ENDURING SKILLS

for

Career and Technical Education

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How to Use These Tools

Enduring Skills represents learning that:

- Endures beyond a single test date
- Is relevant beyond the classroom
- Is worthy of embedded-course long focus
- Is based on standards
- Falls within the higher order thinking on the Rigor/Relevance Framework
  http://education.ky.gov/teachers/PGES/TPGES/Pages/TPGES-Student-Growth-Page.aspx

Program Consultants have identified enduring skills for their area of expertise and have created a Program Rubric. However, it's important to remember that:

- These skills are provided as ***samples and may be tailored*** to meet local needs.
- Proficiency is based on ***industry standards*** for each area.
- Most Program Rubrics differentiate proficiency in the classroom (level 3) and in the workplace (level 4), ***but this is not a requirement*** if your students do not have the opportunity to co-op.

After choosing an enduring skill and assessing the needs of your students, write a ***Student Growth Goal*** using the SMART goal criteria.
http://education.ky.gov/teachers/PGES/TPGES/Pages/TPGES-Student-Growth-Page.aspx

Finally, you will need to deconstruct the skill into a student friendly rubric for classroom assessment and monitoring.

ARGUMENTATIVE WRITING

Enduring Skill	1	2	3	4
CLAIM Identifies and establishes a credible claim or proposal.	Attempts to establish a claim, but lacks a clear purpose. Makes no mention of counter claims.	Establishes a claim. Makes note of counter claims.	Establishes a credible claim. Develops claim and counter claims fairly.	Establishes and maintains a substantive and credible claim or proposal. Develops claims/counter claims fairly and thoroughly.
SUPPORTING DETAILS Provides details to support claim or proposal.	Attempts to provide supporting details, but lacks sufficient development or relevance to the argument or claim.	Presents appropriate supporting details, with minor lapses, and a weak or unclear relationship to the argument or claim.	Presents appropriate and sufficient supporting details. Makes a relevant connection to clarify argument or claim.	Presents thorough and effective supporting details. Makes a clarifying connection(s) that illuminates argument and adds depth to reasoning.
ORGANIZATION Maintains an appropriate organization throughout writing.	Attempts to organize ideas, but lacks control of structure.	Uses an appropriate organizational structure for development of reasoning and logic, with minor lapses in structure and/or coherence.	Maintains an appropriate organizational structure to reveal the reasoning and logic of the argument.	Maintains an intentional and effective organizational structure that enhances the development of the reasoning and logic of the argument.
CONVENTIONS Demonstrates a command of discipline specific language, style and standard English conventions.	Attempts lack control of discipline specific language, style and standard English conventions. Sources are used without citation.	Demonstrates an uneven control of discipline specific language, style and standard English conventions. Inconsistently cites sources.	Demonstrates a control of discipline specific language, style and standard English conventions. Cites sources using appropriate format with only minor errors.	Demonstrates and maintains a well-developed command of discipline specific language, style and standard English conventions. Consistently cites sources using appropriate format.
CONTENT Communicates understanding of content through writing.	Attempts to include disciplinary content in argument, but understanding of content is weak; content is irrelevant, inappropriate, or inaccurate.	Briefly notes disciplinary content relevant to the prompt; shows basic or uneven understanding of content; minor errors in explanation.	Accurately presents disciplinary content with sufficient explanations that demonstrate understanding.	Integrates relevant and accurate disciplinary content with thorough explanations that demonstrate in-depth understanding.

INFORMATIVE/EXPLANATORY WRITING

Enduring Skill	1	2	3	4
PURPOSE Identifies and establishes a purpose for writing.	Attempts to establish a purpose, but lacks focus.	Establishes a purpose, with occasional lapses in focus.	Establishes a purpose and maintains a clear and steady focus throughout writing.	Establishes a purpose and maintains a strongly developed focus throughout writing.
SUPPORTING DETAILS Provides details to support claim or proposal.	Attempts to provide supporting details, but lacks sufficient development or relevance to the argument or claim.	Presents appropriate supporting details, with minor lapses in the reasoning, examples, or explanations with a weak or unclear relationship to the argument or claim.	Presents appropriate and sufficient supporting details. Makes a relevant connection to clarify argument or claim.	Presents thorough and effective supporting details. Makes a clarifying connection(s) that illuminates argument and adds depth to reasoning.
ORGANIZATION Maintains an appropriate organization throughout writing.	Attempts to organize ideas, but lacks control of structure.	Uses an appropriate organizational structure for development of reasoning and logic, with minor lapses in structure and/or coherence.	Maintains an appropriate organizational structure to address specific requirements of the prompt..	Maintains an intentional and effective organizational structure that enhances the presentation of information..
CONVENTIONS Demonstrates a command of discipline specific language, style and standard English conventions.	Attempts lack control of discipline specific language, style and standard English conventions. Sources are used without citation.	Demonstrates an uneven control of discipline specific language, style and standard English conventions. Inconsistently cites sources.	Demonstrates a control of discipline specific language, style and standard English conventions. Cites sources using appropriate format with only minor errors.	Demonstrates and maintains a well-developed command of discipline specific language, style and standard English conventions. Consistently cites sources using appropriate format.
CONTENT Communicates understanding of content through writing.	Attempts to include disciplinary content, but understanding of content is weak; content is irrelevant, inappropriate, or inaccurate.	Briefly notes disciplinary content relevant to the prompt; shows basic or uneven understanding of content; minor errors in explanation.	Accurately presents disciplinary content with sufficient explanations that demonstrate understanding.	Integrates relevant and accurate disciplinary content with thorough explanations that demonstrate in-depth understanding.

LITERACY

Enduring Skill	1	2	3	4
RST.9-10.1 Closely read and analyze complex texts, attending to precise details of explanations, descriptions, or inconsistencies to solve problems in a real world setting.	Limited ability to read and analyze complex texts to solve problems.	Some ability to read and analyze complex texts to solve problems.	Demonstrates ability read and analyze complex text to solve problems in the classroom/lab setting.	Demonstrates ability read and analyze complex text to solve problems in the workplace setting.
RST.9-10.2 Summarize key details and ideas of complex text to solve problems in a real world setting.	Limited ability to summarize key details and ideas of complex text to solve problems.	Some ability to summarize key details and ideas of complex text to solve problems.	Demonstrates ability to summarize key details and ideas of complex text to solve problems in the classroom/lab setting.	Demonstrates ability to summarize key details and ideas of complex text to solve problems in the workplace setting.
RST.9-10.3 Follow precisely a complex multistep procedure in a real world setting.	Limited ability to follow precisely a complex multistep procedure.	Some ability to follow precisely a complex multistep procedure.	Demonstrates ability to follow precisely a complex multistep procedure in the classroom/lab setting.	Demonstrates ability to follow precisely a complex multistep procedure in the workplace setting.
RST.9-10.4 Determine the meaning of symbols, key terms, and other domain-specific words in a real world setting.	Limited ability to determine the meaning of symbols, key terms, and other domain-specific words.	Some ability to determine the meaning of symbols, key terms, and other domain-specific words.	Demonstrates ability to determine the meaning of symbols, key terms, and other domain-specific words in the classroom/lab setting.	Demonstrates ability to determine the meaning of symbols, key terms, and other domain-specific words in the workplace setting.
RST.9-10.7 Use quantitative or technical information expressed visually, mathematically or in words in a real world setting.	Limited ability to use quantitative or technical information expressed visually, mathematically or in words.	Some ability to use quantitative or technical information expressed visually, mathematically or in words.	Demonstrates ability to use quantitative or technical information expressed visually, mathematically or in words in the classroom/lab setting.	Demonstrates ability to use quantitative or technical information expressed visually, mathematically or in words in the workplace setting.

MATHEMATICAL PRACTICES

Enduring Skill	1	2	3	4
Make sense of problems and persevere in solving them.	Attempting to make sense of problems and persevere in solving them.	Developing ability to make sense of problems and persevere in solving them.	Demonstrates ability to make sense of problems and persevere in solving them in the classroom/lab setting.	Demonstrates ability to make sense of problems and persevere in solving them in the workplace setting.
Reason abstractly and quantitatively.	Attempting to reason abstractly and quantitatively.	Developing ability to reason abstractly and quantitatively.	Demonstrates ability to reason abstractly and quantitatively in the classroom/lab setting.	Demonstrates ability to reason abstractly and quantitatively in the workplace setting.
Construct viable arguments and critique the reasoning of others.	Attempting to construct viable arguments and critique the reasoning of others.	Developing ability to construct viable arguments and critique the reasoning of others.	Demonstrates ability to construct viable arguments and critique the reasoning of others in the classroom/lab setting.	Demonstrates ability to construct viable arguments and critique the reasoning of others in the workplace setting.
Model with mathematics.	Attempting to model with mathematics.	Developing ability to model with mathematics.	Demonstrates ability to model with mathematics in the classroom/lab setting.	Demonstrates ability to model with mathematics in the workplace setting.
Use appropriate tools strategically.	Attempting to use appropriate tools strategically.	Developing ability to use appropriate tools strategically.	Demonstrates ability to use appropriate tools strategically in the classroom/lab setting.	Demonstrates ability to use appropriate tools strategically in the in the workplace setting.
Attend to precision.	Attempting to attend to tasks with precision.	Developing ability to attend to tasks with precision.	Demonstrates ability to attend to tasks with precision in the classroom/lab setting.	Demonstrates ability to attend to tasks with precision in the workplace setting.
Look for and make use of structure.	Attempting ability to identify and make use of structure.	Developing ability to identify and make use of structure.	Demonstrates ability to identify and make use of structure in the classroom/lab setting.	Demonstrates ability to identify and make use of structure setting in the workplace setting.
Look for and express regularity in repeated reasoning.	Attempting ability to identify and express regularity in repeated reasoning.	Developing ability to identify and express regularity in repeated reasoning.	Demonstrates ability to identify and express regularity in repeated reasoning in the classroom/lab setting.	Demonstrates ability to identify and express regularity in repeated reasoning in the workplace setting.

AG POWER, STRUCTURAL, AND TECHNICAL SYSTEMS
Program Rubric

Enduring Skill	1	2	3	4
Apply physical science principles and engineering applications to solve problems and improve performance in AFNR power, structural, and technical systems.	Little or no awareness of physical science principles or their application to AFNR.	Attempts to apply limited number of physical science principles within basic situations of the pathway.	Adequately demonstrates knowledge of principles and applies them in various situations through critical thinking measurements.	Advanced concept of the interrelation of science principles that allows student to synthesize solutions in unpredictable situations.
Operate and maintain AFNR mechanical equipment and technical systems.	No evidence of how to properly operate basic equipment.	Basic operational skills with a developing ability to maintain equipment.	Correctly demonstrates operation and maintenance of multiple types of equipment and systems.	Superior ability to operate multiple AFNR mechanical system and evaluate performance of each.
Service and repair AFNR mechanical equipment and power systems.	No evidence of knowledge in proper service or repair of equipment.	Limited range of basic service and repair methods.	Proficient skill in troubleshooting, selecting course of action, and servicing various pieces of equipment.	Exemplary skill in identifying multiple service options and evaluating effectiveness of each, and able to evaluate new systems using current knowledge.
Plan, build, and maintain AFNR structure.	Limited awareness of steps and procedures in development of structures.	Beginning knowledge of methods of planning a structure, with multiple errors in the construction phase of structure.	Well-organized planning of structure to address specific needs and correctly constructs a structure that follows the plan.	Perceptive ability to plan various structures given a set of criteria and builds the structure to exact specifications without error.

ANIMAL SCIENCE PATHWAY

Program Rubric

Enduring Skill	1	2	3	4
Analyze how current trends impact production and practice in the animal systems industry.	Little or no awareness of events/changes that have made significant impacts in animal science.	Attempts to connect events to the resulting impacts within the industry.	Adequately connects how prior events or changes in society have led to current practices/protocol.	Perceptive in analyzing past events, connecting them to current practice, and inferring future implications within the industry.
Utilize best-practice protocols based on animal behaviors for animal husbandry and welfare.	Inadequate demonstration of animal care techniques.	Some evidence of basic understanding of accepted animal care techniques.	Correctly demonstrates protocols of effective animal care for multiple situations.	Exemplary ability to assess and care for animals based on specific situations.
Design and provide proper animal nutrition to achieve desired outcomes for performance development, reproduction, and/or economic production.	Limited understanding of animal physiology and the role of nutrients in the diet of animals.	Basic understanding of digestive systems and importance of nutrients.	Correctly describes function of multiple digestive systems and adequately relates nutrient groups to their role in the health of an animal.	Advanced comprehension of the function of all parts of animal digestion systems and accurately formulates feed rations utilizing multiple points of information.
Apply principles of animal reproduction to achieve desired outcomes for performance, development, and economic production.	Limited awareness of animal anatomy/physiology, genetics, and efficient breeding programs.	Beginning knowledge of basic animal reproduction with insufficient skills to appraise reproductive management practices.	Competent in the anatomy/physiology, genetics/heredity, and effective breeding practices utilized within animal science.	Exceeds expectations in the application of multiple reproductive management practices and principles of genetics/heredity.

HORTICULTURE PATHWAY
Program Rubric

Enduring Skill	1	2	3	4
Develop and implement a crop management plan for a given production goal that accounts for environmental factors.	Little or no awareness of crop management methods.	Some errors noted in attempt to conduct basic tests to determine management plan..	Adequately performs tests and makes observations to determine best course for managing a specific crop.	Able to integrate multiple points of information to select a crop and adjust factors to increase outcome while applying knowledge to similar situations.
Apply the principles of classification, plant anatomy and plant physiology to plant production and management.	Little or no awareness of methods of classification.	Some evidence of basic classification with a limited grasp of plant physiology.	Correctly identifies local and popular plants by multiple means, and analyzes the function of all parts of the plant.	Exemplary ability to infer the classification and function of plants from evaluating characteristics and physiology.
Propagate, culture and harvest plants and plant products based on current industry standards.	Unable to describe process for propagating plant products.	Performs basic propagation and culture of plants with limited success.	Correctly propagates plants utilizing various methods and cultures the plant to point of harvest.	Advanced ability to evaluate plants to determine best propagation method, utilize specific techniques for culture, and select the most efficient manner of harvest.
Effectively utilize business/marketing strategies to develop a successful operation.	No awareness of strategies to operate a successful business.	Beginning knowledge of practices to operate and market a business.	Sufficient insight of practices to establish and expand a business and market products to specific demographics.	Integrates multiple factors in determining marketing practices unique to various demographics and evaluates business practices for effectiveness.

AIR CONDITIONING TECHNOLOGY
Program Rubric

Enduring Skill	1	2	3	4
Use and read the tools and instrumentation needed for checking, testing and operating air conditioning systems.	Unable to use and read the tools and instrumentation needed for checking, testing and operating air conditioning systems.	Errors made while using and reading the tools and instrumentation needed for checking, testing and operating air conditioning systems.	No errors made while using and reading the tools and instrumentation needed for checking, testing and operating air conditioning systems in a classroom/lab setting.	No errors made while using and reading the tools and instrumentation needed for checking, testing and operating air conditioning systems in a workplace setting.
Select and install the proper type of condenser: air-cooled, water cooled or evaporative.	Unable to select and install the proper type of condenser: air-cooled, water cooled or evaporative.	Errors made while selecting and installing the proper type of condenser: air-cooled, water cooled or evaporative.	No errors made while selecting and installing the proper type of condenser: air-cooled, water cooled or evaporative in a classroom/lab setting.	No errors made while selecting and installing the proper type of condenser: air-cooled, water cooled or evaporative in a workplace setting.
Check the operation of all electrical components including control components.	Unable to check the operation of all electrical components including control components.	Errors made while checking the operation of all electrical components including control components.	No errors made while checking the operation of all electrical components, including control components, in classroom/lab setting.	No errors made while checking the operation of all electrical components, including control components, in a workplace setting.
Construct a schematic diagram using all necessary components to safely operate an air conditioner or heat pump.	Unable to construct a schematic diagram using all necessary components to safely operate an air conditioner or heat pump.	Errors made while constructing a schematic diagram using all necessary components to safely operate an air conditioner or heat pump.	No errors made while constructing a schematic diagram using all necessary components to safely operate an air conditioner or heat pump in a classroom/lab setting.	No errors made while constructing a schematic diagram using all necessary components to safely operate an air conditioner or heat pump in a workplace setting.

BUILDING AND APARTMENT MAINTENANCE
Program Rubric

Enduring Skill	1	2	3	4
Perform basic interior maintenance.	Unable to perform basic interior maintenance.	Errors made while performing basic interior maintenance.	No errors made while performing basic interior maintenance in a classroom/lab setting.	No errors made while performing basic interior maintenance in a workplace setting.
Apply basic carpentry skills in residential maintenance.	Unable to apply basic carpentry skills in residential maintenance.	Errors made while applying basic carpentry skills in residential maintenance.	No errors made while applying basic carpentry skills in residential maintenance in a classroom/lab setting.	No errors made while applying basic carpentry skills in residential maintenance in a workplace setting.
Apply basic plumbing skills in residential maintenance.	Unable to apply basic plumbing skills in residential maintenance.	Errors made while applying basic plumbing skills in residential maintenance.	No errors made while applying basic plumbing skills in residential maintenance in a classroom/lab setting.	No errors made while applying basic plumbing skills in residential maintenance in a workplace setting.
Apply basic electrical skills in residential maintenance.	Unable to apply basic electrical skills in residential maintenance.	Errors made while applying basic electrical skills in residential maintenance.	No errors made while applying basic electrical skills in residential maintenance in a classroom/lab setting.	No errors made applying basic electrical skills in residential maintenance.in a workplace setting.
Use basic troubleshooting skills in residential maintenance.	Unable to use basic troubleshooting skills in residential maintenance.	Errors made while using basic troubleshooting skills in residential maintenance.	No errors made while using basic troubleshooting skills in residential maintenance in a classroom/lab setting.	No errors made while using basic troubleshooting skills in residential maintenance in a workplace setting.

CARPENTRY

Program Rubric

Enduring Skill	1	2	3	4
Interpret construction prints and specifications in order to create a material takeoff list and layout of the structure.	Unable to interpret construction prints and specifications in order to create a material takeoff list and layout of the structure.	Errors made while interpreting construction prints and specifications in order to create a material takeoff list and lay out of the structure	No errors made while interpreting construction prints and specifications in order to create a material takeoff list and lay out of the structure in a classroom lab setting.	No errors made while Interpreting construction prints and specifications in order to create a material takeoff list and lay out of the structure in a workplace setting.
Interpret construction prints and specifications in order to assemble materials, tools and equipment needed to complete the construction project.	Unable to Interpret construction prints and specifications in order to assemble materials, tools and equipment needed to complete the construction project.	Errors made while Interpreting construction prints and specifications in order to assemble materials, tools and equipment needed to complete the construction project.	No errors made while Interpreting construction prints and specifications in order to assemble materials, tools and equipment needed to complete the construction project in a classroom/lab setting.	No errors made while Interpreting construction prints and specifications in order to assemble materials, tools and equipment needed to complete the construction project in a workplace setting.
Accurately build and assemble structure components according to design specifications using appropriate materials, tools and equipment.	Unable to accurately build and assemble structure components according to design specifications using appropriate materials, tools and equipment.	Errors made while attempting to accurately build and assemble structure components according to design specifications using appropriate materials, tools and equipment.	No errors made while attempting to accurately build and assemble structure components according to design specifications using appropriate materials, tools and equipment in a classroom/lab setting.	No errors made while attempting to accurately build and assemble structure components according to design specifications using appropriate materials, tools and equipment in a workplace setting.
Check work accuracy using appropriate tools and equipment, e.g. levels, rulers and squares.	Unable to check work accuracy using appropriate tools and equipment, e.g. levels, rulers and squares.	Errors made while checking work accuracy using appropriate tools and equipment, e.g. levels, rulers and squares.	No errors made while checking work accuracy using appropriate tools and equipment, e.g. levels, rulers and squares in an instructor controlled school lab setting.	No errors made while checking work accuracy using appropriate tools and equipment, e.g. levels, rulers and squares in a workplace setting.

ELECTRICAL TECHNOLOGY
Program Rubric

Enduring Skill	1	2	3	4
Perform state-of-circuit charge test; determine necessary action.	Unable to perform a circuit state of charge test, and unable to determine necessary action to make proper repair.	Errors made while performing a circuit state of charge test when trying to determine the necessary action needed to make a proper repair.	No errors made while performing a circuit state of charge test to determine the necessary action needed to make a proper repair in a classroom/lab setting.	No errors made while performing a circuit state of charge test to determine the necessary action needed to make a proper repair in a workplace setting.
Confirm proper load capacity for load center application; determine size of ungrounded service conductors, the neutral conductor and the grounding conductor.	Unable to confirm proper load capacity for load center application or determine size of ungrounded service conductors, the neutral conductor and the grounding conductor.	Errors made while attempting to confirm the proper load capacity for load center application or determine size of ungrounded service conductors, the neutral conductor and the grounding conductor.	No errors made in confirming the proper load capacity for load center application or determining the size of ungrounded service conductors, the neutral conductor and the grounding conductor in a classroom/lab setting	No errors made in confirming the proper load capacity for load center application or determining the size of ungrounded service conductors, the neutral conductor and the grounding conductor in workplace setting.
Restore and maintain power to the residential load center disconnected by a natural disaster (tornado, storm, etc.)	Unable to restore and maintain power to the residential load center disconnected by a natural disaster (tornado, storm, etc.).	Errors made while attempting to restore and maintain power to the residential load center disconnected by a natural disaster (tornado, storm, etc.).	No errors made in restoring and maintaining power to the residential load center disconnected by a natural disaster (tornado, storm, etc.) in a classroom/lab setting.	No errors made in restoring and maintaining power to the residential load center disconnected by a natural disaster (tornado, storm, etc.) in a workplace setting.
Remove and replace burned and disabled parts of the meter socket sending power to the residential load center.	Unable to remove and replace burned and disabled parts of the meter socket sending power to the residential load center.	Errors made while attempting to remove and replace burned and disabled parts of the meter socket sending power to the residential load center.	No errors made in removing and replacing burned and disabled parts of the meter socket sending power to the residential load center in a classroom/lab setting.	No errors made in removing and replacing burned and disabled parts of the meter socket sending power to the residential load center in a workplace setting.

MASONRY
Program Rubric

Enduring Skill	1	2	3	4
Perform basic bricklaying skills, *e.g., mixing mortar, making head/bed joints, laying masonry units*.	Unable to perform basic bricklaying skills.	Errors made while performing basic bricklaying skills.	No errors made while performing basic bricklaying skills in a classroom/lab setting.	No errors made while performing basic bricklaying skills in a workplace setting.
Layout building lines using the Pythagorean theorem (6-8-10), square corners with a 2' framing square and plumb and level installation with mason's 2' and 4' levels.	Unable to layout building lines using the Pythagorean theorem (6-8-10), square corners with a 2' framing square and plumb and level installation with mason's 2' and 4' levels.	Errors made while laying out building lines using the Pythagorean theorem (6-8-10), squaring corners with a 2' framing square and plumbing and leveling installation with mason's 2' and 4' levels.	No errors made while laying out building lines using the Pythagorean theorem (6-8-10), squaring corners with a 2' framing square and plumbing and leveling installation with mason's 2' and 4' levels in a classroom/lab setting.	No errors made while laying out building lines using the Pythagorean theorem (6-8-10), squaring corners with a 2' framing square and plumbing and leveling installation with mason's 2' and 4' levels in a workplace setting.
Inspect, assemble and disassemble rigging and scaffolding.	Unable to inspect, assemble and disassemble rigging and scaffolding.	Errors made while inspecting, assembling and disassembling rigging and scaffolding.	No errors made while inspecting, assembling and disassembling rigging and scaffolding a classroom/lab setting.	No errors made while inspecting, assembling and disassembling rigging and scaffolding in workplace setting.
Determine coursing with a brick spacing rule and with a mason's modular rule.	Unable to determine coursing with a brick spacing rule and with a mason's modular rule.	Errors made while determining coursing with a brick spacing rule and with a mason's modular rule.	No errors made while determining coursing with a brick spacing rule and with a mason's modular rule in a classroom/lab setting.	No errors made while determining coursing with a brick spacing rule and with a mason's modular rule in workplace setting. .

PLUMBING
Program Rubric

Enduring Skill	1	2	3	4
Use basic pipe joining techniques with various types of pipe.	Unable to use basic pipe joining techniques with various types of pipe.	Errors made in using basic pipe joining techniques with various types of pipe.	No errors made in using basic pipe joining techniques with various types of pipe in a classroom/lab setting.	No errors made in using basic pipe joining techniques with various types of pipe in a workplace setting.
Design and install plumbing system to code.	Unable to design and install a plumbing system to code.	Errors made in designing and installing a plumbing system to code.	No errors made in designing and installing a plumbing system to code in a classroom/lab setting.	No errors made in designing and installing a plumbing system to code in a workplace setting.
Rough-in and install a bathroom group and auxiliary fixtures for residential or commercial applications.	Unable to rough-in and install a bathroom group and auxiliary fixtures for residential or commercial applications.	Errors made while roughing-in and installing a bathroom group and auxiliary fixtures for residential or commercial applications.	No errors made while roughing-in and installing a bathroom group and auxiliary fixtures for residential or commercial applications in a classroom/lab setting.	No errors made while roughing-in and installing a bathroom group and auxiliary fixtures for residential or commercial applications in a workplace setting.
Rough in and install a kitchen group and laundry fixtures for residential and commercial applications.	Unable to rough-in and install a kitchen group and auxiliary fixtures for residential or commercial applications.	Errors made while roughing-in and installing a kitchen group and auxiliary fixtures for residential or commercial applications.	No errors made while roughing-in and installing a kitchen group and auxiliary fixtures for residential or commercial applications in a classroom/lab setting.	No errors made while roughing-in and installing a kitchen group and auxiliary fixtures for residential or commercial applications in a workplace setting.

ACCOUNTING
Program Rubric

Enduring Skill	1	2	3	4
Apply principals of personal and business bank reconciliations.	Frequent errors made while applying principals of personal and business bank reconciliation with little understanding of action needed for an accurate reconciliation.	Occasional errors made while applying principals of personal and business bank reconciliation with some understanding of action needed for an accurate reconciliation.	No errors made while applying principals of personal and business bank reconciliations in classroom setting.	Successfully applies principals personal and business bank reconciliations in real world settings (including an applicable CTSO setting).
Prepare and analyze a budget for a business.	Frequent errors made while preparing and analyzing a budget for a business with little understanding of action needed for an accurate budget.	Occasional errors made while preparing and analyzing a budget for a business with some understanding of action needed for an accurate budget.	No errors made in preparing and analyzing a budget for a business in classroom setting.	Successfully prepares and analyzes a budget for a business in real world settings.
Use various federal tax documents (e.g., W2, W4, 1040EZ).	Frequent errors made using federal tax forms with little understanding of action needed to correct errors.	Occasional errors made while using federal tax forms with some understanding of actions needed to correct errors.	No errors made while using federal tax forms in the classroom setting.	Successfully uses federal tax forms in real world settings.
Distinguish between and apply different accounting methods (e.g., inventory methods, depreciation, cash or accrual).	Frequent errors made while distinguishing between and applying different accounting methods with little understanding of action needed to correct explanation.	Occasional errors made while distinguishing between and applying different accounting methods with some understanding of action needed to correct explanation.	No errors made while distinguishing between and applying the different accounting methods in the classroom setting.	Successfully distinguishes between and applies different accounting methods in real world settings.

ADMISTRATIVE SUPPORT
Program Rubric

Enduring Skill	1	2	3	4
Use an electronic spreadsheet to create, save, print, modify, and obtain graphs from a simple spreadsheet.	Frequent errors made while creating and modifying spreadsheet and trying to determine the necessary action needed to correct errors.	Occasional errors made while creating and modifying spreadsheet and trying to determine the necessary action needed to correct errors.	No errors made while creating and modifying a spreadsheet to print accurate reports.	Successfully uses an electronic spreadsheet to create, save, print, modify, and obtain graphs from a simple spreadsheet in a real world setting.
Use a database management program to create, maintain, and print accurate reports from a simple relational database.	Frequent errors made while creating and modifying a database to print reports and trying to determine necessary action needed for an accurate report.	Occasional errors made while creating and modifying a database to print reports and trying to determine necessary action needed for an accurate report.	No errors made while creating and modifying a database to print accurate reports.	Successfully uses a database management program to create, maintain, and print accurate reports from a simple relational database in a real world setting.
Use appropriate software to complete real world tasks.	Frequent errors made while attempting to use appropriate software to complete real world tasks.	Occasional errors made while attempting to use appropriate software to complete real world tasks.	No errors made in use appropriate software to complete real world tasks.	Successfully uses appropriate software to complete tasks in real world setting.
Gathers and compiles data to create quality reports for supervisor using appropriate software application.	Frequent errors made while attempting to gather and compile data to create quality reports for supervisor using appropriate software application.	Occasional errors made while attempting to gather and compile data to create quality and reports for supervisor using appropriate software application.	No errors made while gathering and compiling data AND creates quality reports for supervisor using appropriate software application.	Successfully gathers and compiles data to create quality information and reports for supervisor using appropriate software application in a real world setting.

BUSINESS MANAGEMENT
Program Rubric

Enduring Skills	1	2	3	4
Evaluate and modify a time-management plan.	Frequent errors made while evaluating and modifying a time-management plan with little understanding of action needed to correct errors.	Occasional errors made while evaluating and modifying a time-management plan with some understanding of action needed to correct errors.	No errors made while evaluating and modifying a time-management plan in the classroom setting.	Successfully evaluates and modifies a time-management plan in real world settings (including CTSO leadership positions).
Differentiate between leading and managing.	Frequent errors made while attempting to differentiate between leading and managing with little understanding of action need to correct errors.	Occasional errors made while attempting to differentiate between leading and managing with some understanding of action need to correct errors.	No errors made in differentiating between leading and managing in the classroom setting.	Successfully differentiates between leading and/or managing in real world settings (including CTSO leadership positions).
Reaction appropriately to stressors in the business environment.	Frequent errors made in reacting appropriately to stressors in the business environment with little understanding of action needed to correct errors.	Occasional errors made reacting appropriately reactions to stressors in the business environment with some understanding of action needed to correct errors.	No errors made in reacting appropriately to stressors in the business environment in the classroom setting.	Successfully and appropriately reacts to stressors in the business environment in real world settings (including CTSO leadership positions).
Utilize SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis with case studies/business plan.	Frequent errors made while utilizing SWOT analysis for case studies/business plans with little understanding of action needed to correct errors.	Occasional errors made while utilizing SWOT analysis for case studies/business plans with some understanding of action needed to correct errors.	No errors made while utilizing SWOT to analyze case studies/business plans in the classroom setting.	Successfully uses SWOT analysis for case studies/business plans in real world settings.

MARKETING
Program Rubric

Enduring Skill	1	2	3	4
Explain and apply the seven marketing functions (e.g., distribution, pricing, selling, promotion).	Frequent errors made while explaining and applying the seven marketing functions.	Occasional errors made while explaining and applying the seven marketing functions.	No errors made while explaining and applying the seven marketing functions in the classroom setting.	Successfully applies the seven marketing functions in a real world setting.
Apply ways to obtain market data for market research (e.g., surveys, interviews, observations).	Frequent errors made while applying ways to obtain market data for market research.	Occasional errors made while applying ways to obtain market data for market research.	No errors made while applying ways to obtain market data for market research in the classroom setting.	Successfully applies ways to obtain market data for market research in a real world setting.
Apply concepts of target markets and market segmentation (e.g., demographics, psychographics, geographic).	Frequent errors made while applying concepts of target markets and market segmentation.	Occasional errors made while applying concepts of target markets and market segmentation.	No errors made while applying concepts of target markets and market segmentation in the classroom setting.	Successfully explains and applies the concept of target markets and market segmentation in a real world setting.
Demonstrate effective product presentation techniques (e.g., display, handling, demonstrating sales aids).	Frequent errors made while demonstrating effective product presentation techniques.	Occasional errors while demonstrating effective product presentation techniques.	No errors made while demonstrating effective product presentation techniques in the classroom setting.	Successfully demonstrates effective product presentation techniques in a real world setting.

EMPLOYABILITY SKILLS
Program Rubric

Enduring Skill	1	2	3	4
Apply teamwork skills, e.g., listens to, shares with, and supports the efforts of others	Little or no understanding and application of teamwork skills. Most work is completed in isolation.	Limited participation in a team setting. Rarely interacts with team members.	Demonstrates effective teamwork skills, e.g., listens to, shares with, and supports the efforts of others in the classroom/lab setting.	Demonstrates effective teamwork skills, e.g., listens to, shares with, and supports the efforts of others in the workplace setting.
Demonstrate effective communication skills, e.g., positive criticism, positive attitude, listening, speaking, and writing.	Ineffective use communication skills that hinder work products.	Attempts to use effective communication skills frequently affect work products.	Successful use of communication skills that results in completion of work products/tasks in the classroom/lab setting.	Successful use of communication skills that results in completion of work products/tasks in the workplace setting.
Demonstrate appropriate work ethics and work habits.	Ineffective work ethics/habits that result in unsuccessful and/or untimely completion of task.	Limited work ethics/habits that result in frequent errors in and/or untimely completion of task.	Effective work ethics/habits that result in successful completion of task in the classroom/lab setting.	Effective work ethics/habits that result in successful completion of task in the workplace setting.
Demonstrate on-the-job safety practices.	Frequent errors in ability to apply general on-the-job safety practices.	Developing ability to apply general on-the-job safety practices with occasional errors noted.	Demonstrates ability to apply general on-the-job safety practices with no errors noted in the classroom/lab setting.	Consistently demonstrates ability to apply general on-the-job safety practices with no errors noted in the workplace.
Demonstrate understanding of employability skills, e.g., resume, letter of application, and job application.	Inability to demonstrate understanding of employability skills.	Limited ability to demonstrate understanding of employability skills.	Demonstrate understanding of employability skills, e.g., resume, letter of application, and job application.	Demonstrate understanding of employability skills, e.g., resume, letter of application, and job application in the workplace.

SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS CAREER CLUSTER
Program Rubric

Enduring Skill	1	2	3	4
Understand measurable attributes of objects and the units, systems, and processes of measurement.	Unable to perform an accurate measurement or reading of specific scales.	Frequent errors made while performing accurate measurement or reading of specific scales.	Few errors made while performing accurate measurement or reading of specific scales.	No errors made while performing accurate measurement or reading of specific scales.
Apply and adapt a variety of appropriate engineering strategies to solve problems.	Developing ability to perform basic engineering strategies to solve problems.	General ability to perform most basic engineering strategies to solve problems.	Incorporation of various engineering strategies to solve problems.	Performs advanced engineering strategies resulting in successful completion of tasks.
Use the language of mathematics to express mathematical ideas precisely.	Limited use of mathematic skills and ideas significantly hinders completion of assigned tasks.	Attempts to use effective mathematic skills and ideas frequently affect completion of tasks.	Incorporation of various mathematical skills and ideas resulting in successful completion of tasks.	Advanced use of various mathematical skills and ideas resulting in successful completion of tasks.
Apply concepts of systems, subsystems, feedback and control to solve complex technological problems.	Unable to recognize systems subsystems, feedback and control to solve complex technological problems.	Developing a recognition and can describe systems subsystems, feedback and control to solve complex technological problems.	Demonstrates adequate understanding of the application of systems, subsystems, feedback and control to solve complex technological problems.	Consistently demonstrates precise application of systems, subsystems, feedback and control to solve complex technological problems.
Communication and organizational skills, e.g., thinking, speaking, listening	Developing use of communication and organizational skills significantly hinders completion of assigned tasks.	Attempts to use effective communication and organizational skills frequently affect completion of tasks.	Sophisticated use of communication and organizational skills resulting in successful completion of tasks.	Sophisticated use of communication and organizational skills resulting in successful completion of tasks. setting.
Identify and apply the technological design process to solve problems.	Limited use of design process and significantly hinders completion of assigned tasks.	Generally identifies and applies basic design processes to solve problems and tasks.	Consistently recognizes basic design processes to solve problems and tasks.	Incorporation of various technological design processes to successfully solve problems.

CULINARY
Program Rubric

Enduring Skill	1	2	3	4
Identify trends and influences related to food choices, e.g., physical, social, cultural, economic, and technology.	Unable to identify trends and influences related to food choices.	Able to identify 2-3 trends and influences related to food choices	Identify trends and influences related to food choices in planning a meal.	Identify trends & influences related to food choices & apply to menu planning for a variety of physical, social, cultural, economic, & technology needs.
Apply kitchen safety and sanitation practices in handling and preparing foods.	Unable to apply practices for safety and sanitation of food handling.	Identifies kitchen safety and sanitation but does not apply practices in handling and preparing foods.	Applies all safety and sanitation practices when handling and preparing foods in the foods lab.	Applies all safety and sanitation practices when handling & preparing foods in a commercial kitchen.
Identify and use basic measuring, cooking methods and techniques.	Unable to identify and use proper methods and techniques of cooking and measuring.	Identifies proper measuring or cooking methods but does not apply techniques appropriately.	Identifies and uses basic measuring, cooking methods and techniques.	Identifies and uses basic measuring, cooking methods and techniques for specific diet needs.
Create balanced meal plan using the Dietary Guidelines for Healthy Living.	Unable to create a balanced meal plan	Creates a meal plan but is not balanced and does not use the Dietary Guidelines effectively.	Creates balanced meal plan using the Dietary Guidelines for Healthy Living for a basic diet.	Creates balanced meal plan using the Dietary Guidelines for Healthy Living for a specific health need diet.
Create and effectively use a shopping plan.	Unable to create a shopping plan	Create a shopping plan but does not effectively use it.	Creates and effectively uses a shopping plan.	Creates and effectively uses a shopping plan and completes order forms.
Identify careers and demonstrate communication skills in the nutrition/food service industry.	Unable to identify career and demonstrate communication skills.	Able to identify 2-3 careers and communication skills without demonstration.	Identifies careers and demonstrate communication skills in the nutrition/food service industry.	Identifies careers & demonstrate communication skills in the nutrition/food service industry thru a WBL experience.

HEALTH SCIENCE CAREER CLUSTER
Program Rubric

Enduring Skill	1	2	3	4
Perform accurate temperature, pulse, respiration and blood pressure reading(s) on a resident.	Unable to perform an accurate T,P,R, & BP reading.	Frequent errors made while performing a T,P,R, & BP reading.	No errors made while performing a T,P,R, & BP reading. Results are within the margin of error for competency in a classroom/lab setting.	No errors made while performing a T,P,R, & BP reading. Results are within the margin of error for competency in a workplace setting.
Use effective communication skills, e.g., speaking, listening, writing	Developing use of communication skills significantly hinders completion of assigned tasks.	Attempts to use effective communication skills frequently affect completion of tasks.	Effective use of communication skills resulting in successful completion of tasks in a classroom/lab setting.	Sophisticated use of communication skills resulting in successful completion of tasks in a workplace setting.
Apply appropriate infection control practices.	Developing ability to apply infection control practices.	Demonstrates adequate ability to apply infection control practices with only rare errors noted.	Consistently demonstrates ability to apply infection control practices with no errors noted in a classroom/lab setting.	Consistently demonstrates ability to apply infection control practices with no errors noted in a workplace setting.
Recognize and apply residents' rights.	Developing ability to recognize and apply residents' rights.	General ability to recognize and apply residents' rights.	Consistently recognizes and applies residents' rights in a classroom/lab setting.	Consistently recognizes and applies residents' rights in a workplace setting.
Perform basic healthcare skills according to industry standards.	Developing ability to perform basic healthcare skills according to industry standards.	General ability to perform most basic healthcare skills according to industry standards.	Ability to perform basic healthcare skills consistently according to industry standards in a classroom/lab setting.	Ability to perform basic healthcare skills consistently according to industry standards in a workplace setting.
Recognize and respond appropriately to changing health conditions.	Developing a recognition and response to changing health conditions.	General ability to recognize and respond appropriately to changing health conditions.	Consistently recognizes and responds appropriately to changing health conditions in a classroom/lab setting.	Consistently recognizes and responds appropriately to changing health conditions in a workplace setting.

COMPUTATIONAL THINKING (110251)

Program Rubric

Enduring Skill	1	2	3	4
Demonstrate an understanding of elementary logic, truth tables and Boolean algebra, developing and designing solutions to solve computer-related problems.	Limited ability to apply elementary logic, truth table, and Boolean algebra to develop and design solutions.	Some ability to apply elementary logic, truth table, and Boolean algebra to develop and design solutions.	Meets industry standards for applying elementary logic, truth table, and Boolean algebra (*e.g. AND, OR, NOT, and decision statements: single, multiple and nested*) to develop and design solutions in the classroom/lab setting.	Meets industry standards for applying elementary logic, truth table, and Boolean algebra (*e.g. AND, OR, NOT, and decision statements: single, multiple and nested*) to develop and design solutions in the classroom/lab setting workplace setting.
Illustrate and use concepts using one or more programming language(s).	Limited understanding of illustrating and using concepts, using one or more programming language(s).	Some evidence of illustrating and using concepts, using one or more programming language(s).	Meets industry standards for Illustrating and using concepts, using one or more programming language(s) in the classroom/lab setting	Meets industry standards for Illustrating and using concepts, using one or more programming language(s) in the workplace setting.
Identify and apply the steps required to design a program to solve a problem.	Limited understanding of the steps required to design of a program to solve a problem.	Some understanding of the steps required to design of a program to solve a problem.	Meets industry standards for applying the steps required to design program to solve a problem in the classroom/lab setting.	Meets industry standards for applying the steps required to design a program to solve a problem in the workplace setting.
Describe and utilize the principles of object-oriented programming.	Limited understanding of the principles of object-oriented programming.	Some understanding of the principles of object-oriented programming.	Meets industry standards for utilizing the principles of object-oriented programming in the classroom/lab setting.	Meets industry standards for utilizing the principles of object-oriented programming in the workplace setting.

Use fundamental data types, data structures and analyze the binary representation of data.	Limited ability to use data types and structures and analyze the binary representation of data.	Some evidence of using data types and structures and analyze the binary representation of data.	Meets industry standards for using data types and structures and analyzing the binary representation of data in the classroom/lab setting.	Meets industry standards for using data types and structures and analyzing the binary representation of data in the classroom/lab workplace setting.
Illustrate the flow of a program (e.g. flowcharting, pseudo code).	Limited ability to illustrate the flow of a program.	Some evidence of illustrating the flow of a program.	Meets industry standards for illustrating the flow of a program in the classroom/lab setting.	Meets industry standards for illustrating the flow of a program in the workplace setting.
Develop algorithms with increasing degree of complexity using structured programming techniques (e.g. sequence, selection and repetition).	Limited ability to develop algorithms with increasing degree of complexity using structured programming techniques.	Some evidence of developing algorithms with increasing degree of complexity using structured programming techniques.	Acceptable with occasional errors in developing algorithms with increasing degree of complexity using structured programming techniques.	Mastery, exceeding expectations in developing algorithms with increasing degree of complexity using structured programming techniques.
Use modular programming (e.g. modules, arguments, parameters, pass-by-value and pass-by-reference).	Limited understanding of using modular programming.	Some evidence of using modular programming.	Acceptable with occasional errors of using modular programming.	Mastery, exceeding expectations of using modular programming.
Analyze the binary representation of data (e.g., pre- and post-test, counter controlled, and nested).	Limited understanding of analyzing the binary representation of data.	Some evidence of analyzing the binary representation of data.	Acceptable with occasional errors in analyzing the binary representation of data.	Mastery, exceeding expectations for analyzing the binary representation of data.
Explain the implications of file processing (e.g. file usage, searching algorithms, sorting algorithms).	Limited understanding of explaining the implications of file processing.	Some evidence of explaining the implications of file processing.	Acceptable with occasional errors in explaining the implications of file processing.	Mastery, exceeding expectations for explaining the implications of file processing.

COMPUTER LITERACY (110110)
Program Rubric

Enduring Skill	1	2	3	4
Describe basic computer functions and use correct computer terminology (*e.g. history of the computer, types of personal and multiuser computers and proper ergonomics*).	Limited ability to describe basic computer functions and using correct computer terminology.	Some ability to describe basic computer functions and using correct computer terminology.	Meets industry standards for describing basic computer functions and using correct computer terminology in the classroom/lab setting.	Meets industry standards for describing basic computer functions and using correct computer terminology in the workplace setting.
Describe and use basic computer hardware (*e.g. CPU, binary code, storage devices, input and output devices, printers, communication devices, impact of computers and green technology*).	Limited ability to describe and use basic computer hardware.	Some ability to describe and use basic computer hardware.	Meets industry standards for describing and using basic computer hardware in the classroom/lab setting.	Meets industry standards for describing and using basic computer hardware in the workplace setting.
Demonstrate and use file management effectively and correctly (*e.g. manage files, folders, disks, organize files, explain file extensions, file properties, backup files, compressing files, locating files*).	Limited ability to demonstrate and use file management effectively and correctly	Some ability to demonstrate and use file management effectively and correctly	Meets industry standards demonstrating and using file management effectively and correctly in the classroom/lab setting.	Meets industry standards for demonstrating and using file management effectively and correctly in the workplace setting.
Use application and system software effectively and correctly (*e.g. course management system, computer technology as a tool, prepare basic documents, spreadsheets, databases and presentations*).	Limited ability to use application and system software effectively and correctly	Some ability to use application and system software effectively and correctly	Meets industry standards for using application and system software effectively and correctly in the classroom/lab setting.	Meets industry standards for using application and system software effectively and correctly in the workplace setting.

Analyze trends in information processing and new emerging technologies	Limited ability to identify trends in information processing and new emerging technologies	Some ability to identify trends in information processing and new emerging technologies	Meets industry standards for identifying trends in information processing and new emerging technologies in the classroom/lab setting.	Meets industry standards for identifying trends in information processing and new emerging technologies in the workplace setting.
Identify and analyze ethical issues (*e.g. copyright, privacy and security as related to computing and understanding of licensing, freeware, shareware, open source*).	Limited ability to identify and analyze ethical issues.	Some ability to Identify and analyze ethical issues.	Meets industry standards for applying ethical issues in the classroom/lab setting.	Meets industry standards for applying ethical issues in the workplace setting.
Describe and explain basic data communications and network technologies and functions (*e.g. comparing web browsers, navigating and searching the web, basic e-mail and Internet functions*).	Limited ability to describe and explain basic data communications and network technologies and functions	Some ability to describe and explain basic data communications and network technologies and functions	Meets industry standards for describing and explaining basic data communications and network technologies and functions in the classroom/lab setting.	Meets industry standards for describing and explaining basic data communications and network technologies and functions in the workplace setting.
Explain social networking and its impact on today's society (*e.g. forums, discussion board, blogs, podcasts, e-commerce and social media marketing, globalization and challenges with technological barriers, electronic payments and varying cultures*).	Limited ability to explain social networking and its impact on today's society	Some ability to explain social networking and its impact on today's society	Meets industry standards for explaining social networking and its impact on today's society in the classroom/lab setting.	Meets industry standards for explaining social networking and its impact on today's society in the workplace setting.
Describe cloud computing and its impact on business and personal systems.	Limited ability to describe cloud computing and its impact on business and personal systems	Some ability to describe cloud computing and its impact on business and personal systems	Meets industry standards for describing cloud computing and its impact on business and personal systems in the classroom/lab setting.	Meets industry standards for describing cloud computing and its impact on business and personal systems in the workplace setting.

WEB PAGE DEVELOPMENT COURSE (110801)

Program Rubric

Enduring Skill	1	2	3	4
Plan and create the layout of a website (*e.g. usage of templates, accessibility standards, browser compatibility, and file management*).	Limited ability to plan and create the layout of a website.	Developing ability to plan and create the layout of a website.	Meets industry standards for planning and creating the layout of a website in the classroom/lab setting.	Meets industry standards for planning and creating the layout of a website in the workplace setting.
Use Hypertext Markup Language (HTML) in a website (*e.g. nested elements, attributes, headings, paragraphs, formatting, styles and lists*).	Limited ability to use HTML in a website.	Some evidence of using HTML appropriately in a website.	Meets industry standards for using HTML in a website in the classroom/lab setting.	Meets industry standards for using HTML in a website in the workplace setting.
Use Cascading Style Sheets (CSS) in a website.	Limited ability to use CSS in a website.	Some evidence of using CSS in a website.	Effectively uses CSS in a website in the classroom/lab setting.	Effectively uses CSS in a website in the workplace setting.
Utilize Website Layout attributes (*e.g. create a text link, create an email, target and name attributes, and use anchors on a web page(s)*).	Limited ability to use Website Layout attributes.	Some ability to utilize Website Layout attributes.	Meets industry standards for utilizing Website Layout attributes in the classroom/lab setting.	Meets industry standards for utilizing Website Layout attributes in the workplace setting.
Use multimedia in the creation of a website (*e.g. images, sound and video*).	Limited ability to use multimedia in the creation of a website.	Some ability to use multimedia in the creation of a website.	Meets industry standards for using multimedia in the creation of a website in the classroom/lab setting.	Meets industry standards for using multimedia in the creation of a website in the workplace setting.

Use HTML and CSS in page layout (*e.g. creating lists, using tables, defining page size, using overflow, using CSS two-column page layout, using relative and absolute position and using CSS for print*).	Limited ability to use HTML and CSS in page layout.	Some evidence of ability to use HTML and CSS in page layout.	Meets industry standards for using HTML and CSS in page layout in the classroom/lab setting.	Meets industry standards for using HTML and CSS in page layout in the workplace setting.
Create lists and tables in organizing content (*e.g. table elements, spanning rows and columns and style a table with CSS*).	Limited ability to create lists and tables to organize content.	Some evidence of ability to create lists and tables to organize content.	Acceptable with occasional errors in creating lists and tables to organize content.	Mastery, exceeding expectations in creating lists and tables to organize content.
Create web forms for a website (*e.g. form elements, submit and reset buttons, checkbox and radio buttons, label element, HTML form controls i.e. data list, search box, calendar control, color picker control)*.	Limited ability to create for a website.	Some evidence of ability to create forms for a website.	Acceptable with occasional errors in creating forms for a website.	Mastery, exceeding expectations for creating forms for a website.
Use multimedia to publish a website (e.g. configuring sound and video, web publishing basics, registering a domain name, choosing a web host, publishing with File Transfer Protocol and other file transfer tools, search engine submission and optimization and accessibility and usability testing).	Limited ability to use multimedia to publish a website.	Some evidence of ability to publish a website.	Acceptable with occasional errors in using multimedia to publish a website.	Mastery, exceeding expectations in using multimedia to publish a website.

COMPUTER AIDED DESIGN
Program Rubric

Enduring Skill	1	2	3	4
Apply dimensions and annotations to drawings.	Unable to apply dimensions and annotations to drawings.	Errors made while attempting to apply dimensions and annotations to drawings.	No errors made applying dimensions and annotations to drawings in classroom/lab setting.	No errors made applying dimensions and annotations to drawings in a workplace setting.
Produce line entities using various coordinate techniques.	Unable to produce line entities using various coordinate techniques.	Errors made while attempting to produce line entities using various coordinate techniques.	No errors made in producing line entities using various coordinate techniques in classroom/lab setting.	No errors made in producing line entities using various coordinate techniques in a workplace setting.
Construct geometric shapes in two-dimensional space.	Unable to construct geometric shapes in two-dimensional space.	Errors made while attempting to construct geometric shapes in two-dimensional space.	No errors made in constructing geometric shapes in two-dimensional space in a classroom/lab setting.	No errors made in constructing geometric shapes in two-dimensional space in a workplace setting.
Develop detailed orthographic views as required.	Unable to develop detailed orthographic views as required.	Errors made while attempting to develop detailed orthographic views as required.	No errors made in developing detailed orthographic views as required in classroom/lab setting.	No errors made in developing detailed orthographic views as required in a workplace setting.

COMPUTERIZED MANUFACTURING & MACHINING
Program Rubric

Enduring Skill	1	2	3	4
Apply mechanical blueprint reading skills.	Unable to apply mechanical blueprint reading skills.	Errors made while applying mechanical blueprint reading skills.	No errors made in applying mechanical blueprint reading skills in a classroom/lab setting	No errors made in applying mechanical blueprint reading skills in a workplace setting.
Apply fundamentals of machine tool (basic).	Unable to apply fundamentals of machine tool (basic).	Errors made while attempting to apply fundamentals of machine tool (basic).	No errors made in applying the fundamentals of machine tool (basic) in classroom/lab setting	No errors made in applying the fundamentals of machine tool (basic)
Apply fundamentals of machine tool (intermediate).	Unable to apply fundamentals of machine tool (intermediate).	Errors made while attempting to apply the fundamentals of machine tool (intermediate).	No errors made in applying the fundamentals of machine tool (intermediate) in a classroom/lab setting.	No errors made in applying the fundamentals of machine tool (intermediate) in a workplace setting.
Apply CAD design to part development.	Unable to apply CAD design to part development.	Errors made while attempting to apply CAD design to part development.	No errors made in applying CAD design to part development in a classroom/lab setting.	No errors made in applying CAD design to part development in a workplace setting.

INDUSTRIAL MAINTENANCE
Program Rubric

Enduring Skill	1	2	3	4
Apply principles of fluid power theory.	Unable to apply principles of fluid power theory.	Errors made while attempting to apply principles of fluid power theory.	No errors made in applying principles of fluid power theory in a classroom/lab setting.	No errors made in applying principles of fluid power theory in a workplace setting.
Apply basics of industrial maintenance electricity.	Unable to apply basics of industrial maintenance electricity.	Errors made while attempting to apply the basics of industrial maintenance electricity.	No errors made in applying basics of industrial maintenance electricity in a classroom/lab setting.	No errors made in applying basics of industrial maintenance electricity in a workplace setting.
Apply basics of motor control devices.	Unable to apply the basics of motor control devices.	Errors made while attempting to apply the basics of motor control devices.	No errors made in applying the basics of motor control devices in a classroom/lab setting.	No errors made in applying the basics of motor control devices in a workplace setting.
Analyze, construct, and troubleshoot industrial maintenance systems.	Unable to analyze, construct, and troubleshoot industrial maintenance systems.	Errors made while attempting to analyze, construct, and troubleshoot industrial maintenance systems.	No errors made in analyzing, constructing, and troubleshooting industrial maintenance systems in a classroom/lab setting.	No errors made in analyzing, constructing, and troubleshooting industrial maintenance systems in a workplace setting.

METAL FABRICATION TECHNOLOGY
Program Rubric

Enduring Skill	1	2	3	4
Interpret building trade's blueprint.	Unable to interpret building trade's blueprint.	Errors made while attempting to interpret building trade's blueprint.	No errors made in interpreting building trade's blueprint in a classroom/lab setting.	No errors made in interpreting building trade's blueprint in a workplace setting.
Use the radial line method to lay out sheet metal patterns.	Unable to use the radial line method to lay out sheet metal patterns.	Errors made while attempting to use the radial line method to lay out sheet metal patterns.	No errors made in using the radial line method to lay out sheet metal patterns in a classroom/lab setting.	No errors made in using the radial line method to lay out sheet metal patterns in a workplace setting.
Calculate heat load to determine correct duct size/design.	Unable to calculate heat load to determine correct duct size/design.	Errors made while attempting to calculate heat load to determine correct duct size/design.	No errors made in calculating heat load to determine correct duct size/design in a classroom/lab setting.	No errors made in calculating heat load to determine correct duct size/design in a workplace setting.
Fabricate residential and commercial A/C and heating ductwork.	Unable to fabricate residential and commercial A/C and heating ductwork.	Errors made while attempting to fabricate residential and commercial A/C and heating ductwork.	No errors made in fabricating residential and commercial A/C and heating ductwork in a classroom/lab setting.	No errors made in fabricating residential and commercial A/C and heating ductwork in a workplace setting.

WELDING TECHNOLOGY

Program Rubric

Enduring Skill	1	2	3	4
Setup and operate welding and cutting equipment.	Unable to set up and operate various welding and cutting equipment.	Errors made while setting up and operating various welding and cutting equipment.	No errors made in setting up and operating various welding and cutting equipment in a classroom/lab setting.	No errors made in setting up and operating various welding and cutting equipment in a workplace setting.
Identify, select, and store SMAW electrodes.	Unable to identify, select, and store SMAW electrodes.	Errors made while attempting to identify, select, and store SMAW electrodes.	No errors made in identifying, selecting, and storing SMAW electrodes in a classroom/lab setting.	No errors made in identifying, selecting, and storing SMAW electrodes in workplace setting.
Apply principles of SMAW process to weld metals.	Unable to apply principles of SMAW process to weld metals.	Errors made while attempting to apply principles of SMAW process to weld metals.	No errors made in applying principles of SMAW process to weld metals in a classroom/lab setting.	No errors made in applying principles of SMAW process to weld metals in a workplace setting.
Apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel.	Unable to apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel.	Errors made while attempting to apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel.	No errors made in applying the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel in a classroom/lab setting.	No errors made in applying the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel in a workplace setting.

WOOD MANUFACTURING TECHNOLOGY

Program Rubric

Enduring Skill	1	2	3	4
Apply the properties of common species of hardwood and softwood in choosing appropriate materials.	Unable to apply the properties of common species of hardwood and softwood in choosing appropriate materials.	Errors made in applying of the properties of common species of hardwood and softwood to choose appropriate materials.	No errors made in applying of the properties of common species of hardwood and softwood to choose appropriate materials in a classroom/lab setting.	No errors made in applying of the properties of common species of hardwood and softwood to choose appropriate materials in a workplace setting.
Master basic jig and fixture design and development concepts.	Unable to master basic jig and fixture design and development concepts.	Errors made while attempting to master basic jig and fixture design and development concepts.	No errors made in mastering basic jig and fixture design and development concepts in a classroom/lab setting.	No errors made in mastering basic jig and fixture design and development concepts in a workplace setting.
Develop production planning materials, route sheets, subassembly sheets and final assembly sheets.	Unable to develop production planning materials, route sheets, subassembly sheets and final assembly sheets.	Errors made while attempting to develop production planning materials, route sheets, subassembly sheets and final assembly sheets.	No errors made in developing production planning materials, route sheets, subassembly sheets and final assembly sheets in a classroom/lab setting.	No errors made in developing production planning materials, route sheets, subassembly sheets and final assembly sheets in a workplace setting.
Evaluate and specify appropriate joinery when assembling two or more components.	Unable to evaluate and specify appropriate joinery when assembling two or more components.	Errors made while attempting to evaluate and specify appropriate joinery when assembling two or more components	No errors made in evaluating and specifying appropriate joinery when assembling two or more components in a classroom/lab setting.	No errors made in evaluating and specifying appropriate joinery when assembling two or more components in a workplace setting.

PATHWAYS TO CAREERS
Program Rubric

Enduring Skill	1	2	3	4
Apply teamwork skills, e.g., listens to, shares with, and supports the efforts of others	Little or no understanding and application of teamwork skills. Most work is completed in isolation.	Limited participation in a team setting. Rarely interacts with team members.	Consistently demonstrates effective teamwork skills, e.g., listens to, shares with, and supports the efforts of others in the classroom/lab setting.	Consistently demonstrates effective teamwork skills, e.g., listens to, shares with, and supports the efforts of others in the workplace setting.
Demonstrate effective communication skills, e.g., positive criticism, positive attitude, listening, speaking, and writing.	Ineffective use communication skills that hinder work products.	Attempts to use effective communication skills frequently affect work products.	Successful use of communication skills that results in completion of work products/tasks in the classroom/lab setting.	Successful use of communication skills that results in completion of work products/tasks in the workplace setting.
Demonstrate appropriate work ethics and work habits.	Ineffective work ethics/habits that result in unsuccessful and/or untimely completion of task.	Limited work ethics/habits that result in frequent errors in and/or untimely completion of task.	Effective work ethics/habits that result in successful completion of task in the classroom/lab setting.	Effective work ethics/habits that result in successful completion of task in the workplace setting.
Demonstrate on-the-job safety practices.	Frequent errors in ability to apply general on-the-job safety practices.	Developing ability to apply general on-the-job safety practices with occasional errors noted.	Demonstrates ability to apply general on-the-job safety practices with no errors noted in the classroom/lab setting.	Consistently demonstrates ability to apply general on-the-job safety practices with no errors noted in the workplace.
Use the ILP to analyze individual interests, aptitudes, and attitudes related to career planning.	Ineffective use of the ILP to analyze individual interests, aptitudes, and attitudes related to career planning.	Limited use of the ILP to analyze individual interests, aptitudes, and attitudes related to career planning.	Uses tools in the ILP to analyze individual interests, aptitudes, and attitudes related to career planning.	Effectively uses tools in the ILP to analyze individual interests, aptitudes, and attitudes related to career planning.
Demonstrate understanding of employability skills, e.g., resume, letter of application, and job application.	Inability to demonstrate understanding of employability skills.	Limited ability to demonstrate understanding of employability skills.	Demonstrate understanding of employability skills, e.g., resume, letter of application, and job application.	Demonstrate understanding of employability skills, e.g., resume, letter of application, and job application in the workplace.

AUTOMOTIVE TECHNOLOGY
Program Rubric

Enduring Skill	1	2	3	4
Apply electronic/electrical system skills listed in the Automotive Maintenance and Light Repair Task List in maintenance/repair.	Unable to apply electronic/electrical system skills in maintenance/repair.	Errors made when applying electronic/electrical system skills in maintenance/repair.	No errors made when applying electronic/electrical system skills in maintenance/repair in a classroom/lab setting.	No errors made when applying electronic/electrical system skills in maintenance/repair in a workplace setting.
Apply engine repair skills listed in the Automotive Maintenance and Light Repair Task List in maintenance/repair.	Unable to apply engine repair skills in maintenance/repair.	Errors made when applying engine repair skills in maintenance/repair.	No errors made when applying engine repair skills in maintenance/repair in a classroom/lab setting.	No errors made when applying engine repair skills in maintenance/repair in a workplace setting.
Apply automatic transmission and transaxle skills listed in the Automotive Maintenance and Light Repair Task List in maintenance/repair.	Unable to apply automatic transmission and transaxle skills in maintenance/repair.	Errors made when applying automatic transmission and transaxle skills in maintenance/repair.	No errors made when applying automatic transmission and transaxle skills in maintenance/repair in a classroom/lab setting.	No errors made when applying automatic transmission and transaxle skills in maintenance/repair in a workplace setting.
Apply manual drive train and axles skills listed in the Automotive Maintenance and Light Repair Task List in maintenance/repair.	Unable to apply manual drive train and axles skills in maintenance/repair.	Errors made when applying manual drive train and axles skills in maintenance/repair.	No errors made when applying manual drive train and axles skills in maintenance/repair in a classroom/lab setting.	No errors made when applying manual drive train and axles skills in maintenance/repair in a workplace setting.

Apply the suspension and steering skills listed in the Automotive Maintenance and Light Repair Task List in maintenance/repair.	Unable to apply suspension and steering skills in maintenance/repair.	Errors made when applying suspension and steering skills in maintenance/repair.	No errors made when applying suspension and steering skills in maintenance/repair in a classroom/lab setting.	No errors made when applying suspension and steering skills in maintenance/repair in a workplace setting.
Apply brake system skills listed in the Automotive Maintenance and Light Repair Task List in maintenance/repair.	Unable to apply brake system skills in maintenance/repair.	Errors made when applying brake system skills in maintenance/repair.	No errors made when applying brake system skills in maintenance/repair in a classroom/lab setting.	No errors made when applying brake system skills listed in maintenance/repair in a workplace setting.
Apply heating and air conditioning system skills listed in the Automotive Maintenance and Light Repair Task List in maintenance/repair.	Unable to apply heating and air conditioning system skills in maintenance/repair.	Errors made when applying heating and air conditioning system skills in maintenance/repair.	No errors made when applying heating and air conditioning system skills in maintenance/repair in a classroom/lab setting.	No errors made when applying heating and air conditioning system skills in maintenance/repair in a workplace setting.
Apply engine performance skills listed in the Automotive Maintenance and Light Repair Task List in maintenance/repair.	Unable to apply engine performance skills in maintenance/repair.	Errors made when applying engine performance skills in maintenance/repair.	No errors made when applying engine performance skills in maintenance/repair in a classroom/lab setting.	No errors made when applying engine performance skills in maintenance/repair in a workplace setting.

COLLISION REPAIR
Program Rubric

Enduring Skill	1	2	3	4
Apply painting and refinishing skills listed in the Painting and Refinishing Task List.	Unable to apply painting and refinishing skills.	Errors made when painting and refinishing skills.	No errors made when applying painting and refinishing skills in a classroom/lab setting.	No errors made when applying painting and refinishing skills in a workplace setting.
Apply non-structural analysis and damage repair skills listed in the Non-Structural Analysis and Repair Task List.	Unable to apply non-structural analysis and damage repair skills.	Errors made when applying non-structural analysis and damage repair skills.	No errors made when applying non-structural analysis and damage repair skills in a classroom/lab setting.	No errors made when applying non-structural analysis and damage repair skills in a workplace setting.
Apply structural analysis and damage repair skills listed in the Structural Analysis and Damage Repair Task List.	Unable to apply structural analysis and damage repair skills.	Errors made when applying structural analysis and damage repair skills.	No errors made when applying structural analysis and damage repair skills in a classroom/lab setting.	No errors made when applying structural analysis and damage repair skills in a workplace setting.
Apply mechanical and electrical skills listed in the Mechanical and Electrical Task List.	Unable to apply mechanical and electrical skills.	Errors made when applying mechanical and electrical skills.	No errors made when applying mechanical and electrical skills in a classroom/lab setting.	No errors made when applying mechanical and electrical skills in a workplace setting.
Apply damage analysis, estimating and customer service skills listed in the Damage Analysis, Estimating and Customer Service Task List.	Unable to apply damage analysis, estimating and customer service skills.	Errors made when applying damage analysis, estimating and customer service skills.	No errors made when applying damage analysis, estimating and customer service skills in a classroom/lab setting.	No errors made when applying damage analysis, estimating and customer service skills in a workplace setting.

DIESEL TECHNOLOGY
Program Rubric

Enduring Skill	1	2	3	4
Apply introductory diesel engine skills listed in the Diesel Engine Task List in maintenance/repair.	Unable to apply introductory diesel engine skills in maintenance/repair.	Errors made when applying introductory diesel engine skills in maintenance/repair.	No errors made when applying introductory diesel engine skills in maintenance/repair in a classroom/lab setting.	No errors made when applying introductory diesel engine skills in maintenance/repair in a workplace setting.
Apply diesel engine repair skills listed in the Diesel Engine Task List.	Unable to apply diesel engine repair skills.	Errors made when applying diesel engine repair skills.	No errors made when applying diesel engine repair skills in a classroom/lab setting.	No errors made when applying diesel engine repair skills in a workplace setting.
Apply preventive maintenance skills listed in the Preventive Maintenance Task List.	Unable to apply preventive maintenance skills.	Errors made when applying preventive maintenance skills.	No errors made when applying preventive maintenance skills in a classroom/lab setting.	No errors made when applying preventive maintenance skills in a workplace setting.
Apply hydraulic skills listed in the Hydraulics Task List in maintenance/repair.	Unable to apply hydraulic skills in maintenance/repair.	Errors made when applying hydraulic skills in maintenance/repair.	No errors made when applying hydraulic skills in maintenance/repair in a classroom/lab setting.	No errors made when applying hydraulic skills in maintenance/repair in a workplace setting.
Apply powertrain skills listed in the Drive Train Task List in maintenance/repair.	Unable to apply the powertrain skills in maintenance/repair.	Errors made when applying powertrain skills in maintenance/repair.	No errors made when applying powertrain skills in maintenance/repair in a classroom/lab setting.	No errors made when applying powertrain skills in maintenance/repair in a workplace setting.
Apply suspension and steering skills listed in the Suspension and Steering Task List in maintenance/repair.	Unable to apply suspension and steering skills in maintenance/repair.	Errors made when applying suspension and steering skills in maintenance/repair.	No errors made when applying suspension and steering skills in maintenance/repair in a classroom/lab setting.	No errors made when applying suspension and steering skills in maintenance/repair in a workplace setting.

Apply climate control skills listed in the Heating, Ventilation and Air Conditioning Task List in maintenance/repair.	Unable to apply climate control skills in maintenance/repair.	Errors made when applying climate control skills in maintenance/repair.	No errors made when applying climate control skills in maintenance/repair in a classroom/lab setting.	No errors made when applying climate control skills in maintenance/repair in a workplace setting.
Apply brake skills listed in the Brakes Task List in maintenance/repair.	Unable to apply brake skills in maintenance/repair.	Errors made when applying brake skills in maintenance/repair.	No errors made when applying brake skills in maintenance/repair in a classroom/lab setting.	No errors made when applying brake skills in maintenance/repair in a workplace setting.
Apply electronic/electrical skills listed in the Electronic/Electrical Task List in maintenance/repair.	Unable to apply electronic/electrical skills in maintenance/repair.	Errors made when applying electronic/electrical skills in maintenance/repair.	No errors made when applying electronic/electrical skills in maintenance/repair in a classroom/lab setting.	No errors made when applying electronic/electrical skills in maintenance/repair in a workplace setting.

POWERSPORTS/MOTORCYCLE TECHNOLOGY

Program Rubric

Enduring Skill	1	2	3	4
Apply advanced engine and drive system skills listed in the Powersports/Motorcycle Technology Task List in maintenance/repair.	Unable to apply advanced engine and drive system skills in maintenance/repair.	Errors made when applying advanced engine and drive system skills in maintenance/repair.	No errors made when applying advanced engine and drive system skills in maintenance/repair in a classroom/lab setting.	No errors made when applying advanced engine and drive system skills in maintenance/repair in a workplace setting.
Apply basic engine and drive system skills listed in the Powersports/Motorcycle Technology Task List in maintenance/repair.	Unable to apply basic engine and drive system skills in maintenance/repair.	Errors made when applying basic engine and drive system skills in maintenance/repair.	No errors made when applying basic engine and drive system skills in maintenance/repair in a classroom/lab setting.	No errors made when applying basic engine and drive system skills in maintenance/repair in a workplace setting.
Apply diagnostic and troubleshooting skills listed in the Powersports/Motorcycle Technology Task List.	Unable to apply diagnostic and troubleshooting skills.	Errors made when applying diagnostic and troubleshooting skills.	No errors made when applying diagnostic and troubleshooting skills in a classroom/lab setting.	No errors made when applying diagnostic and troubleshooting skills in a workplace setting.
Apply frame and suspension skills listed in the Powersports/Motorcycle Technology Task List in maintenance/repair.	Unable to apply frame and suspension skills in maintenance/repair.	Errors made when applying frame and suspension skills in maintenance/repair.	No errors made when applying frame and suspension skills in maintenance/repair in a classroom/lab setting.	No errors made when applying frame and suspension skills in maintenance/repair in a workplace setting.
Apply fundamentals of electricity skills listed in the Powersports/Motorcycle Technology Task List in maintenance/repair.	Unable to apply fundamentals of electricity skills in maintenance/repair.	Errors made when applying fundamentals of electricity skills in maintenance/repair.	No errors made when applying fundamentals of electricity skills in maintenance/repair in a classroom/lab setting.	No errors made when applying fundamentals of electricity skills in maintenance/repair in a workplace setting.

Apply performance machining and welding skills listed in the Powersports/Motorcycle Technology Task List in maintenance/repair.	Unable to apply performance machining and welding skills in maintenance/repair.	Errors made when applying performance machining and welding skills in maintenance/repair.	No errors made when applying performance machining and welding skills in maintenance/repair in a classroom/lab setting.	No errors made when applying performance machining and welding skills in maintenance/repair in a workplace setting