipment to complete an automotive task.

Standard 3.0 Students will apply reading and problem solving skills to solve automotive technical problems.

Benchmark:
At all levels students will:
3.1 Demonstrate technical reading skills related to automotive manuals.
3.2 Demonstrate problem solving skills related to automotive diagnostics and engine repair.
3.3 Know the definitions of automotive related vocabulary.

Standard 4.0 Students will acquire and demonstrate mathematical and technical skills relating to the automotive applications.

Benchmark:
At all levels students will:
4.1 Apply mathematical skills related to measurement as it applies to engines.
4.2 Demonstrate an understanding of automotive troubleshooting protocols.

Standard 5.0 Students will demonstrate knowledge and skills related to automotive technology.

Benchmark:
At all levels students will:
5.1 Demonstrate knowledge of automotive industry standards.
5.2 Use appropriate automotive quality control equipment.
5.3 Demonstrate a working knowledge of various automotive systems.
5.4 Practice safe and appropriate use of automotive technology.

Automotive ASE

This class, housed at Paris Gibson School, is a two hour, two semester class designed to provide an automotive training program recognized by the National Automotive Technicians Education Foundation. Standard tasks and safety requirements were taken directly from the NATEF Automotive Task List.

Safety

For every task the following safety requirement must be strictly enforced:
Comply with personal and environmental safety practices associated with clothing; eye protection; hand tools; power equipment; proper chemicals/materials in accordance with local, state, and federal safety and environmental regulations.

Electrical/Electronic Systems

1. For the purpose of attaining skills and understanding of Electrical/Electronic Systems, students will identify essential knowledge, interpret and/or diagnose problems appropriately, and apply the required skill to demonstrate knowledge of the NATEF Tasks.
1.1 General Electrical System Diagnosis
1.2 Battery Diagnosis and Service
1.3 Charging System Diagnosis and Repair
1.4 Lighting Systems Diagnosis and Repair
1.5 Gauges, Warning Devices, and Driver Information Systems Diagnosis and Repair
1.6 Horn and Wiper/Washer Diagnosis and Repair
1.7 Accessories Diagnosis and Repair

Suspension and Steering

2. For the purpose of attaining skills and understanding of Suspension and Steering, students will identify essential knowledge, interpret and/or diagnose problems appropriately, and apply the required skill to demonstrate knowledge of the NATEF Tasks.

2.1 General Suspension and Steering Systems Diagnosis
2.2 Steering Systems Diagnosis and Repair
2.3 Suspension Systems Diagnosis and Repair
2.3.1 Front Suspension
2.3.2 Rear Suspension
2.4 Wheel Alignment Diagnosis, Adjustment and Repair
2.5 Wheel and tire Diagnosis and Repair

Manual Drive Train and Axles

3. For the purpose of attaining skills and understanding of Manual Drive Train and Axles, students will identify essential knowledge, interpret and/or diagnose problems appropriately, and apply the required skill to demonstrate knowledge of the NATEF Tasks.

3.1 General Drive Train Diagnosis
3.2 Clutch Diagnosis and Repair
3.3 Transmission/Transaxle Diagnosis and Repair
3.4 Drive Shaft and Half Shaft, Universal and Constant-Velocity (CV) Joint Diagnosis and Repair
3.5 Drive Axle Diagnosis and Repair
3.5.1 Ring and Pinion Gears and Differential Case Assembly
3.5.2 Limited Slip Differential
3.5.3 Drive Axle Shaft
3.6 Four-wheel Drive/All-wheel Drive Component Diagnosis and Repair

Brakes
4. For the purpose of attaining skills and understanding of Brakes, students will identify essential knowledge, interpret and/or diagnose problems appropriately, and apply the required skill to demonstrate knowledge of the NATEF Tasks.
4.1 General Brake Systems Diagnosis 4.2 Hydraulic Systems Diagnosis and Repair 4.3 Drum Brake Diagnosis and Repair 4.4 Disc Brake Diagnosis and Repair 4.5 Power Assist Units Diagnosis and Repair 4.6 Miscellaneous (Wheel Bearings, Parking Brakes, electrical) Diagnosis and Repair 4.7 Antilock Brake and Traction Control Systems

Electricity/Electronics Content Standards and Benchmarks
(Introduction to Electricity, DC Electricity, DC/Residential Electricity, Applied Electronics)
In the Electricity/Electronics curriculum strand, the content standards and benchmarks are the underpinnings of each class. The differentiated knowledge and skill levels occur as the complexity of the projects increase.
Standard 1.0 Students will know various career opportunities and assess personal career pathways related to electricity/electronics.
Benchmark: **At all levels students will:** 1.1 Identify career opportunities in the field of electricity/electronics. 1.2 Identify skills and aptitudes in an electricity/electronics-related career setting. 1.3 Understand educational pathways to electricity/electronics careers.
Standard 2.0 Students will demonstrate an understanding of and apply principles of resource management (i.e., financial, materials, time) to electricity/electronics projects.
Benchmark: **At all levels students will:** 2.1 Apply appropriate time to task for electricity/electronics projects. 2.2 Analyze circuit and determine appropriate physical resources. 2.3 Analyze circuit and determine sequence of appropriate steps.
Standard 3.0 Students will acquire and utilize personal and leadership skills to become successful, productive employees in an electricity/electronics environment.
Benchmark: **At all levels students will:** 3.1 Demonstrate active cooperative skills by participation in group activities and projects in electricity/electronics. 3.2 Demonstrate positive work ethics such as punctuality, ready to work, time on task related to electricity/electronics assignments and projects.
Standard 4.0 Students will acquire and demonstrate current technical skills leading to an occupation in electricity/electronics.
Benchmark: **At all levels students will:** 4.1 Understand safe and appropriate use of technology including meters and power supplies. 4.2 Select the appropriate components and equipment for wiring a circuit (given specific schematics) to industry standards. 4.3 Identify the proper sequence of steps to wire a circuit to industry standards.
Standard 5.0 Students will demonstrate scientific, mathematics and communication knowledge and skills necessary in an electricity/electronics environment.
Benchmark: **At all levels students will:** 5.1 Apply and demonstrate mathematical and scientific application by solving for various electrical quantities (volts, ohm's amps) used in workplace settings. 5.2 Demonstrate reading application through interpretation of text and schematics to electricity/electronics industry standards. 5.3 Demonstrate effective communication including writing, schematic drawings and oral descriptions in an electricity/electronics environment.
Applied Electronics
Standard 1.0 Students will experience various career opportunities and assess personal career pathways related to electronics.
Benchmark: **In Applied Electronics students will:** 1.1a Identify career opportunities in the Applied Electrical area. 1.1b Analyze individual abilities in a career setting. 1.1c Understand educational pathways to electrical careers.
Standard 2.0 Students demonstrate an understanding and apply principles of Resource Management (i.e., financial, time, personal management).
Benchmark:

In Applied Electronics students will:
- 2.2a Utilize the proper sequence of steps to wire a circuit.
- 2.2b Apply appropriate time to task.
- 2.4 Use physical resources wisely to accomplish a goal.

Standard 3.0 Students acquire and utilize personal and leadership skills to become successful, productive citizens.

Benchmark:
In Applied Electronics students will:
- 3.1 Demonstrate active cooperative skills by participation in group activities and projects through positive personal and work ethics.
- 3.6 Practice several methods of effective communication including reading, writing, schematic drawings and oral descriptions.

Standard 4.0 Students acquire and demonstrate current technical skills leading to an occupation.

Benchmark:
In Applied Electronics students will:
- 4.1 Demonstrate basic technical skills and procedures required for an occupation using applied electronics.
- 4.2 Understand safe and appropriate use of technology including bread boards, and circuitry.
- 4.3 Select the appropriate tools, equipment, and procedures of soldering skills for an entry level job or advanced training.
- 4.5 Apply technical reading skills to utilize information from text and schematics to a variety of projects.

Standard 5.0 Students know and demonstrate the requirements of the workplace through authentic application.

Benchmark:
In Applied Electronics students will:
- 5.1a Apply and demonstrate mathematical application by solving for various electrical quantities (volts, ohm's amps) used in workplace settings.
- 5.1b Practice and demonstrate reading application through interpretation of text and schematics to industry standards.
- 5.4 Recognize acceptable industry standard equipment in a school setting.

Residential Electricity

Standard 1.0 Students will experience various career opportunities and assess personal career pathways related to residential electricity.

Benchmark:
In Residential Electricity Students will:
- 1.1a Identify career opportunities in the Residential Electrical and related fields.
- 1.1c Understand educational pathways to electrical careers.

Standard 2.0 Students demonstrate an understanding and apply principles of resource management (i.e., financial, time, personal management).

Benchmark:
In Residential Electricity Students will:
- 2.2a Identify the proper sequence of steps to wire a circuit.
- 2.2b Apply appropriate time to task.
- 2.4 Use physical resources wisely to accomplish a goal.

Standard 3.0 Students acquire and utilize personal and leadership skills to become successful, productive citizens.

Benchmark:
In Residential Electricity Students will:
- 3.1 Demonstrate active cooperative skills by participation in group activities and projects through positive personal and work ethics.
- 3.7 Practice several methods of effective communication including reading, writing, schematic drawings and oral descriptions.

Standard 4.0 Students acquire and demonstrate current technical skills leading to an occupation.

Benchmark:
In Residential Electricity Students will:
- 4.1 Demonstrate basic technical skills and procedures required for an occupation using Residential Electricity.
- 4.2 Understand safe and appropriate use of technology including meters, ground, and GFCI.
- 4.3 Select the appropriate tools, equipment, and procedures for the task needed for an entry level job or advanced training.
- 4.5 Apply technical reading skills to utilize information from text and schematics to a variety of projects.

Standard 5.0 Students know and demonstrate the requirements of the workplace through authentic application.

Benchmark:
In Residential Electricity Students will:
- 5.1a Apply and demonstrate mathematical application by solving for various quantities used in workplace settings.
- 5.1b Practice and demonstrate reading application through interpretation of text and schematics to industry standards.
- 5.4 Recognize acceptable industry standard equipment in a school setting.

Introduction to Industrial Technology—Electricity Ninth Grade

Standard 1.0 Students experience various career opportunities and assess personal career pathways.

Benchmark:
In Introduction to Industrial Technology Students will:
- 1.1a Identify career opportunities in the Electrical area.
- 1.1b Analyze individual abilities in a career setting.
- 1.1c Understand educational pathways to electrical careers.

Standard 2.0 Students demonstrate an understanding and apply principles of resource management (i.e., financial, time, personal management).

Benchmark:
In Introduction to Industrial Technology Students will:

2.2a Identify the proper sequence of steps to wire a circuit.
2.2b Apply appropriate time to task.
2.4 Use physical resources wisely to accomplish a goal.

Standard 3.0 Students acquire and utilize personal and leadership skills to become successful, productive citizens.

Benchmark:
In Introduction to Industrial Technology Students will:

3.1 Demonstrate active cooperative skills by participation in group activities and projects through positive personal and work ethics.
3.6 Practice several methods of effective communication including reading, writing, schematic drawings and oral descriptions.

Standard 4.0: Students acquire and demonstrate current technical skills leading to an occupation.

Benchmark:
In Introduction to Industrial Technology Students will:

4.1 Demonstrate basic technical skills and procedures required for an occupation using electricity.
4.2 Understand safe and appropriate use of technology including meters and power supplies.
4.3 Select the appropriate tools, equipment, and procedures for the task needed for an entry level job.
4.5 Apply technical reading skills to utilize information from text and schematics to a variety of projects.

Standard 5.0: Students know and demonstrate the requirements of the workplace through authentic application.

Benchmark:
In Introduction to Industrial Technology Students will:

5.1b Practice and demonstrate reading application through interpretation of text and schematics to industry standards.
5.4 Recognize acceptable industry standard equipment in a school setting.

Welding/Metals Content Standards and Benchmarks

(Curriculum for Introduction to Welding, Welding I, Welding II, and Metals Manufacturing)

In the Welding/Metals curriculum strand, the content standards and benchmarks are the underpinning of each class. The differentiated knowledge and skill levels occur as the complexity of the projects increase. This is reflected in the learning targets.

Standard 1.0 Students will know various career opportunities and assess personal career pathways related to welding/metals.

Benchmark:
At all levels students will:

1.1 Identify personal interests and abilities in the welding/metals trade.
1.2 Demonstrate knowledge of a variety of welding/metals careers.
1.3 Identify local resources and know education and certification requirements of career plans related to welding/metals.

Standard 2.0 Students will demonstrate an understanding of and apply principles of Resource Management (i.e., financial, materials, time) to welding/metals projects.

Benchmark:
At all levels students will:

2.1 Identify appropriate materials and estimate the amount of materials necessary for a specific welding/metals project.
2.2 Estimate time necessary to complete a given welding/metals project and determine its feasibility.
2.3 Prepare materials list, determine quantities of materials, and budget for an independent welding/metals project.

Standard 3.0 Students will acquire and utilize personal and interpersonal communication and workplace skills to become productive welders and metals manufacturers.

Benchmark:
At all levels students will:

3.1 Demonstrate an understanding of the qualities of a leader and a team member in a productive welding/metals environment.

In Welding I, Welding II, and Metals Manufacturing students will:

3.2 Apply welding/metals industry work ethics of punctuality, time on task, and care and organization of tools and equipment.
3.3 Compare and evaluate quality of workmanship to welding/metals industry standards through self-reflection.
3.4 Use effective communication, including reading and writing, to accomplish a task in a welding/metals environment.

Standard 4.0 Students will acquire and demonstrate current technical and academic skills leading to an occupation in welding or metals manufacturing.
Benchmark: **At all levels students will:** 4.1 Know and correctly use technical terminology, processes, tools and materials related to welding/metals. 4.2 Know and demonstrate safe and appropriate use of welding/metals equipment. 4.3 Apply appropriate mathematics and science concepts to solve welding/metals problems.
In Welding I, Welding II, and Metals Manufacturing students will: 4.4 Recognize problems, identify possible causes, find a solution and follow troubleshooting protocol in order to complete a project in a welding/metals environment.
Standard 5.0 Students transfer welding/metals knowledge and skills to a variety of authentic workplace setting.
Benchmark: **In Welding I, Welding II, and Metals Manufacturing students will:** 5.1 Use acceptable industry standard tools and equipment in an environment other than welding/metals shop.
In Welding II and Metals Manufacturing students will: 5.2 Recognize problems, identify possible causes, find a solution and follow troubleshooting protocol in order to accomplish a welding/metals goal in a workplace setting.

Cisco 1- 4
This curriculum aligns with the Cisco Systems requirements which develop student understanding and skills in designing, building, and maintaining computer networks. Graduates from Cisco are prepared for testing to attain industry-standard networking certification. The differentiated knowledge and skill levels occur as the complexity of the class increases in learning targets.
Standard 1.0 Students experience various opportunities and assess personal career pathways.
Benchmark: **Students at all levels will:** **1.1** Explore and identify personal interests, aptitudes, and abilities and develop strategies to achieve tentative career goals.
Standard 2.0 Students demonstrate an understanding and apply principles of resource management.
Benchmark: **Students at all levels will:** **2.1** Prioritize, allocate time, prepare and follow schedules to complete a project. **2.2** Apply appropriate time to task. **2.3** Use physical resources wisely to accomplish a goal.
Standard 3.0 Students acquire and utilize personal skills to become successful productive citizens.
Benchmark: **Students at all levels will:** **3.1** Demonstrate active cooperative skills by participation in group activities and projects. **3.2** Demonstrate positive personal and work ethics **3.3** Practice several methods of effective communication including reading, writing, schematic drawings and oral descriptions.
Standard 4.0 Students acquire and demonstrate current technical skills leading to an occupation.
Benchmark: **Students at all levels will:** **4.1** Practice technical skills and procedures required for an occupation. **4.2** Practice safe and appropriate use of technology including meters, power supplies, and electronic components. **4.3** Select appropriate tools, equipment, and procedures for the task needed for an entry level job or advanced training. **4.4** Apply technical reading skills to utilize information from text and schematics to a variety of projects.
Standard 5.0 Students know and demonstrate the requirements of the workplace through authentic application.
Benchmark: **Students at all levels will:** **5.1** Practice and demonstrate the installation of structured cabling. **5.2** Practice and demonstrate mathematical applications. **5.3** Use acceptable industry standard equipment in a school setting.

Materials Purchased and included in this adoption are the following:

Class	Materials	Cost	ISBN
Automotive AE taught at Paris Gibson	Erjavec, J. (2006). *Today's Technician: Manual Transmissions & Transaxles*, 4th ed. Shop Manual and Classroom Manual.	$70.50 ea includes	Shop manual 1401877532 Classroom manual 1401877532
	Raadsheer, F. & Erjavec, J. (2006). *Automotive Technology*: *A Systems Approach*, 4th ed. Student Textbook and Tech Manual.	$72.50 ea $33.00 ea	Textbook 1401848311 Student Workbook 1401848338
	Hollembeak, B. (2003). *Today's Technician: Automotive Electricity & Electronics*, 3rd ed. Classroom Manual and Shop Manual.	$69.75 ea Includes	Shop manual 0766820998 Classroom manual 0766820998