



www.rmctc.org

The Information Technology - Applications Program

CIP 52.1201

Instructor: Michelle Merkel
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Have Questions?
Reading Muhlenberg Career & Technology Center
2615 Warren Rd
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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

Dear Parent/Guardian:

My name is Mrs. Michelle Merkel. I am the Information Technology Applications instructor at the Reading Muhlenberg Career & Technology Center (RMCTC.) I began my career here in August 2005. I am very excited to see all my returning students, and to welcome new students.

I have my Bachelor's Degree in Computer Science from Kutztown University. I also have my teaching certification from Temple University. As I always tell my students, it is important to stay current with technology and what is new in the field of computers, and I always try to do the same.

I feel it is important to keep an open line of communication with the parents/guardians of all my students. I will contact you regularly and please don't ever hesitate to call me at 610-921-7300 or email me at mmerkel@rmctc.org. I try to contact parents before discipline problems get out of hand in the classroom. I appreciate the support all parents have shown me in the past. This school year will be exciting and I am planning a few special projects for the students.

I will be sending home several forms that must be filled out and returned to me as soon as possible. Please take the time to read all the forms very carefully. The policies and procedures for both the school and our class are very important. I look forward to getting to know all my new students and also welcoming back my returning students. I hope to make a great impact on their life. Please help and support me in my effort so we can reach this goal together.

Sincerely Yours,

Ms. Michelle A. Merkel
Information Technology Applications Instructor
Reading Muhlenberg Career & Technology Center



Information Technology -

- Jump-start your college career by earning up to 27 free college credits towards a Computer Technology degree while still in high school
- Explore the business world through real life projects and hands-on learning in a collaborative, technology-oriented environment
- Explore hardware, software, networking, database administration, and security needs in the business world
- Code mobile and desktop computer programs using a variety of languages including Java, HTML 5 & CSS, SQL, Python, and C++



Student Certifications NOCTI

- National Occupational Competency Testing Institute
- * Management Information Systems
- Microsoft Office Specialist – Excel
- Microsoft Office Specialist – Word
- Microsoft Office Specialist – Powerpoint
- Microsoft Office Specialist – Access
- Microsoft Office Specialist – Outlook
- OSHA- General

- Pathways** 11-1021 General & Operations Managers 15-1121 Computer Systems Analysts
 15-1131 Computer Programmers
 15-1132 Software Developers, Applications
 15-1141 Database Administrator
 15-1151 Computer User Support Specialist
 43-4051 Customer Service Rep
 43-9011 Computer Operator

CTC knowledge transfers to college credits at:

- Berks Technical Institute
- Harrisburg Area Community College
- Keystone Technical Institute
- Lackawanna College
- Lincoln Technical Institute
- Luzerne County Community College
- Manor College
- McCann's School of Business
- Pennsylvania College of Technology
- Pierce College
- Reading Area Community College

*Earn up to 24 dual enrollment college credits with Reading Area Community College through participation in the Technical Academy.



Instructor – Mrs. Michelle Merkel

Biography

I graduated from Muhlenberg High School in 1999 and earned a bachelor's degree in computer science from Kutztown University in 2003. I was immediately hired to manage a database for a local non-profit organization. While working there, I developed a passion for helping and guiding others. This inspired me to become a teacher. I enjoy helping and guiding students throughout their educational journey.

Education

Bachelor's degree, Computer Science, Kutztown University

Certificates and Awards

Occupational Competency Assessment Certificate, Temple University

Vocational Education I Teaching Certificate, Temple University

Vocational Education II Teaching Certificate, Temple University
Microsoft Office Specialist – Master

CompTIA – IT Fundamentals

IC3 – Computing Fundamentals

IC3 – Key Applications

IC3 – Living Online

Sage MAS 90 – MAS 200 Core Applications w/Payroll

Google for Education – Basic Certification

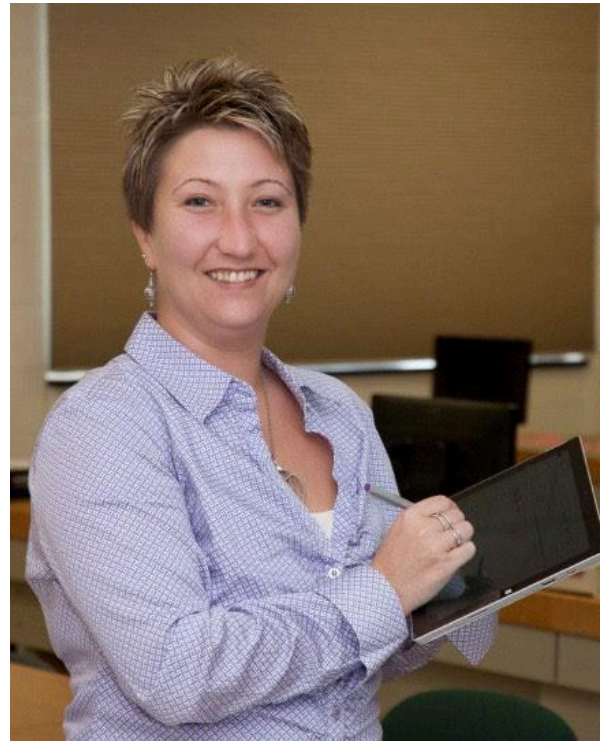
Hire Date

2005

Community Service

EMT for more than 10 years

Youth soccer and basketball coach



Program Planning Tool

Program Title: **CIP 52.1201 INFORMATION TECHNOLOGY – APPLICATIONS (TA PROGRAM)**

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...

- Meet Tech Academy requirements, including 1. Student must be in grades 10 or 11 at RMCTC, 2. Have at least a 3.0 overall GPA (on 4 point scale), 3. Math proficient, 4. Reading proficient, 5. Taking college prep academic sequence throughout high school.
- 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: Internet and Computing Core Certification (IC3), Microsoft Office Master, Microsoft Office Specialist: Word, Excel, PowerPoint, Access & Outlook.
- 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 20 students are assigned to work "independently" and in "small teams". Students progress through using learning guides in a self-directed manner. Students will be required to sit and work at a computer terminal for the majority of the class time. Students will be required to use a computer, computer mouse, and printers.
- Participate in classroom theory and laboratory applications for generally 2 ½ hours each day; students will spend 20% of their time in classroom theory and 80% 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 aligned with RACC courses. Textbooks and technical manuals are written at a college reading level.
- 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:
CERTIFICATION TESTS:\$63.00

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 Level- Text and manuals written on a college level reading level. Proficient on end-of-course exam (Keystone). Ability to understand data processing, data communications, computer programming and the related documentation. Able to read college level text books used in this program. NOCTI assessment and industry certification exams require a proficiency in English language skills.</p>		
<p>Math Level - Proficient on end-of-course exam (Keystone). Knowledge of arithmetic, algebra, geometry and their applications. Ability to compute proper settings for equipment and correct dimensioning for documents and deliverables. Ability to configure, program, integrate, install and trouble shoot sophisticated software applications.</p>		
<p>Aptitude – Problem solving/diagnostic skills; aptitude for mechanical, electrical, electronic, computer technology, technical drawings and diagrams. Ability to assimilate and process data from multiple sources.</p>		
<p>Safety & Physical - Manual dexterity; fine motor skills; hand-eye-body coordination. Stamina in order to sit at work station and focus on activity for extended periods of time.</p>		
<p>Interpersonal/ Social - Ability to relate well to customers and coworkers; ability to work independently and as a team member. Ability to listen to what people are saying and understand the points being made.</p>		
<p>Other Occupational/Program Considerations – This is a Technical Academy Program and students must meet RACC student entrance requirements, including 1. Student must be in grades 10 or 11 at RMCTC, 2. Have at least a 3.0 overall GPA (on 4 point scale), 3. Math proficient, 4. Reading proficient, 5. Taking college prep academic sequence throughout high school.</p>		

Scope and Sequence Information Technology - Applications 52.1201



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.

Subject (Hours)	Secondary School				Postsecondary Institution			
	Grade 9 (Hours)	Grade 10 (Hours)	Grade 11 (Hours)	Grade 12 (Hours)	First Semester	Second Semester	Third Semester	Fourth Semester
Technical		Orientation & Safety	Java/Methods/Classes/Objects	Database Administration				
		Understanding Computers/Maintenance & Fundamentals	Fundamentals of Programming/System Development	Office Procedures & Service Communications				
		Word Processing	Graphics/Inheritance/Swing Components	Senior Project/Business/Technical Documents				
		Spreadsheets	Exception Handling/Input/Output	Business Law & Ethics				
		Presentation Graphics	Communication Skills	Job Seeking/Keeping Skills				
		Job Seeking/Keeping Skills	Job Seeking/Keeping Skills					
English	College Prep English 9	College Prep English 10	College Prep English 11	College Prep English 12				
Math	Algebra I	Geometry	Algebra II	Trigonometry				

Science	Accl Integrated Science	Biology	Chemistry	Physics				
Humanities	Citizenship	World Cultures	American History I	American Government				
Other	Physical Education	Physical Education	Physical Education	Physical Education				
	Health	Health	Driver's Ed Theory					

52.1201 Management Information Systems, General

100 - Safety

101 - Follow current ergonomic best practices for health, safety, and productivity.

102 - Organize and maintain workspace.

103 - Dissipate electrostatic discharge and identify related risks.

200 - Professional Business Procedures

201 - Practice and deliver multimedia and telecommunications etiquette.

202 - Identify, proofread, and correct grammar errors in all documents.

203 - Practice professional interpersonal communication skills.

204 - Use time management skills.

205 - Prepare business correspondence and technical documents.

207 - Identify needs and build rapport with end users.

208 - Develop and perform conflict resolution practices.

212 - Apply supervision and training techniques.

300 - Business Law and Ethics

301 - Identify and explain the principles of business law and ethics (e.g., intellectual property).

303 - Explain crimes often associated with businesses and organizations (e.g., embezzlement, extortion, and computer crimes).

305 - Identify proper use of business technology and property (e.g., computers, mobile devices, cyber safety awareness and telephones).

306 - Identify legal safeguards to protect sensitive data and preserve confidentiality.

400 - Computer and Internet Fundamentals

401 - Use terminology associated with online technologies.

402 - Stay current with new and emerging technologies and certifications.

403 - Use advanced search engine techniques to locate resources.

404 - Identify components of a computer system and related peripherals.

405 - Navigate and manage operating systems and utility programs (e.g., installing, uninstalling, updating software).

406 - Identify types of telecommunication devices and networks (e.g. local area network (LAN), wide area network (WAN), router, switch, firewall).

407 - Identify file types and use file management techniques (e.g., compressing files, copying files, renaming files).

408 - Use a variety of cloud computing services.

410 - Utilize multimedia presentation software for professional communication.

411 - Design, edit, and publish documents using appropriate software.

412 - Identify and explain the variety of E-commerce models, e.g. business-to-business (B2B), consumer-to-business (C2B), business-to-consumer (B2C), customer-to-customer (C2C).

413 - Select data and design mail merge functionality in productivity software.

414 - Construct files utilizing features, such as formats, headers and footers, styles, tables, and charts.

415 - Differentiate the types of programming language, e.g., procedural, object-oriented, script.

500 - Data Analysis Software

501 - Manage, manipulate, and validate data using spreadsheets.

502 - Generate and analyze graphs/charts and associated data using spreadsheet software.

504 - Input data (e.g., payroll or inventory data, into spreadsheet software).

505 - Create and show formulas and use built-in functions utilizing spreadsheet software.

506 - Sort and filter spreadsheet data.

507 - Format spreadsheet cells, e.g., underline, alignment, borders, shading.

600 - Database Administration

601 - Design a database structure and use related terminology.
602 - Create an entity-relationship diagram.
603 - Create tables and modify fields.
604 - Build forms to capture, manipulate, and display data.
605 - Construct and manage queries using one or more tables.
606 - Design and arrange reports using filters.
607 - Apply normalization to relational databases.
609 - Implement security, back-up, and recovery procedures.
610 - Import and export data into other applications.
700 - Programming and System Development
701 - Apply working knowledge of the System Development Life Cycle (system investigation/project proposal, analysis, design, code/test, implementation, and maintenance).
702 - Apply programming fundamentals (e.g., system processing, integration, generations of languages, binary code, object code, source code).
703 - Declare and manipulate various data type variables.
704 - Utilize program control structures (e.g., decisions, loops, functions/ subroutines, arithmetic, and logical operations).
705 - Create working graphical user interfaces (GUI).
706 - Create, test, and debug successful computer programs.
707 - Create thorough program documentation.
900 - Computer Maintenance/Troubleshooting
901 - Apply the troubleshooting theory.
902 - Troubleshoot hardware problems and performance issues.
903 - Troubleshoot software problems and performance issues.
904 - Integrate common preventative maintenance techniques.
905 - Analyze and correct basic network problems and performance issues.
2500* - EMPLOYABILITY SKILLS
2501* - Establish Career Goals.
2502* - Complete Job Application.
2503* - Compose Resume.
2504* - Prepare for Job Interview.
2505* - Compose Employment Letters.
2506* - Participate in Online Job Search.
2507* - 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.*

Information Technology Applications



Policies - Procedures - Safety

Information Technology Applications Policies – Procedures – Safety

Staff Protocol

As a student of Information Technology Applications (ITA) you are considered a member of our staff. Conduct of all staff members is expected to be:

Professional – In the manner expected for an individual in a technologically advanced vocation.

Courteous – Civil, polite, refined, with respect to the feelings of others.

Mature – Act as you would if you were working in an office with other professional adults.

Respectful – Tolerable and non-judgmental of others.

Conduct which is unacceptable and may result in demerits, suspension, or removal from shop includes, but is not limited to:

Insubordination – Blatant disregard for orders, procedures, and policies.

Arguing, verbal abuse, fighting - Violence of any kind is unacceptable at RMCTC. Students caught fighting are prosecuted to the fullest extent of the law.

Unauthorized computer use – To include but not limited to setting unauthorized passwords, willful damage, erasure, or manipulation of student or system files, tampering or accessing system files and settings, unauthorized use of or attempt to access the internet or prohibited areas on the internet, unauthorized loading of any data or programs from an outside source. Any data or materials on diskette or CD that have been introduced or in contact with another computer outside ITA will first be checked for virus content. Computers may be used only for work assigned by the instructor. Any other usage will be considered in violation of this policy.

Music – In accordance with RMCTC policy, there will be no CD players, MP3 players, headsets, internet music or distractions of that nature allowed. This topic is covered in depth in the student handbook.

Game playing – Games will not be accessed on line, brought in from home, or downloaded from the internet. In short, NO games. We're here to learn. Play at home.

Staff Attitude

All staff members are expected to display an attitude that reflects:

Positive thinking – Show confidence in your abilities.

Personal pride – Self-respect for quality and accomplishments.

Desire to Achieve – Eagerness to reach new levels of knowledge and skill.

Team player – Since much of our work is done in groups, staff members are expected to work for the good of the team and not criticize the work of others.

Staff Skills

Federal, State and Local regulation require each student to meet standards of excellence in their chosen vocation. Failure to do so will result in denying certification or graduation.

Skill requirements for graduation as competent are as follows:

- Satisfactory completion of a job title, completed senior project, basic performance on the NOCTI Exam.
- Ability to follow rules and procedures
- Ability to work and cooperate with peers and supervisors
- Ability to communicate both verbally and written
- Ability to solve problems

Safety & Equipment

Electrical:

Do not attempt to service or install or remove computer wiring while the equipment is connected to electrical outlets. Always ensure electrical equipment is disconnected from the power source or turned off to prevent electrical shock.

Never touch bare, exposed, or damaged wires.

Never allow wiring and cables to lie in normal traffic paths to prevent the possibility of tripping and injury.

Never allow moisture, liquids or magnetic items to come in contact with electrical equipment. This is a very dangerous combination and could result in electrocution.

Chairs & Tables:

Desks are designed for placing working material on and as a surface to do productive work. They were not designed to sit upon. You will be responsible for the cost of repair or replacement of any equipment damaged through misuse.

Standard four-leg chairs were designed to sit on with all four legs remaining on the floor. Rocking back or balancing on two legs not only reduces the life of the chair but also may result in personal injury. You will be responsible for any injuries for failure to follow safety regulations.

Cushioned roller chairs are to remain at the computer locations assigned. If misuse occurs students will lose their privilege of using these chairs.

Computer units:

Computer equipment is very costly and not designed to take abuse by rough handling or careless, unsafe operations. You will be responsible for the cost of replacement or repair to any equipment damaged by such misuse.

Fire:

There are fire extinguishers designed to handle electrical fires. Be sure to familiarize yourself with the location of these fire extinguishers. Directions for their use are printed on the device.

General fire or emergency exiting from the building is conducted in the following manner:

When the fire alarm sounds immediately stop what you are doing and calmly exit the building according to the emergency exit route posted by the door

Once outside the building continue to the parking lot in the front of the school and stand with the rest of the class, as attendance may need to be taken.

You will be instructed when it is safe to reenter the building.

Medical:

It is extremely important to provide accurate information on the medical card to insure proper treatment should a medical emergency arise.

The school nurse is located in the industrial wing of the building and is available should you require medical attention.

If you are taking medication that will need to be administered during school hours, please be sure it is kept in the nurse's office. Students are not allowed to take any form of medication whether it be prescription or over-the-counter in the classroom.

Procedures

Restricted areas:

Students are not allowed to enter the storage closet at any time.

Teacher's computers and desks are also off limits.

Pass Policy:

No Student will leave the instructional area without specific reason and authority to do so.

One student at a time may use the lavatory. After receiving permission from the teacher, you may sign out on the lav sheet and take the lav pass with you. Students will not be permitted to use the lav during the change of classes.

Students are not allowed to use the school phone except in the case of an emergency. Student must have a phone pass filled out and signed by the teacher. Student will take the pass to the main office where a school secretary will dial the number.

Food:

There will be no food, drinks, or gum allowed in the classroom at any time.

Cell Phones:

Cell phones are not permitted in classrooms at RMCTC. Upon arrival, students are instructed to place their cell phone in their locker. Students violating this policy will be given a warning, then a personal conversation will happen, and if the student continues to violate this policy, a parent will be notified that their child is being written up and referred to the Dean of Students for further discussion. If there is an immediate reason that a student needs to keep their phone on their person, please communicate with Ms. Merkel as to why and we will work something out.

Valuables:

Students are urged not to bring anything of value to school with them. Lockers are provided for each student. It is advised that each student lock their belongings in their locker upon arriving at school. This will greatly reduce the chance of valuables being lost or stolen. The school or its employees will not be held responsible for stolen or misplaced valuables.

Personal hygiene:

Students should practice acceptable standards of personal hygiene at all times. Not only does personal hygiene prevent an individual from being offensive, but greatly reduces the risk of disease and illness from being spread.

Start up & shut down:

All students regardless of level or session will immediately take their assigned seat upon entering class. Do not turn on computers or engage in any other activity until released or instructed by the teacher.

Students should remain quiet during announcements.

Students are expected to work until 10 minutes before dismissal before you begin clean up and shut down. All of your personal work should be put away in your locker and books should be returned to their assigned location.

Grading:

ITA student's grades are broken up into two categories: Work Ethic and Knowledge. Each day the student receives a daily Work Ethic grade from 1-10 points. If a student is absent their grade will be affected. Each day the students complete a timecard and give themselves a Work Ethic grade they believed they earned that day. The teacher reviews these timecards and assigns a daily Work Ethic grade. *If a student neglects to complete their timecard on any given day, they will earn a 1 for that day as their Work Ethic grade.* Students start their day with a 10. No uniform is a two (2) point deduction, sleeping is a deduction, off task/surfing the internet is a deduction. The Knowledge grade comes from the tests, quizzes, and homework they complete during the year. Please refer to the Student Handbook for additional information on grading.

Blogs:

Each day of school the student will be required to type in their daily blog. This is a way to practice writing skills, typing skills, and reading skills. The blog should consist of school related events. The student is asked to use complete sentences and only write about events appropriate for school. If a student neglects to blog on any day, their work ethic grade for that day will be deducted by two points. I read the blogs every day to ensure students are completing work and I respond to any questions that are posted for me.

Uniform:

Each student will be provided one uniform shirt, a polo or a long sleeve t-shirt. This shirts

needs to be worn every day. The student has the option of purchasing additional shirts, t-shirts are \$8.00, long sleeve t-shirts are

\$9.00, hoodies are \$20.00. Failure to wear your uniform results in a two (2) point deduction in Work Ethic grade for the day.

Students will be administered a skill test on safety, knowledge test on the handbook and this packet, and a knowledge test on safety before they are permitted to use the computers. They must pass the knowledge tests with an 80% or higher and the skill test with a 100%.

We have read and understand the policies and procedures of Information Technology Applications as well as the Ergonomics Safety packet.

Date _____

Signatures

Parent/Guardian print name here _____

Parent/Guardian sign name here _____

Student print name here _____

Student sign name here _____

Information Technology Applications

Ergonomic Safety

Eyes & Safety

Computer operators often suffer from the following: Visual fatigue, blurred or clouded vision, burning & tearing eyes, headaches and frequent changes in eyeglass prescription.

Glare is the main problem.

Always:

- Adjust your monitor so that the angle prevents the light source from shining on the screen & washing out characters
- Use blinds, drapes, or shades to block the glare from windows
- Avoid light colored clothing
- If possible use a micromesh antiglare filter on the screen

In order to prevent visual fatigue which is caused by: staring at the screen without varying focus, dry eyes caused by not blinking or low humidity, maintaining a viewing angle that is above the horizon, poor image quality due to lack of contrast, intense display colors, or incorrect eyeglass prescription

Always:

- Exercise the eyes by looking away at objects of varying distance
- Keep the screen and document holder at the same distance from the eyes (if possible)
- Practice blinking regularly
- Try to add moisture to the air w/ a steam humidifier, pans of water, or plants
- Adjust the screen height or height of the chair so the top line of the monitor is no higher than your eyes
- Adjust brightness control for comfort
- Keep the screen clean
- Adjust contrast control so characters appear crisp
- Have regular eye exams

Musculoskeletal

Problems: Muscle fatigue, neck/back ache, cumulative trauma disorders (associated w/tasks that require repetitive motions over long periods of time.)

Cumulative Trauma Disorders: Tenosynovitis and Carpal Tunnel Syndrome (CTS)

Tenosynovitis: an inflammation of the sheaths through which the tendons of the fingers pass. It is caused by the rapid flexing of the fingers and wrists. It can lead to Tendonitis which is the inflammation of the tendon itself.

Symptoms: pain in the wrist and back of the hand

Carpal Tunnel Syndrome (CTS): a condition caused by compression or squeezing of the median nerve which passes through the carpal tunnel of the wrist bones. This problem can intensify over time, spreading up the arm and weakening the muscles so that one may drop objects being carried or fail to sense hot or cold. CTS can be aggravated by swelling of the tendon sheaths such as in tenosynovitis.

Symptoms: Pressing on the nerve causes numbness, tingling, burning or pain in the palms, fingers, or wrists

Musculoskeletal problems occur from the following:

- Maintaining an unnatural or unhealthy posture while using the computer
- Inadequate lower back support
- Static load placed on the body by sitting in the same position for an extended period of time
- An ergonomically poor workstation design

To avoid musculoskeletal problems the following should be done: The Monitor:

- Should swivel, tilt and elevate
- Should be located so the top line of the monitor is no higher than the user's eyes or no lower than 20 degrees below the horizon of the user's eyes
- Should be at the same level and beside the document holder
- Should be between 18-24 inches away from the user's face

The Keyboard:

- Should be detached and adjustable
- Should be placed to allow the forearm to be parallel to the floor without raising the elbows

- Should allow the wrist to be in line with the forearm so the wrist is not flexed up or down

- Should include 2 inches of space to rest the wrist or should be provided with a padded detachable wrist rest
- Should be placed directly in front of the monitor and at the same elevation as the mouse, track ball or touch pad

The Chair:

- Should support the back
- Should have a vertically adjustable independent back rest that returns to its original position and has tilt adjustments to support the lower back
- Should have a pneumatic height adjustment, so that the chair height can be adjusted while the user is in a seated position
- Should be adjusted so the back crease of the knee is slightly higher than the pan of the chair
- Should be supported by a five prong caster base
- Should have removable armrests that are adjustable in all three dimensions
- Should have a contoured seat with breathable fabric and rounded edges to distribute the weight and should be adjustable to allow the seat pan to tilt forward or back

The Table/Desk:

- Should provide sufficient leg room
- Should allow for adjustable height
- Should have enough surface area to support the computer equipment and space for documents
- Should provide at least 30 inches in depth
- Should have rounded corners and edges

Wrist Rest:

- Should be a minimum depth of two inches
- Should be the same length as the keyboard
- Should be the same height as the front edge of the keyboard
- Should be constructed of firm supportive foam or gel material
- Should have a flat top with rounded edges
- Should be attached to the work surface

The Keyboard Tray:

- Should have adjustable height options
- Should have a forward and back tilt feature
- Should be large enough for the keyboard and mouse
- Should be retractable for storage

- Should clamp under the work surface and have position lock
- Should be able to rotate 360 degrees

The Document Holder:

- Should be adjustable to fit monitors from 8.5 to 17 inches wide
- Should be fully adjustable to permit left or right, up or down, forward or backward, and tilted movement
- Should be sturdy enough to support stacks of papers and heavy documents
- Should have a wide lip to hold books and manuals open
- Should have an adjustable line guide for data entry
- Should have a non-reflective material to minimize glare
- Should be stable and able to be attached to either side of the monitor

Useful Tips:

- Provide a 15 minute break for every 2 hours of continuous computer use
- Alternate work tasks
- Use a stretching routine to relax the body
- Keep the mouse at keyboard level
- Do not grip the mouse tightly
- Hold the mouse lightly with all fingers clicking gently

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 student information system 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 inquiries or concerns.

Interpreting a Grade:

Work Ethics Grade (40%): Each school day, every student receives a Work Ethics or daily grade. Criteria that compromise these grades are safety, student behavior, preparation/participation, productivity or time on 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 student's 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 can reflect a deduction in points earned for that class period. 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 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.

Student grades will be reflected as a percentage, and will be reported directly to the student's sending school to be added to the report cards.

Final Grade average is based on the student's four (4) numerical marking period grades.

If a student has three (3) marking period grades of "F" consideration will be given 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 may be asked to select a new program or return to the sending school on a full-time basis.

The individual teacher must evaluate each student's achievements 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 failures. **Blatant refusal** to attempt or to complete a significant number of course requirements may lead to poor performance and possible removal.

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 direction, 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 failing student **has not reached necessary 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.**

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. 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 are 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 students' 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.

Makeup Work for Absences: Students have the opportunity to make-up schoolwork due to an illness/being absent from school. Students must submit make-up work within the following timelines:

1. One (1) to three (3) days excused absence – five (5) school days to complete assigned work.
2. Four (4) or more days excused – ten (10) school days to complete assigned work. All work missed through unexcused absences will be graded zero (0).

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. Students will also receive a report card from RMCTC reflecting their program grade and Social Studies grade, where applicable. 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.

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 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