The Electrical Technology Program

CIP 46.0399

Instructor: Chad Heffner
cheffner@rmctc.org

Have Questions?
Contact: Mrs. Donna Henderson– School Counselor
Reading Muhlenberg Career & Technology Center
2615 Warren Rd
Reading, PA 19604
Telephone: 610-921-7313
Email: dhenderson@rmctc.org
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
Dear Parent/Guardian,

In order to participate safely in the Electrical Technology Program, your son/daughter will be required to have the following items:

1. **Work boots with rubber soles** – These will be required to do the hands-on projects in the shop area. Sandals and open-toed shoes are prohibited in the shop area.

2. **Proper work attire** – Students in each program area at RMCTC are required to wear a uniform throughout the school day. The uniform in Electrical Technology consists of a T-shirt with the RMCTC logo and cotton pants. Students will be supplied with two T-shirts. If a student loses a shirt or wishes to have more than two, they can be purchased through the RMCTC website. A change of clothes can be kept in your child’s locker in the shop.

3. **A pencil** is required every day for theory lessons.

Your son/daughter will be required to operate various hand and power tools in the electrical shop. Each student will be given instruction on the proper operation and safety requirements for each tool. The student will then have to perform and demonstrate the correct operation while under the instructor’s supervision. Until the instruction and safe operation of a tool is complete, the student will not be permitted to operate that particular piece of equipment.

The Electrical Technologies Program is an area of potential hazard if the students do not adhere to the safety guidelines that have been put in place. For the safety of all students, any student who violates school or classroom rules/regulations may not be allowed to participate in hands-on projects. Instead, he/she will be assigned bookwork activities in addition to any other penalties which may apply.

Regarding safety, other than to test a student’s hands-on project, there is absolutely no reason your son/daughter should be exposed to energized circuits while in the electrical shop. The student’s projects will be energized and verified only while under the instructor’s direct supervision. Failure to adhere to this policy will result in the appropriate disciplinary action.

Each student’s safety is my number one priority in the electrical shop. I have included a list of shop rules for you to go over with your child. This list will also be posted in the shop. To ensure that you have read and understand the safety guidelines and shop rules, please sign and return these two forms to the school.

Sincerely,

Chad Heffner
Electrical Technologies Instructor
Reading Muhlenberg CTC

____________________               ______________
Parent’s Signature               Date

____________________               ______________
Student’s Signature               Date
Design and construct electrical systems in homes and businesses.
Develop the skills and knowledge needed to build electrical systems.
Successfully transition into a first career job and/or related post-secondary training.
Interact with local electrical industry experts.

**Job Titles – Career Pathways**

41-2031  Retail Salespersons
47-2111  Electricians
47-3013  Helpers — Electricians
49-9098  Helpers — Installation, Maintenance, and Repair Workers

**CTC knowledge transfers to college credit at:**
Harrisburg Area Community College
Keystone Technical Institute
Lincoln Technical Institute
Orleans Technical Institute
Pennsylvania College of Technology
Rosedale Technical Institute
Triangle Technology

**Student Certifications**
NOCTI – National Occupational Competency Testing Institute Certification
* Electrical Power & Transmission Installers
OSHA Safety Certification
PBA – Pennsylvania Builders Association

**Accreditations**
PBA – Pennsylvania Builders Association
Instructor – Mr. Chad Heffner

Biography
I am a graduate of Reading High School and Reading Muhlenberg Vocational-Technical School. I entered the electrical trade because it is an ever-expanding industry with many different career paths.
I decided to enter the teaching profession because I wanted to pass along to high school students the knowledge I’ve attained through my 15 years in the electrical field. Students can realize these skills and knowledge and some of the opportunities available to them in the electrical industry.

Education
IBEW Local 743 Apprentice Program
Vocational Education I Teaching Certificate

Certifications and Awards
NECA/IBEW Apprenticeship
OSHA 30-hour training

Work Experience
15 years residential, commercial, and industrial

Hire Date
2011

Community Service
Home Builders Association
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) a multiple choice test and (2) a performance test consisting of occupational related tasks scored and 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: Pennsylvania Builders Association and OSHA Certifications.
- 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 by using learning guides in a self-directed manner. Students will be required to use tools such as cable reels, screwdrivers, conduit benders, crimping tools, power drills, stripping tools, voltage and current meters, wire and cable cutters.
- Students will be required to climb ladders and work from scaffolding. Working in the laboratory, students will also be required to learn the safe installation of switches, conduit, controls, circuit breakers, wires, lights, signal devices and other electrical parts. Due to the risk of electrical shock and fire hazard, using this equipment requires self-discipline and strict adherence to rules to ensure safety of self and others. The laboratory simulates a real working environment therefore students will be exposed to the noise levels, dust, debris, and fumes associated with the electrical occupations profession.
- Participate in classroom theory and laboratory applications for generally 2 ½ hours each day; students will spend 50% of their time in classroom theory and 50% of their time doing laboratory applications and live work.
- Participate in Career & Technical Student Organizations including HBA, 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 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 11th to 12th grade reading level and most technical manuals are written at a higher level and are accessed on line.
- 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. Glasses - $8; Start-up tools - $150.
## Program Planning Tool

<table>
<thead>
<tr>
<th>CTE Requirements</th>
<th>Present Educational Ability/Level</th>
<th>Support Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Program Completion</strong> – 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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Reading &amp; Language Arts Level</strong> - Text and manuals written on a 11th-12th grade reading level. Proficient on end-of-course exam (Keystone). Understanding written sentences and paragraphs in work related documents. Ability to read and comprehend blueprints, technical drawings, and measuring instruments. NOCTI assessment and industry certification exams require a proficiency in English language skills.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Math Level</strong> - At grade level and proficient on end-of-course exam (Keystone). Knowledge of arithmetic, algebra, geometry and their applications. Ability to estimate and measure sizes, distances, and quantities; and determine time, costs, resources, or materials needed to perform a work activity. Ability to calculate and use electrical mathematical concepts and properties.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aptitude</strong> – Mechanical, critical thinking, active listening, complex problem solving, troubleshooting, deductive reasoning, inductive reasoning, selective attention (ability to concentrate on a task over a period of time without being distracted), visual color discrimination and spatial relations.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Safety &amp; Physical</strong> – Manual dexterity, multi-limb coordination while standing, sitting or lying down, arm-hand steadiness and finger dexterity. General body coordination and stamina that requires considerable use of arms, legs and whole body. High degree of self-discipline and focus needed for safety around moving equipment, hand tools, power tools and other equipment found in the industry. Physical strength and stamina with the ability to lift 50 lbs. overhead. Ability to work in all weather conditions, work independently, have good eye/hand coordination, color discrimination, no fear of heights or working in closed spaces.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Interpersonal/ Social</strong> – Dependability, cooperation, integrity, initiative, independence, stress tolerance. Ability to work independently and in a team.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Other Occupational/Program Considerations</strong> - Teamwork, excellent measuring skills, Dust, dirt and debris, loud and sometime startling noises, ongoing background noise, moving people and construction equipment, small spaces, interior or exterior work factors/environmental factors, scaffolding and ladders. Due to the risk of electrical shock and fire hazards, using this equipment requires self-discipline and strict adherence to rules to ensure safety of self and others.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Academic Subjects – Career success and postsecondary education success require the same level of college prep coursework. The Pennsylvania Department of Education’s (PDE) focus is to ensure that every student is prepared for college and a career. Academic courses such as applied math or general science cannot be listed on the program’s scope and sequence. PDE’s goal is to have all students perform at the competent or advanced level on the PSSA, and earn the Pennsylvania Skills Certificate on the end-of-program assessment.

### Scope and Sequence Electrical Technology 46.0399

<table>
<thead>
<tr>
<th>Subject (Hours)</th>
<th>Grade 9 (Hours)</th>
<th>Grade 10 (Hours)</th>
<th>Grade 12 (Hours)</th>
<th>First Semester</th>
<th>Second Semester</th>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand &amp; Power Tools</td>
<td>Switch &amp; Receptacle Circuits</td>
<td>Electrical Service</td>
<td></td>
<td>ELT 113: Accident Prevention</td>
<td>ELT 122: Alternating Current Fundamentals</td>
<td>ELT 235: Industrial Electronics</td>
<td>ELT 245: Intro to Programming Logic Control</td>
</tr>
<tr>
<td>Hardware, Boxes &amp; Cable Installation</td>
<td>Fixtures &amp; Wired Devices</td>
<td>Residential Cabling Technology</td>
<td></td>
<td>ELT 116: Construction Lab I - Residential</td>
<td>EDT 120: Electrical Drawing and Print Reading</td>
<td></td>
<td>ELT 248: Electrical Systems Analysis</td>
</tr>
<tr>
<td>Switch &amp; Receptacle Circuits</td>
<td>Testing Equipment</td>
<td>Green Technology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ELT 249: Programmable Logic Control Input/Output</td>
</tr>
<tr>
<td>Blueprint Reading &amp; Electrical Code</td>
<td>Raceways</td>
<td>Basic Motor Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical Principles</td>
<td>Blueprint Reading</td>
<td>OSHA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Seeking/Keeping Skills</td>
<td>Electrical Service</td>
<td>Job Seeking/Keeping Skills</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>College Prep English 9</td>
<td>College Prep English 10 11</td>
<td>College Prep English 12</td>
<td>ENL 111: English Comp I</td>
<td></td>
<td>ENL 121: English Comp II</td>
<td>ENL 201: Technical &amp; Professional Communication</td>
</tr>
<tr>
<td>Math</td>
<td>Algebra I</td>
<td>Algebra II</td>
<td>Geometry</td>
<td>Trigonometry</td>
<td>MTH 180: College Algebra and Trig I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Science</td>
<td>Accl Integrated Science</td>
<td>Biology</td>
<td>Chemistry</td>
<td></td>
<td>MTH 182: College Algebra and Trig II</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humanities</td>
<td>Citizenship</td>
<td>World Cultures</td>
<td>American History I</td>
<td>American Government</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>Physical Education</td>
<td>Physical Education</td>
<td>Physical Education</td>
<td>Physical Education</td>
<td></td>
<td></td>
<td>FIT: Elective: Fitness</td>
</tr>
<tr>
<td>Health</td>
<td>Health</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---
46.0399 Electrical and Power Transmission Installers, Other

**BASIC SAFETY**
Inspect and use personal protective equipment
Identify causes of job site accidents.
Properly don fall protection
Identify four classes of fire extinguishers
Confirm circuits are de-energized before working on them.
Perform lockout/tagout.
Inspect and use ladders
Complete jobsite hazard analysis form
Identify Arc-flash hazards and protection

**HAND TOOLS**
Use screwdrivers.
Use pliers.
Use keyhole/drywall saw.
Use hydraulic knockout/punch tool.
Use a tape measure.
Use wire strippers.
Use wire cutters.
Use utility knife.
Use torpedo level.
Use a hammer.
Use a conduit reamer.
Use a hacksaw.
Use a roto-split.
Use adjustable or non adjustable wrenches.
Use ratchet and sockets.
Use nut drivers.

**POWER TOOLS**
Use electric hammer drill.
Use reciprocating saw.
Use portable hand-held band saw.
Use a drill.
Use oscillating multi purpose tool.
Use impact driver.

**BLUEPRINT READING**
Identify types of blueprint plans.
Identify blueprint symbols.
Interpret blueprint plans.
Develop electrical details on a residential blueprint.
Use a measuring tool to scale.

**ANCHORS AND SUPPORTS**
Identify select and install various types of anchors and supports.

**RESIDENTIAL CABLING TECHNOLOGY**
Install non-metallic (NM) Cable for connection to an electrical device.
Install metal-clad cable (MC).
Terminate a coaxial cable.
Identify telecommunications cable types.
Terminate an RJ45 connector.
Install SE cable.

**SWITCHES AND RECEPTACLES CIRCUITS**
Install a duplex receptacle.
Install a single pole switch.
Install a 3-way switch.
Install a 4-way switch.
Install a split-wired duplex receptacle.
Install a Ground Fault Circuit Interrupter (GFCI) Receptacle.
Install an Arc-Fault Circuit Interrupter (AFCI).
Install a time control switch.
Install a range receptacle.
Install a dryer receptacle.

**FIXTURES**
- Install surface-mounted lighting fixture.
- Install recessed lighting fixtures.
- Install a ceiling fan.
- Install LED lighting.
- Identify IC and non-IC recessed lighting fixtures.

**RACEWAYS**
- Install Electrical Metallic Tubing (EMT).
- Install Poly-Vinyl Chloride conduit (PVC).
- Identify surface metal and non-metal raceways (Wiremold).
- Identify flexible raceway.
- Bend a stub 90°.
- Bend an offset.
- Bend a back to back 90°.
- Cut, ream and deburr raceway systems.
- Install conductors in a raceway system.

**WIRED DEVICES**
- Install a hard wired smoke detector.
- Install door-bell system.
- Trim out electrical devices.
- Install an occupancy sensor.
- Install a photocell.

**TESTING EQUIPMENT**
- Use a multimeter.
- Use a continuity tester.
- Use a plug-in circuit tester.
- Use a clamp-on ammeter.
- Use a circuit tracer.
- Use a network cable tester.
- Apply Ohm’s/Watt’s Law calculations to electrical applications.

**ELECTRICAL SERVICE**
- Install an overhead service.
- Identify parts of an underground service.
- Identify types of safety disconnect switches.
- Terminate a service panel/load center.

**NATIONAL ELECTRICAL CODE**
- Identify the purpose of the National Electrical Code (NEC).
- Use Chapter 9 Tables.
- Use the NEC as a reference to questions and competencies that students perform for all electrical installations.
- Identify the publisher of the National Electrical Code (NEC).
- Identify the code cycle of the National Electrical Code (NEC).
- Identify NFPA70E (Arc Flash).

**GREEN TECHNOLOGY**
- Identify renewable energy sources.
- Identify procedures for installing a wind turbine system.
- Identify procedures for installing a solar energy source system.
- Evaluate the demand and consumption of electrical energy.

**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.
- Identify program rules, goals, and procedures.
- Identify various boxes and brackets.
Identify types and sizes of cable.
Demonstrate how to thread and install RMC/IMC.
Comprehend series, parallel, and combination circuits.
Demonstrate the application of construction math problems.
Interpret basic motor control schematic and ladder diagrams.
Draw a diagram and wire a basic control circuit.
Draw a diagram and wire single and multiple start-stop stations.
Prepare to obtain OSHA certification.
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 college transfer.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.
Electrical Technologies Shop Rules

1. No horseplay.

2. Do not throw anything.

3. Do not leave the shop without permission.

4. Be respectful to others.

5. Cleaning up is everyone’s responsibility.

6. Electronic devices must be put away at all times (cell phones, iPods, mp3 players, etc.)

7. Teacher dismisses the students, not the bell.

8. Personal Protective Equipment (PPE) must be worn in the shop area at all times.

_________________________________  ___________
Parent Signature                              Date

_________________________________  ___________
Student 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 leaning 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:

\[
\text{Work Ethic} \times 40\% \\
\text{Knowledge} \times 60\%
\]

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): A task list guides every RMCTC program. Tasks are evaluated on a 0-5 scale with a 4 or 5 considered proficient. 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

<table>
<thead>
<tr>
<th>Grade</th>
<th>Letter</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 – 97</td>
<td>A+</td>
</tr>
<tr>
<td>96 – 93</td>
<td>A</td>
</tr>
<tr>
<td>92 – 90</td>
<td>A-</td>
</tr>
<tr>
<td>89 – 87</td>
<td>B+</td>
</tr>
<tr>
<td>86 – 83</td>
<td>B</td>
</tr>
<tr>
<td>82 – 80</td>
<td>B-</td>
</tr>
<tr>
<td>79 – 77</td>
<td>C+</td>
</tr>
<tr>
<td>76 – 73</td>
<td>C</td>
</tr>
<tr>
<td>72 – 70</td>
<td>C-</td>
</tr>
<tr>
<td>69 – 65</td>
<td>D</td>
</tr>
<tr>
<td>64 – under</td>
<td>F</td>
</tr>
</tbody>
</table>
GRADE REPORTING (continued)

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 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 **satisfactory** achievement.
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 **minimally satisfactory** 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 **unsatisfactory** achievement.
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.

**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.
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.

**Home Builders of America (HBA)**

http://www.pabuilders.org/

The purpose of the HBA Student Chapter Program is to give students first hand exposure to the “real world” of the building industry and an invaluable complement to their academic studies.

**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.
WORK BASED LEARNING
Cooperative Education & Internships
RULES / GUIDELINES

1. All Work Based Learning (WBL) students must have school WBL forms completed and sign up for the school Remind App before starting the job/internship. Any student who is 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 may 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 not scheduled, you can work additional hours if your employer allows you to work. Labor Laws need to be followed.
   - 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 or the first day, you are at RMTC for the month,** you must report to the Work Based Learning Office, where you will sign in with Mrs. Hughes. Co-op students will record hours and earnings, and then return to your program area for the remainder of the school day. **Do not forget to bring your check stubs to record your hours and earnings!** Internship students will record hours. If you miss two monthly 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. Upon your first week of work, obtain a contact number in case you need to call your supervisor.

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