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The Automotive Technology Program

CIP 47.0604

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Have Questions?

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READING MUHLENBERG CAREER & TECHNOLOGY CENTER

MISSION STATEMENT

The Reading Muhlenberg Career & Technology Center, in partnership with our diverse community, sponsoring districts, and business and industry, is committed to providing quality career and technical education, resulting in opportunities for students to gain employment, pursue post-secondary education, and develop an appreciation for lifelong learning.

VISION STATEMENT

To empower Reading Muhlenberg Career & Technology Center students with the technical knowledge and skills to confidently pursue a career.

BELIEFS

- We believe in valuing the diversity of each student
- We believe education leads to opportunity
- We believe quality education starts with quality leadership
- We believe a career and technical education is a critical component of workforce development
- We believe technology is vital to learning and will help students connect with a rapidly changing world
- We believe technology must be embraced by teachers as a tool to help prepare students to meet current and future labor market demands
- We believe in providing all students with a positive educational experience
- We believe students should feel proud of what they have accomplished each day
- We believe students will be provided the opportunity to achieve their highest potential
- We believe students will be provided the opportunity to acquire and cultivate leadership skills
- We believe in providing students with a safe school environment
- We believe the success of a student is enhanced by parents and/or other influential adults through their support and involvement
- We believe in encouraging students to maintain a lifelong affiliation with the school
- We believe change is an ongoing process, not an event, and is fundamental for building quality programs of study
- We believe instruction must accommodate individual student learning styles



Automotive Technology

- Develop the skills necessary to perform proper hands-on vehicle repair.
- Expand your career options by earning your PA State Safety & Emissions Inspection certifications.
- Maintain, diagnose, analyze, and repair basic-to-advanced automotive systems.
- Learn the 3 “C’s” – complaint, cause, and correction – used in the automotive repair industry.
- Perform a wide variety of hands-on repairs and experience the “live” automotive repair industry environment.



Job Titles – Career Pathways

- 41-2022 Parts Salespersons
- 49-2096 Electronic Equipment Installers and Repairers, Motor Vehicles
- 49-3023 Automotive Service Technicians and Mechanics
- 49-3093 Tire Repairers and Changers
- 53-6051 Transportation Inspectors
- 53-7061 Cleaners of Vehicles and Equipment
- LOCAL Lube Technician
- LOCAL Alignment / Suspension Technician
- LOCAL Brake Technician

CTC knowledge transfers to college credits at:

- Commonwealth Technical Institute
- Community College of Allegheny County
- Community College of Philadelphia
- Delaware County Community College
- Harrisburg Area Community College
- Johnson College
- Lincoln Technical Institute
- Luzerne County Community College
- Northampton Community College
- Pennsylvania College of Technology
- Rosedale Technical College
- Thaddeus Stevens College of Technology
- Universal Technical Institute (UTI)

Student Certifications

- NOCTI – National Occupational Competency Testing Institute Certification
- * Automotive Technician – Core
- Pennsylvania State Safety Inspector Certification, Cat I
- Pennsylvania State Safety Inspector Certification, Cat III
- Pennsylvania State Emissions Inspector Certification
- OSHA Fire Extinguisher Certification
- Valvoline Motor Oil Specialist Certification
- S/P2
- Section 609 Certification for Refrigerant Recycling and Recovery

Accreditations

NATEF – National Automotive Technicians Education Foundation



Instructor – Mr. Jonathan Gehring

Biography

I've always enjoyed teaching, presenting, and helping others with something they don't understand or want to know more about. Upon graduating from high school, I was originally going to pursue the college route to become a math teacher. However, what I really enjoyed doing was working with my hands, problem solving, and working with tools. So I turned my hobby into a living with Ford Motor Company and found my tenure there to be very rewarding. From ambulances to police cars, small sedans to the largest trucks, I did it all.

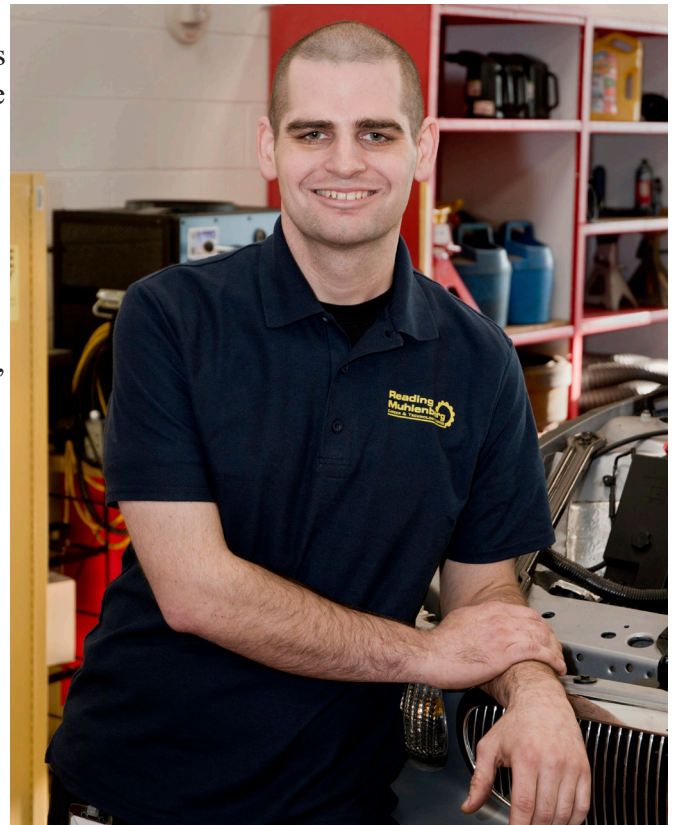
I want to help other kids pursue the same career and realize that the trades are rewarding even more so now as vehicles become more complex. I look forward to giving back to communities in which I grew up and now live by encouraging my students to pursue their dreams in the trade of automotive technology!

Education

Reading High School (Salutatorian)

Universal Technical Institute

Ford Motor Company Accelerated Credentials Training (FACT)



Certifications and Awards

Ford designated credentials acquired:

- Gasoline engine performance
- Gasoline engine repair
- Electronic systems diagnosis and repair
- Brake systems diagnosis and repair
- Steering and suspension service
- Hybrid vehicle service and repair

2017 Ford Engine Master

2017 Ford Chassis Master

PA State Inspection

PA State Emissions

EPA 609 Refrigerant Handling

Work Experience

I worked at a Ford dealership performing all repairs from simple oil changes to complex internal engine repair. I also had the unique experience of being able to work on a fleet of ambulances and police cars from the Lehigh Valley area. During my time in the field, I achieved Master Technician status with Ford.

Hire Date

2018

Program Planning Tool

Program Title: CIP 47.0604 AUTOMOTIVE TECHNOLOGY

Student Name: _____

This document has been designed as a tool to facilitate student placement decisions and provides important information about the program. The chart on the reverse side is designed to assist in the identification of necessary skills, present educational levels, and supports, if any, that are needed to foster program success.

Program Completion Requirements

A successful student will...

- Secondary Academic Course Requirements: The PA Dept. of Education's focus is to ensure every student is college and career ready, therefore all students are recommended to follow a college prep sequence of academic classes. Courses such as applied math or general science are not appropriate for this program. PDE's goal is to have all students perform at the competent or advanced level on the Keystone Exams and Program of Study end-of-program assessment (NOCTI).
- Complete an Occupational Competency Assessment (i.e. NOCTI end-of-program exam) and score at the "competent" or "advanced" level. This end-of-program exam will cover the full scope of the program of study curriculum and includes (1) multiple choice test (2) performance test consisting of occupational related tasks scored & evaluated by industry judges.
- Earn a minimum of one industry recognized certification. Students will be encouraged and expected to earn all recognized industry certifications that make up the scope of the curriculum. Accommodations are not permitted for industry certifications. These include: 1. PA Safety Inspection 2. PA Emissions Inspection 3. OSHA Fire Extinguisher 4. Valvoline Motor Oil Specialist 5. S/P2 6. Section 609 Certification for Refrigerant Recycling and Recovery
- Complete the approved program curriculum and earn a minimum of one RMCTC Job Title aligned with the student's career objective. Job titles are identified on the program task list, aligned with local workforce needs and high priority employment occupations, and annually reviewed and approved by the program's occupational advisory committee.
- Successful completion of Keystone Exams as determined by sending school district.
- Maintain a 95% attendance rate or better.
- Transition on to a post-secondary institution, military or related fulltime employment aligned to their CTC program of study.

Instructional Process/Specifications

A successful student will...

- Perform a wide variety of tasks in a laboratory environment with equipment consistent with industry standards. Up to 25 students are assigned to work "independently" and in "small teams". Students progress through using learning guides in a self-directed manner. Working in the laboratory, students will be required to use hand tools, power tools, measuring instruments, hydraulic lifts, welding equipment, chemicals, heavy equipment, and cutting tools. Students must be alert and aware of the surroundings at all times as vehicles move in and out of the laboratory. This requires self-discipline and strict adherence to rules to ensure safety of self and others.
- Participate in classroom theory and laboratory applications for generally 2 ½ hours each day; students will spend 35% of their time in classroom theory and 65% of their time doing laboratory applications and live work.
- Complete written and performance tests. Students will be evaluated weekly on occupational skill performance using rubrics. In addition, students will be evaluated daily on work ethics. Progress is measured by test performance, task completion and work ethic.
- Read and study textbooks and technical manuals. Most textbooks are written at a 10th to 11th grade reading level (most technical manuals are written at a higher level).
- Participate in Career & Technical Student Organizations including SkillsUSA and/or National Technical Honor Society.
- Participate in a paid or unpaid work based learning related to the Program of Study (cooperative education, clinical internship, and/or job shadowing).
- Complete homework on time. Homework typically involves chapter or workbook assignments, on line research assignments and writing assignments.
- Purchase appropriate work and safety attire, tools, and equipment. Following is an estimated breakdown of costs:
 - UNIFORM: \$100

Program Planning Tool



CTE Requirements	Present Educational Ability/Level	Support Needs
<p>Program Completion – Strong self-determination skills and understanding of personal strengths and weaknesses. Ability to meet industry established standards of performance, complete the program of study without curriculum modifications, and earn industry certifications without testing accommodations.</p>		
<p>Reading and Language Arts Level - Text and manuals written on a 10th-11th grade reading level. Proficient on end-of-course exam (Keystone). Must have ability to read and comprehend technical content; interpret schematics. Certification exams require reading, writing & comprehension of English. Good oral and written communications. NOCTI assessment and Industry certification exams require a proficiency in English language skills</p>		
<p>Math Level - At grade level and proficient on end-of-course exam (Keystone). Knowledge of arithmetic, algebra, geometry and their applications. Must have ability to apply weights and measures, metric system, fractions, decimals and percentages.</p>		
<p>Aptitude – Problem solving/diagnostic skills; aptitude for mechanical, electrical, electronic, computer technology, technical drawings and diagrams. ability to diagnose the source of a problem quickly and accurately.</p>		
<p>Safety & Physical - Manual dexterity; fine motor skills; hand-eye-body coordination; frequent standing bending and lifting required; high degree of self-control and focus needed for safety around moving equipment, hand tools, power tools and other equipment found in the industry; ability to work in tight spaces; ability to work independently, read and follow directions; stamina to stand for long periods of time. Ability to lift 50 lbs.</p>		
<p>Interpersonal/ Social - Ability to relate well to customers and coworkers; ability to work independently and as a team member; self-discipline a must due to safety issues; listening to what people are saying and understanding the points being made.</p>		
<p>Other Program/Occupational Considerations - Ability to work independently read and follow directions. Strong attention to detail. Stamina to stand for long periods of time. Excellent hand/eye coordination and attention to detail. Environment with several sensory inputs, including loud and sometime startling noises, dusts and fumes, ongoing background noise, moving people and vehicles.</p>		

47.0604 Automobile/Automotive Mechanics Technology/Technician

ORIENTATION

Explain and follow all lab rules.

Participate in basic shop management.

Participate in parts ordering.

Demonstrate auto shop safety and hygiene.

Demonstrate the use of service information.

Demonstrate proper telephone courtesy.

Identify vehicle by sight V.I.N. and/or ID tag.

Identify career paths within the career and technical education program.

Complete work order to include customer information vehicle identifying information customer concern related service history cause and correction.

Research applicable vehicle and service information vehicle service history service precautions and technical service bulletins.

Locate and interpret vehicle and major component identification numbers.

SAFETY

Identify and follow all safety rules.

Demonstrate the ability to secure vehicles on jack stands and hydraulic lifts.

Demonstrate the ability to safely set-up/shut-down oxygen acetylene welding equipment.

Identify chemical safety Right-To-Know Laws and Safety Data Sheets (SDS).

Identify and demonstrate the safe use of hand tools.

Identify and demonstrate the safe use of power tools.

Identify and demonstrate the safe use of protective clothing and equipment.

Identify and demonstrate the safe use of fire protection equipment.

Identify and demonstrate the safe use of shop equipment.

Explain EPA and OSHA Regulations.

TOOLS/FASTENERS

Identify and use fasteners and bolts.

Demonstrate the ability to correctly drill and use re-threading tools.

Demonstrate the ability to correctly read and interpret precision automotive measuring tools.

Demonstrate the ability to correctly use automotive tools.

Perform common fastener and thread repairs to include remove broken bolt restore internal and external threads and repair internal threads with a threaded insert.

CERTIFICATIONS

Prepare to obtain PA Safety Inspection Certification.

Prepare to obtain EPA 609 Refrigerant Recovery Recycling Certification.

Prepare to obtain Emission Inspection Certification.

SUSPENSION AND STEERING

Identify and interpret suspension and steering system concerns determine necessary action.

Inspect rack and pinion steering gear inspect mounting bushings and brackets.

Inspect rack and pinion steering gear inner tie rod ends (sockets) and bellows boots.

Determine proper power steering fluid type inspect fluid level and condition.

Flush fill and bleed power steering system.

Diagnose power steering fluid leakage determine necessary action.

Remove and reinstall power steering pump.

Remove and reinstall press fit power steering pump pulley check pulley and belt alignment.

Inspect and replace power steering hoses and fittings.

Inspect and replace pitman arm relay (centerlink/intermediate) rod idler arm and mountings and steering linkage damper.

Inspect replace and adjust tie rod ends (sockets) tie rod sleeves and clamps.

Inspect and/or replace upper and lower control arms bushings shafts and rebound bumpers.

Inspect and/or replace strut rods and bushings.

Inspect and/or replace upper and/or lower ball joints.

Inspect and/or replace steering knuckle assemblies.

Inspect and/or replace short and long arm suspension system coil springs and spring insulators.

Inspect and/or replace and adjust suspension system torsion bars inspect mounts.

Inspect and/or replace stabilizer bar bushings brackets and links.

Inspect and/or replace strut cartridge or assembly strut coil spring insulators (silencers) and upper strut bearing mount.

Inspect remove and replace shock absorbers.

Lubricate suspension and steering systems.

Perform pre-alignment inspection and measure vehicle ride height perform necessary action.

Prepare vehicle for wheel alignment on the alignment machine describe alignment angles and perform four wheel alignment by checking and adjusting front and rear wheel caster camber and toe as required center steering wheel.

Check front and/or rear cradle (subframe) alignment determine necessary action.

Inspect tire condition identify tire wear patterns check and adjust air pressure determine necessary action.

Diagnose wheel/tire vibration shimmy and noise determine necessary action.

Rotate tires according to manufacturer's recommendations.

Measure wheel tire axle flange and hub runout determine necessary action.

Diagnose tire pull problems determine necessary action.

Dismount inspect and remount tire on wheel balance wheel and tire assembly (static and dynamic).

Dismount inspect and remount tire on wheel equipped with tire pressure monitoring system sensor.

Inspect tire and wheel assembly for air loss perform necessary action.

Repair tire using internal patch.

Identify indirect and direct tire pressure monitoring systems (TPMS) calibrate system verify operation of instrument panel lamps.

Identify steps required to remove and replace sensors in a tire pressure monitoring system (TPMS) including relearn procedure.

BRAKES

Identify and interpret brake system concern determine necessary action.

Measure brake pedal height travel and free play (as applicable) determine necessary action.

Check master cylinder for internal/external leaks and proper operation determine necessary action.

Remove bench bleed and reinstall master cylinder.

Inspect brake lines flexible hoses and fittings for leaks dents kinks rust cracks bulging or wear tighten loose fittings and supports determine necessary action.

Replace brake lines hoses fittings and supports.

Fabricate brake lines using proper material and flaring procedures (double flare and ISO types).

Select handle store and fill brake fluids to proper level.

Inspect test and/or replace components of brake warning light system.

Bleed and/or flush brake system.

Diagnose poor stopping noise vibration pulling grabbing dragging or pedal pulsation concerns determine necessary action.

Remove clean inspect and measure brake drums determine necessary action.

Refinish brake drum measure final drum diameter.

Remove clean and inspect brake shoes springs pins clips levers adjusters/self-adjusters other related brake hardware and backing support plates lubricate and reassemble.

Inspect and install wheel cylinders.

Pre-adjust brake shoes and parking brake install brake drums or drum/hub assemblies and wheel bearings.

Install wheel torque lug nuts and make final checks and adjustments.

Remove caliper assembly inspect for leaks and damage to caliper housing determine necessary action.

Clean and inspect caliper mounting and slides/pins for operation wear and damage determine necessary action.

Reassemble lubricate and reinstall caliper pads and related hardware seat pads and inspect for leaks.

Clean inspect and measure rotor thickness lateral runout and thickness variation determine necessary action.

Remove and reinstall rotor.
Refinish rotor on vehicle measure final rotor thickness.
Refinish rotor off vehicle measure final rotor thickness.
Check brake pad wear indicator system operation determine necessary action.
Check vacuum supply to vacuum-type power booster and check power assist operation.
Remove clean inspect repack and install wheel bearings RACES and replace seals install hub and adjust bearings.
Check parking brake cables and components including integral parking brake system for wear binding and corrosion clean lubricate adjust or replace as needed.
Check parking brake and indicator light system operation determine necessary action.
Check operation of brake stop light system determine necessary action.
Inspect and replace wheel studs.
Remove and reinstall sealed wheel bearing assembly.
Identify and inspect electronic brake control system components determine necessary action.
Diagnose electronic brake control system electronic control(s) and components by retrieving diagnostic trouble codes and/or using recommended test equipment determine necessary action.
Bleed the electronic brake control system hydraulic circuits.
Identify traction control/vehicle stability control system components.
Describe the operation of a regenerative braking system.

ELECTRICAL/ELECTRONIC SYSTEMS

Identify and interpret electrical/electronic system concern determine necessary action.
Use wiring diagrams during diagnosis of electrical circuit problems.
Check electrical circuits with a test light determine necessary action.
Check electrical circuits using fused jumper wires determine necessary action.
Locate shorts grounds opens and resistance problems in electrical/electronic circuits determine necessary action.
Measure and diagnose the cause(s) of excessive parasitic draw determine necessary action.
Inspect and test fusible links circuit breakers and fuses determine necessary action.
Inspect and test switches connectors relays solenoid solid state devices and wires of electrical/electronic circuits perform necessary action.
Remove and replace terminal end from connector replace connectors and terminal ends.
Repair wiring harness and/or solder (including CAN/BUS systems) repair
Identify location of hybrid vehicle high voltage circuit disconnect (service plug) location and safety procedures.
Perform battery state-of-charge test determine necessary action.
Perform battery capacity test confirm proper battery capacity for vehicle application determine necessary action.
Maintain or restore electronic memory functions.
Inspect clean fill and/or replace battery battery cables connectors clamps and hold-downs.
Perform battery charge.
Start a vehicle using jumper cables or an auxiliary power supply.
Identify electronic modules security systems radios and other accessories that require reinitialization or code entry following battery disconnect.
Perform starter current draw tests determine necessary action.
Perform starter circuit voltage drop tests determine necessary action.
Inspect and test starter relays and solenoids determine necessary action.
Remove and install starter in a vehicle.
Inspect and test switches connectors and wires of starter control circuits perform necessary action.
Differentiate between electrical and engine mechanical problems that cause a slow-crank or no-crank condition.
Perform charging system output test determine necessary action.
Diagnose charging system for the cause of undercharge no-charge and overcharge conditions.
Remove inspect and install generator (alternator).
Inspect replace and aim headlights and bulbs.
Diagnose the cause of incorrect operation of warning devices and other driver information systems.
Diagnose incorrect horn operation perform necessary action.
Diagnose incorrect wiper operation diagnose wiper speed control and park problems perform necessary action.
Diagnose incorrect washer operation perform necessary action.
Diagnose incorrect operation of motor-driven accessory circuits determine necessary action.
Remove and reinstall door panel.
Use a digital multimeter (DMM).

ENGINE PERFORMANCE

Identify and interpret engine performance concern determine necessary action.
Identify components and inspect engine assembly for fuel oil coolant and other leaks determine necessary action.
Diagnose abnormal engine noise or vibration concerns determine necessary action.
Diagnose abnormal exhaust color odor and sound determine necessary action.
Perform engine absolute (vacuum/boost) manifold pressure tests determine necessary action.
Perform cylinder power balance test determine necessary action.
Perform cylinder cranking and running compression tests determine necessary action.
Perform cylinder leakage test determine necessary action.
Diagnose engine mechanical electrical electronic fuel and ignition concerns determine necessary action.
Verify engine operating temperature determine necessary action.
Perform cooling system pressure tests check coolant condition inspect and test radiator pressure cap coolant recovery tank and hoses perform necessary action.
Retrieve and record diagnostic trouble codes OBD monitor status and freeze frame data clear codes when applicable.
Diagnose the causes of emissions or drivability concerns with stored or active diagnostic trouble codes obtain graph and interpret scan tool data.
Access and use service information to perform step-by-step diagnosis.
Perform active tests of actuators using a scan tool determine necessary action.
Describe the importance of running all OBDII monitors for repair verification.
Inspect and test ignition primary and secondary circuit wiring and solid state components test ignition coil(s) perform necessary action.
Inspect and test crankshaft and camshaft position sensor(s) perform necessary action.
Inspect test and/or replace ignition control module powertrain/engine control module reprogram as necessary.
Diagnose hot or cold no-starting hard starting poor drivability incorrect idle speed poor idle flooding hesitation surging engine misfire power loss stalling poor mileage dieseling and emissions problems determine necessary action.
Inspect and test fuel pumps and pump control systems for pressure regulation and volume perform necessary action.
Replace fuel filters.
Inspect throttle body air induction system intake manifold and gaskets for vacuum leaks and/or unmetered air.
Inspect and test fuel injectors.
Verify idle control operation.
Inspect the integrity of the exhaust manifold exhaust pipes muffler(s) catalytic converter(s) resonator(s) tail pipe(s) and heat shield(s) perform necessary action.
Inspect test and service positive crankcase ventilation (PCV) filter/breather cap valve tubes orifices and hoses perform necessary action.
Inspect test service and replace components of the EGR system including electrical/electronic sensors controls and wiring EGR tubing exhaust passages vacuum/pressure controls filters and hoses perform necessary action.
Inspect and test mechanical components of secondary air injection systems perform necessary action.
Inspect and test electrical/electronically-operated components and circuits of air injection systems perform necessary action.
Inspect and test catalytic converter efficiency.
Inspect and test components and hoses of the evaporative emissions control system perform necessary action.
Interpret diagnostic trouble codes (DTCs) and scan tool data related to the emissions control systems determine necessary action.
Remove and replace timing belt verify correct camshaft timing.
Remove and replace thermostat and gasket/seal.
Inspect and test mechanical/electrical fans fan clutch fan shroud/ducting air dams and fan control devices perform necessary action.
Perform engine oil and filter change.

ENGINE REPAIR

Verify operation of the instrument panel engine warning indicators.

Install engine covers using gaskets seals and sealers as required.

Adjust valves (mechanical or hydraulic lifters).

Inspect replace and adjust drive belts tensioners and pulleys check pulley and belt alignment.

Inspect and test coolant drain and recover coolant flush and refill cooling system with recommended coolant bleed air as required.

AUTOMATIC TRANSMISSION AND TRANSAXLE

Check fluid level and fluid condition in a transmission or a transaxle equipped with a dip-stick.

Check fluid level and fluid condition in a transmission or a transaxle not equipped with a dip-stick.

Drain and replace fluid and filter(s).

Identify drivetrain components and configuration.

Inspect adjust and/or replace external manual valve shift linkage transmission range sensor/switch and/or park/neutral switch.

Inspect for leakage at external seals gaskets and bushings.

Inspect replace and/or align powertrain mounts.

MANUAL DRIVE TRAIN AND AXLES

Drain and refill manual transmission/transaxle and final drive unit.

Check and adjust clutch master cylinder fluid level.

Check for system leaks.

Check and adjust differential housing fluid level.

Drain and refill differential housing.

Identify and inspect and/or replace manual drivetrain and axle components and configuration.

HEATING AND AIR CONDITIONING

Inspect A/C condenser for airflow restrictions.

Inspect engine cooling and heater systems hoses.

Inspect A/C-heater ducts doors hoses cabin filters and outlets.

VALUE ADDED

80.1 - Establish Career Goals.

80.2 - Complete Job Application.

80.3 - Compose Resume.

80.4 - Prepare for Job Interview.

80.5 - Compose Employment Letters.

80.6 - Participate in Online Job Search.

80.7 - Prepare Career Portfolio.

STUDENTS OCCUPATIONALLY & ACADEMICALLY READY



- *Earn college credits which will save you money on tuition*
 - *Shorten college attendance*
 - *Get on the right career path*
 - *Enter the job market prepared*
 - *Get a consistent education*
- *See your CTC School Counselor for More Information*

TO QUALIFY CTC STUDENTS MUST:

1. Earn a high school diploma, achieve a minimum 2.5 GPA on a 4.0 scale in your CTC program and complete the PDE approved Program of Study.
2. Earn the industry certifications offered by your program (if applicable).
3. Achieve Competent or Advanced on the NOCTI End of Program Assessment.
4. Achieve proficiency on ALL of the Program of Study Competency Task List.
5. Provide documentation to Postsecondary Institution that you have met all of the requirements!

Find out more about the colleges offering course credits you can earn while attending RMCTC. Go to collegetransfer.net, search: PA Bureau of CTE SOAR Programs, and find your program by CIP Code.



**To receive college credits, qualifying students have three years from their date of graduation to apply and matriculate into the related career and technical program at a partnering institution.*

AUTOMOTIVE TECHNOLOGY

Automotive Technology – “A career is not a destination – but a JOURNEY”

ATT (Automotive Technology Trade) – Uniform Policy

Dear Parent/Guardian,

In order to safeguard the physical well-being of our students, it is sometimes necessary to require appropriate personal safety equipment and clothing to be worn by our students while they are receiving Automotive Training at the Reading Muhlenberg Career & Technology Center.

Safety equipment will be supplied by the school and Safety Clothing must be provided by the student...

School provided equipment:

- Eye Protection: *Safety glasses, goggles, face shields, welding helmets, & side protectors for prescription glasses*
- Ear protection: *ear plugs and headphones*

Students provided clothing: (estimated cost for everything is \$100.00)

- Footwear – boot or shoe must have an ‘oil resistant’ soul and may be steel toed
- Dark Blue Shirt - Cotton tee’s are ok or ‘Dickies’ that have short or long sleeve button-down shirts that match their pants
- Dark Blue Work Pant – ‘Dickies’ Type - (NO BLUE JEANS)
– The Students’ entire leg must be covered for safety!

- ✓ Appropriate clothing is required for active participation in the program
- ✓ Clothing should be form fitting and **not** ‘Baggy.’ Baggy clothing is dangerous and can get caught in machinery.
- ✓ Clothing should be cleaned on a regular basis to assure safe & sanitary operation of the school.

Recommended places to purchase this equipment would be ‘Wal-Mart’ & ‘Super Shoes’

Note: If a student is not properly dressed for his/her instructional activity, the daily “Work Ethic” grade will suffer. Eventually, a student may **FAIL** his/her course due to inappropriate dress. Please see the ‘STUDENT HANDBOOK’ under “Dress Code” section for additional information.

Thank you for your cooperation.
Respectfully yours,

Mr. Jonathan Gehring
Reading Muhlenberg Career and Technology Center
Automotive Technology Instructor
jgehring@rmctc.org

Revised 8/2013

ATT – Shop Rules/Policies Revised 6/2010

I. General:

SAFETY FIRST!

1. HORSEPLAY IS HIGHLY FORBIDDEN!!!!

2. Do not sit at instructors'/staffs' desk at any time!

- Please show respect – Remember the 'Golden Rule'

3. ABSOLUTELY NO:

- 1) **FIGHTING**
- 2) **DRUGS**
- 3) **WEAPONS**

Note: Students who violate the above will be **suspended** & referred to the local police for additional criminal charges.

4. No Smoking on school premises

5. Only appropriate safety clothing is permitted in shop area.

- Safety glasses **MUST** be worn at all times.
- Work clothing and Safety Shoes
- Long hair must be tied back and out of the face.
- Long chains must be tucked-in behind shirt or removed
- Watches and bracelets must be removed

6. The following clothing is NOT permitted

- Shirts or pants that display anything 'vulgar' or 'illegal'
- Jewelry or wallets that can be used as a weapon
Example: chains or spikes

7. No eating and drinking in shop area

- May have snack in theory room only!
- ALL trash must be put into trash cans

Note: Privilege may be revoked at any time according to instructor/staff

8. Each student is responsible for his/her belongings.

- Each student will be assigned a locker
- YOU are responsible for keeping it clean
- All coats, jackets, sweaters, and other wearing apparel must be hung up in lockers or on the wall rack.

*** Jackets, 'hoodies', and book bags are **not** permitted outside of classroom.

9. No Excessive noise:

- Screaming
- Hollering
- Banging on tables and chairs
- No talking to other students while they are operating dangerous machinery.

ATT – Shop Rules/Policies Revised 6/2010

II. School Property/Equipment:

Students', who lose, destroy, deface or damage school property, must reimburse the school for its loss.

- 1. Do not operate equipment without the instructor's permission**
 - Students must also pass equipment safety tests.
- 2. Absolutely NO writing is permitted on school property.**
- 3. Do not prop feet on chairs, tables or equipment.**
- 4. Do not lean back on chairs**
- 5. Do not lean against ANY vehicles**
 - Vehicles should always be treated like they are your own.
 - Students are not allowed to be inside any vehicle unless they have permission of the instructor.
- 6. Report any damaged or defective equipment to instructor or staff**
- 7. Do NOT operate equipment without the instructor's permission**

III. Classroom:

- 1. The following will NOT be tolerated/permitted:**
 - 1) Disrespect
 - 2) Hostility
 - 3) Unbecoming behavior towards other students and instructor
 - 4) Cursing
 - 5) Obscene language
 - 6) Insulting remarks towards other students and instructor
- 2. ALL students are to remain at tables and in their seats until the dismissal bell rings or an announcement is made.**
 - **No one** is to stand in the door way or in the hall.
 - Instructor and/or staff has the ultimate say when students are dismissed! (See student handbook)

ATT – Shop Rules/Policies Revised 6/2010

IV. Shop/Tool Room:

- 1. Each student is required to clean-up his/her area before leaving the school at the end of class.**
- 2. Clean-up will be announced by the Instructor of Shop Foreman only.**
- 3. Floors must be kept clean and aisles clear to prevent injury.**
 - If something is spilled on the floor, it must be cleaned immediately
- 4. No one is allowed in the tool room or supply area without permission from the instructor.**
- 5. Tool tags will be used at all times – (no tag = no tool)**
- 6. All tools that a student/s needs MUST be signed out and returned Before leaving for Social Studies or the end of the class.**

Parents/Guardians please sit down with your child and read these rules together one by one.

Rules and regulations are for the benefit of ALL students and have been established to ensure the safe operation of the school.

Your signature below acknowledges that all rules/policies have been read together and understood together.

Signature: Parent/Guardian

Date:

Signature: Student

Date:

Home/Class-Work Grade Policy- ATT (rev 8.2012)

It is the students' responsibility to make up his or her work when absent provided their absence was excused! All work missed through unexcused absences will be graded as a zero!!

- ✓ Students are expected to submit assignments on the established due dates.
- ✓ Late assignments may be penalized as much as fifty (50%) percent of the grade.
- ✓ Unexcused absences are defined as those absences when the student does not attend class and does not notify the school and/or provide a valid excuse (example: illness/fieldtrip/doctor appointment)

Make up work for Excused Absences:

1. One (1) to Three (3) days excused – five (5) school days to complete assigned work.
2. Four (4) or more days excused – ten (10) school days to complete assigned work.

A = 100% - 90%

Assignment completed on time
Assignment was completed with 90% accuracy
Evidence of careful research on subject matter
Independent thinking within the written assignment

B= 89% - 80%

Assignment completed on time
Assignment was completed with 80% accuracy

C= 79% - 70%

Assignment completed NOT on time
Assignment was completed with 70% accuracy

D= 69% - 65%

Assignment completed NOT on time
Assignment was completed with 60% accuracy

F= 64% and below

Assignment incomplete or unacceptable.
Failure to complete assignment or No attempt was made.
Demonstrates little or no interest in subject matter
Student assignment/work was copied from another student

Daily Work Ethic Grade - ATT

Work Ethic Grade is worth 40% of your grade

Attitude is everything!

Each student receives a daily 'Work Ethic' Grade

Values are for 10 down to 1

(Unexcused absence will result in a daily grade of '0')

10 = 100%; 9 = 90%; 8 = 80%; 7 = 70%; 6 = 60%; 5 = 50%; 4 = 40%
3 = 30%; 2 = 20%; 1 = 10%; & 0 = 0%

Each Student starts his/her day with an '8'

Students' points can move upward up or downward according to their performance that day.

If the student is PREPARED, applies themselves, performs well, and CLEANS UP properly that day
- they will receive a '10'

If the student does NONE OF THE ABOVE, they will LOSE Work Ethic grade points!

ATT WORK ETHIC POINT DEDUCTION SYSTEM - From '10'

- | | |
|------------------------------------|---------------------------------|
| -10 = Unexcused Absence | -9 = Refuse to work |
| -8 = Insubordination/Disrespectful | -7 = Safety Violation/Horseplay |
| -6 = Refuse to change/No Uniform | -5 = Falling Asleep in theory |
| -5 = Not returning tools/equipment | -5 = Not cleaning work area |
| -4 = Disrupting class/shop | -4 = Unprepared for class |
| -3 = Unauthorized area | -3 = Wasting time/materials |
| -2 = Unacceptable Language | -1 = Late to class |

Your signature below acknowledges that all rules/policies have been read together and understood together (Parent/Guardian and Student).

Signature: Parent/Guardian

Date:

Signature: Student

Date:

ATT – Equipment Permission Form (Rev. 8/2012)

- ✓ The following is a list of tools available for your child’s use in the shop.
- ✓ Please review the list CAREFULLY with your child and decide if your child may use these tools.
- ✓ Parents are encouraged to request a demonstration of a tool by the instructor.... Please call to make an appointment!
- ✓ PARENTS....Please initial NEXT to the tool/equipment under the appropriate column.
- ✓ Empty spaces will be considered as a ‘no.’

	<u>YES</u>	<u>NO</u>
<u>Equipment:</u>		
Tire Changer/Balancer	_____	_____
Drill Press	_____	_____
Bench Grinder	_____	_____
Valve Grinder	_____	_____
Solvent Tank (clean parts)	_____	_____
Hydraulic Press	_____	_____
Valve Seat Grinder	_____	_____
Hand Drills	_____	_____
Vehicle Lifts	_____	_____
Floor Jack & Stands	_____	_____
 <u>Air Tools:</u>		
Impact Guns	_____	_____
Air Grinder	_____	_____
Air Chisel	_____	_____
 <u>Hand Tools:</u>		
Wrenches	_____	_____
Sockets & Ratchets	_____	_____
Pliers	_____	_____
Hammers	_____	_____
Chisels & Punches	_____	_____
Assorted Specialty Tools	_____	_____

Signature: Parent/Guardian

Date

Signature: Student

Date



AUTOMOTIVE TECHNOLOGY - ATT

BOOKS/TOOLS/ EQUIPMENT BORROWING POLICY

When borrowing a tool/book care must be taken or the tool/book must be paid for if.....

If the tool borrowed has been:

1. Lost
2. Stolen
3. Damaged
4. Not returned

That **item** must be replaced according to the means set forth by the instructor.

I agree to return the 'item' borrowed in the same condition I received. If not I/we will pay for a replacement tool by means set forth by the instructor.

Print Name

Sign Name

Date

'Item' Description and/or Part Number

Witness signature and Date

Date Returned and Initial



Student Information Form - ATT

Please print the following information and return to your instructor.
The following information will be used by the instructor for contact purposes only!

Last Name	First Name	Middle Initial	
Street Address	City	State	Zip Code
Home Phone Number	Home School	Grade	Sex (M or F)
	ATT	Yes/No	
Date of Birth (DOB)	Instructional Area	Interpreter Required (circle)	
Parent/s or Guardian/s with whom residing (Name)		Relationship	
Mother's Name	Address	Phone Number	Email Address
Place of employment		Work Phone Number	
Father's Name	Address	Phone Number	Email Address
Place of employment		Work Phone Number	

Parental Contact Date: (Instructor purposes only)

Reading/Muhlenberg
Career & Technology Center
Automotive Technology - ATT

Electronic Device & Cell Phone Policy

I. General Provisions: All cellular telephones, camera phones, electronic games, iPods, or any other personal electronic devices are **NOT** permitted in the school and/or classroom.

PA-Law: cell phones are NOT permitted in PA public schools

PA School Code - Section 1317.1(see - RMCTC Student Handbook)

- a.** Any device found in the possession of a student at RMCTC will be subject to confiscation of such devices and locked in a safe at the Main Office.
- b.** Devices that have been confiscated can be picked up by a parent/Guardian at the Main Office during regular business hours.
(Monday thru Friday – 7:00am to 3:30pm)
- c.** Such electronic devices disrupt the instructional program and distracts from the learning environment.

II. If it is necessary that you must contact your child, a simple call to the school at 610.921.7300 will allow you to get connected to your child quickly.

Please understand the seriousness of this rule and regulation!

'Rules and Regulations' are for the benefit of ALL students and have been established to ensure the safe operation of the school.

Signature: Parent/Guardian

Date:

Signature: Student

Date:

Jonathan Gehring
Automotive Instructor
Reading/Muhlenberg Career & Technology Center

ATT - DISCIPLINARY ACTION FORM

VIOLATION # _____

Student: _____

Instructor: _____

TYPE OF INCIDENT:

- Safety Violation Disruptive Behavior Damage to Property/Equipment
 Foul Language Theft of Property Other: _____

Date(s) of Incident _____ Time of Incident: _____

Type of Incident: Description:

Corrective Action Plan:

Next Action Step If Problem Continues:

Verbal Warning Phone Call Home School Write Up Parent/Teacher Conference

Other _____

Student Signature & Date

I acknowledge receipt of this disciplinary action form and its contents have been discussed with me.

Instructor Signature & Date

GRADE REPORTING

Purpose: The intent of this grading procedure is to provide a student grade that accurately reflects student achievement. Progress is measured in the areas of work ethics, knowledge and the practical skills aligned to the program area learning guides. Student performance for learning guide activities and assignments are reflected in the knowledge grade. Students will be evaluated according to established program standards on an individual basis. The ClassMate grading software automatically calculates student grades using the following formula:

Work Ethic	40%
Knowledge	<u>60%</u>
	100%

Teachers must be able to justify grade percentages in the event of inquires or concerns.

Interpreting a Grade:

Work Ethics Grade (40%): Each school day, every student receives a Work Ethics or daily grade. Criteria that comprise these grades are safety, student behavior, preparation/participation, productivity or time on task, professional appearance and extra effort. The Work Ethics grade range is based on a 0 to 10 model that students may earn each day depending on how many criteria they satisfactorily meet.

NOTE: Impact of Absenteeism, Tardiness/Early Dismissals – The direct effect of absenteeism on a students' grade will be through the Work Ethic component of the grading formula. If a student is Tardy or has an Early Dismissal the Work Ethic grade will automatically be defaulted to a five (5) from a possible ten (10) points. The instructor may change this value as they see fit.

Knowledge Grade (60%): Throughout the marking period, a student's cognitive knowledge about various career-specific topics will be evaluated and recorded by the instructor. Examples of knowledge activities include: lab/shop assignments, homework, quizzes, tests, and research activities. The Knowledge grade range is based on actual points earned divided by the total accumulative points.

Skill (Learning Guide): Learning guides are normally aligned to lab assignments or shop projects where a student will physically perform a task. The student and teacher will discuss, at the beginning of each quarter, student expectations and the required tasks that must be completed or "contracted" by the end of the marking period. This allows a student to work productively with the expectation to make constant progress during the marking period. All assignments, activities and rubrics associated with learning guides are documented in the "knowledge" grading component. It is important to note that poor productivity will have a negative impact on a student's grade.

NOTE: For the purpose of students earning a job title associated with their program area, teachers track students' skill/task work. Teachers identify specific criteria to evaluate each task performed, ranging from a 0 to 5 (not completed to mastery). Students must earn a 4 or 5, in order to credit the task towards earning the specific job title. Students have the opportunity to revisit a task multiple times until successfully receiving credit. The job titles a student earns will be listed on the student's RMCTC certificate that is awarded at Senior Recognition Night.

CTC Letter Conversion Table

<u>Grade</u>	<u>Letter</u>
100 – 97	A+
96 – 93	A
92 – 90	A-
89 – 87	B+
86 – 83	B
82 – 80	B-
79 – 77	C+
76 – 73	C
72 – 70	C-
69 – 65	D
64 – under	F

Final Grade average is based on the student's four (4) numerical marking period grades. The final average will directly align to the letter conversion table listed above.

If a student has three (3) marking period grades of "F" the teacher shall give appropriate consideration to that student not passing for the year. If a student is on an **upward trend** at the end of the school year, this **may** justify having the student pass for the year. If the opposite is true, and the student is on a **downward trend**, the student **should**

GRADE REPORTING (continued)

receive a failing grade.

The individual teacher must evaluate each student's achievement in terms of the expected goals for their program area.

Failure to complete assignments, frequent lateness or absence, and demonstrated indifference to school are major contributors to student failure. **Blatant refusal** to attempt or to complete a significant number of course requirements may, by itself, justify a final course grade of "F".

The following divisions are given as a guide to recording and interpreting the grading system. It remains for each teacher to objectively and fairly rate each student, not based upon personality, but performance.

Determination of Grades: Teachers will give thorough consideration using all grading components in determining students' grades to both class work and test results.

A = Excellent

1. This grade represents **superior work** and is distinctly an honor grade.
2. The excellent student **has reached all course objectives** with high quality achievement.
3. The excellent student displays unusual effort and works willingly and effectively in reaching required objectives.

B = Good

1. This grade represents **above average** quality achievements.
2. The good student **has reached a large majority of course objectives**.
3. The good student is industrious and willing to follow directions.

C = Average

1. This grade represents **acceptable** quality achievements.
2. The average student **has reached a majority of course objectives**.
3. The average student is cooperative and follows directions, yet extra effort and improvement are needed for more complete mastering of the material.

D = Passing

1. This grade represents a **minimum acceptable** quality achievement.
2. The student is performing below-average work and **has not reached a majority of course objectives**.
3. This achievement level indicates there is a great need for improvement, daily preparation and improved dedication and attendance.

F = Failure

1. This grade represents **unacceptable** quality achievements.
2. The failing student has **not reached necessary course objectives**.
3. The failing student has not attempted to complete assignments, is constantly late or absent, and generally has failed to accomplish the fundamental minimum essentials necessary in the program area.
4. It may be noted that generally a student does not fail because of a lack of ability; failure may be caused by laziness, non-dedication, or a general disregard to directions of the teacher and the unwillingness to use whatever ability he/she possesses.

Incomplete Grades: Incomplete grades must be updated no later than ten (10) days from the close of the marking period. As soon as the work is completed and the grade is available, it must be reported to the appropriate person.

Failures: Students who receive a failing final grade in a program area are permitted to repeat that program, but are urged not to do so for obvious reasons. If this situation presents itself, students and parents are advised to consider an alternative program which is probably more suited to the student's true interests and aptitudes and not merely satisfying a short-term or unrealistic desire.

Attendance and its Impact upon Grades: The importance of regular school attendance and its positive impact upon a student's performance grade cannot be overstated. If a student is absent, he or she does not have the opportunity to keep pace with their classmates and must work independently to acquire the information missed during any absence. Regardless of how well a student performs when he/she is present, habitual absenteeism usually results in a failing performance grade. This situation is not unlike the conditions of the business or industry for which the student is being trained.

GRADE REPORTING (continued)

Make up Work for Absences: Students have the opportunity to make-up school work due to an illness/being absent from school. **PROVIDED** their absence is excused. Students must submit make-up work within the following timelines:

1. One (1) to three (3) days excused absences – five (5) school days to complete assigned work.
2. (4) or more days excused absence – ten (10) school days to complete assigned work.

All work missed through unexcused absences will be graded as a zero

Report Cards (see Progress Reports): Students will receive a report card from the sending school district which will reflect the student's grade from their Career & Technology classes. In addition, grades are available on the parent portal.

Student Recognition Night: Reading Muhlenberg Career & Technology Center hosts an annual Student Recognition Night, which honors our senior students. During this event, senior students in attendance are recognized and may also receive awards that they have earned relevant to their accomplishments while attending Reading Muhlenberg CTC.

Parent Portal: The Parent Portal is available for parents/guardians to view your child's progress by accessing the RMCTC Parent Portal on the School's web-site; www.rmctc.org. This will give you up to date information related to your child's attendance, grades (work ethic and knowledge), discipline referrals and schedule. In order to use this resource, you must provide the CTC with a current email address and register online.

Log onto www.rmctc.org, click on "**Parents**", then click on "**parent portal**" which will navigate you to the link where you will log into the portal. You will have to "**create an account**" on your first visit to the portal by using your email address (you need to use the email address you provided us on your child's application) and setting up a password. Once registered you may return at any time to view your child's information.

Please utilize our website, to track your child's progress by viewing their grades and attendance, along with any discipline action. In addition, you will be able to review your child's report cards & progress reports as soon as they are available. You also have the ability to select the option to receive email notifications for specific instances that you choose. You can choose to receive an email automatically if your child is absent/tardy or both, if your child receives a discipline referral or suspension and if your child receives a specific grade.

CAREER & TECHNICAL STUDENT ORGANIZATIONS (CTSO)

All students enrolled in Reading Muhlenberg Career & Technology Center have the opportunity to participate in at least one Career & Technical Student Organization (CTSO) while enrolled at the CTC. Students who become members in these co-curricular organizations have the opportunity to participate in team building, leadership, community service and social events.

Students also have the opportunity to attend skill competitions where the skills they have learned are "put to the test" against other competitors. These competitions include testing of knowledge and hands-on skills in a variety of trade and leadership events. Students who are fortunate enough to win their events at a district or state competition are able to compete at the national level and travel to locations such as Louisville, KY, Kansas City, MO, San Diego, CA, Orlando, FL, and Cleveland, OH.

SkillsUSA



<http://skillsusa.org>

SkillsUSA is a national organization of students, teachers and industry representatives who are working together to prepare students for careers in technical, skilled and service occupations. SkillsUSA provides quality education experiences for students in leadership, teamwork, citizenship and character development. It builds and reinforces self-confidence, work attitudes and communications skills. It emphasizes total quality at work, high ethical standards, superior work skills, life-long education, and pride in the dignity of work. SkillsUSA also promotes understanding of the free-enterprise system and involvement in community service.

National Technical Honor Society (NTHS)



www.nths.org

NTHS is the acknowledged leader in the recognition of outstanding student achievement in career and technical education. Over 2000 schools and colleges throughout the U.S. and its territories are affiliated with the NTHS. Member schools agree that NTHS encourages higher scholastic achievement, cultivates a desire for personal excellence, and helps top students find success in today's highly competitive workplace.

NTHS members receive: the NTHS membership certificate, pin, card, window decal, white tassel, official NTHS diploma seal, and three personal letters of recommendation for employment, college admission, or scholarships. Students will have access to our online career center including these valuable services: MonsterTRAK, Wells Fargo, Career Safe, and Career Key.

READING-MUHLENBERG CAREER & TECHNOLOGY CENTER

WORK BASED LEARNING Cooperative Education & Internships RULES / GUIDELINES

1. All Work Based Learning (WBL) students must have school WBL forms completed before starting the job/internship, and any student less than 18 years of age must also have a transferable work permit.
2. **ABSENT FROM SCHOOL????? – NO WORK!!!!!!!**
 - If you are absent from school in the morning, you may **NOT** go to work in the afternoon. **YOUR JOB IS PART OF YOUR SCHOOL DAY.** If you are at a **medical, social service, or court appointment** in the AM, you **may** go to work that day. However, you must bring a note **from the agency where you were**, to your attendance secretary, the next school day.
 - If you are ill, **YOU** must call your employer to inform him/her that you will not be reporting for work.
 - **IMPORTANT:** If your name is going to appear, for any reason, on your sending school absentee list, you must also **report off to Mrs. Albarran @ 610-921-7301. Failure to report off will result in removal from WBL.**
 - If **school is closed** for a holiday, in-service day, or a snow day, you **DO** go to work on those days, if you are scheduled.
 - If you are suspended **out of school** you may not work at your WBL job. This includes jobs that are scheduled with after school hours.
 - **REPETITIVE ABSENCES** at school or work will result in your removal from Work Based Learning.
3. All WBL students are required to **report to the CTC every Monday.** Any additional classroom time is at the discretion of your program area teacher. You are responsible for communicating this to your employer. On the **first Monday of each month**, immediately upon arrival, report directly to **Student Services**, where you will sign in with Mrs. Baller. Co-op students will record hours and earnings, and then return to your program area for the remainder of the school day. **Don't forget to bring your check stubs to record your hours and earnings!** Internship students will record hours. **If you miss two Monday meetings, you will be removed from WBL.**
 - Any violations of these rules will result in the following **discipline action:**
 - 1ST violation – VERBAL WARNING**
 - 2nd violation – REMOVAL FROM WORK BASED LEARNING**
4. When at work you are guided by and are responsible to your employer. Be sure to follow all of the Employers' rules and regulations because you will be terminated for the same reasons as any other employee.
5. If your work experience is terminated for any reason, you must return to school the next day, and inform your CTC teacher and the Work Based Learning Coordinator.
6. If you wish to terminate your employment, you must discuss this with your teacher and the Work Based Learning Coordinator, and leave the job properly by giving the employer a two-week notice and a letter of resignation.
7. If you have any questions concerning the rules and guidelines of Work Based Learning, please contact the WBL coordinator at 610-921-7337.

STUDENT SIGNATURE

PARENT/GUARDIAN SIGNATURE