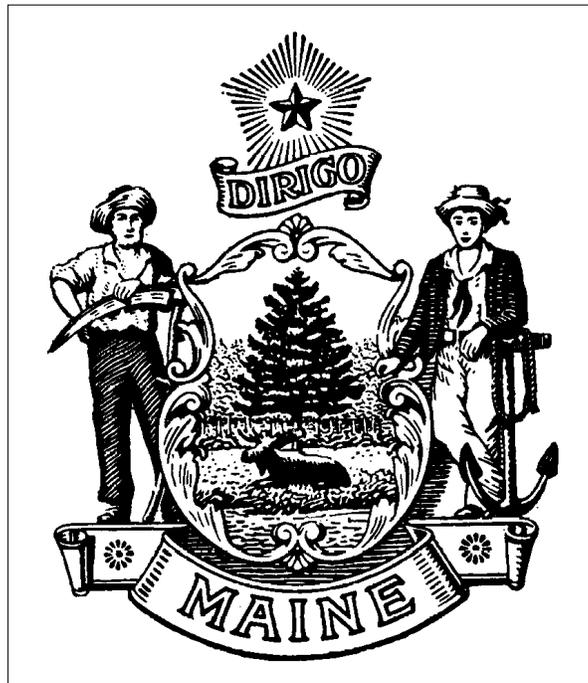


# Diversified Occupations & General Trades

*STATEWIDE STANDARD*

Maine's Vocational & Technical Education Programs

*Maine Department of Education*



*Workforce Education Team*

June 2001

Printed under State Appropriation No. 013-05A-6261-08. Federally funded under Title I of the Carl D. Perkins Vocational and Technical Education Act of 1998 (PL 105-332).

The Maine Department of Education ensures equal employment and educational opportunities and affirmative action, and does not discriminate in its educational programs, services, activities, or employment policies on the basis of sex, race, color, creed, national origin, marital or parental status, condition of disability, or limited English proficiency.

Inquiries regarding compliance with Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Age Discrimination Act of 1975, the Individuals with Disabilities Education Act of 1975, the Americans with Disabilities Act of 1990, Section 427 of the General Education Provisions Act, or other Federal or State of Maine antidiscrimination laws, or concerning other issues of equity and discrimination, may be directed to—

Affirmative Action Officer, Maine Department of Education  
23 State House Station  
Augusta, Maine 04333-0023  
Voice: (207) 624-6600

*Publications of the Workforce Education Sub-Team of the Maine Department of Education (MDOE) are available from—*

**Curriculum Resource Center of Maine (CRCOM)**  
200 Hogan Road  
Bangor, Maine 04401  
Voice: (207) 942-1311 Fax: (207) 942-1391

For additional information on workforce education or school-to-work opportunities programming, please contact the MDOE Workforce Education Sub-Team/Office of School-To-Work Opportunities at—Voice: (207) 624-6730 Fax: (207) 624-6731

v  
**Table of Contents**  
v

*Preface* .....iii

*Introduction* ..... v

Applicable Classification of Instructional Programs (CIP) Codes ..... 1

Glossary of Terms ..... 2

Maine Learning Results Links – Codes and Text..... 3

***Duties and Tasks***

A. Professional Attributes..... 8

B. Communications ..... 8

C. Critical/Creative Thinking ..... 9

D. Career Preparation ..... 9

E. Safety ..... 10

F. Independent Living & Community Job Site Skills ..... 10

G. Food Service – Health and Safety..... 11

    G1. Food Service – Food Preparation ..... 12

    G2. Food Service – Line Work ..... 13

    G3. Food Service – Production Baker ..... 13

H. Horticulture..... 14

I. Grounds Maintenance ..... 15

J. Automobile Reconditioning..... 16

K. Small Engine Repair – Fundamental Skills ..... 18

    K1. Small Engine Repair – Preventive Maintenance ..... 19

    K2. Small Engine Repair – Fuel Systems ..... 19

    K3. Small Engine Repair – Charging Systems ..... 19

    K4. Small Engine Repair – Ignition Systems ..... 20

    K5. Small Engine Repair – Cooling Systems ..... 20

    K6. Small Engine Repair – Small Engine Overhaul ..... 20

L.	Retail/Point-of-Sale Operations .....	21
M.	Hospitality/Housekeeping .....	22
N.	Laundry Worker .....	23
O.	Building Maintenance .....	24
P.	Carpentry & Woodworking – Fundamental Skills .....	25
	P1. Carpentry – Framing .....	25
	P2. Carpentry – Exterior Finishing .....	26
	P3. Carpentry – Interior Finishing .....	26
	P4. Woodworking – Constructing & Fastening Joints .....	26
	P5. Woodworking – Finishing Surfaces .....	26
Q.	General Trades – Electrical .....	27
	Q1. General Trades – Plumbing .....	27
	Q2. General Trades – Masonry .....	28
	Q3. General Trades – Welding .....	29
	Q4. General Trades – Cutting Operations .....	29
	Q5. General Trades – Machine Tool .....	29
	<i>Appendix A: Bibliography</i> .....	32
	<i>Appendix B: Acknowledgements</i> .....	34

U  
**Preface**  
U

*In 1998, the Maine Association of Vocational Education Administrators charged the Center for Career Development, part of the Maine Technical College System, with developing products and processes to align all applied technology programming to the then new, Maine Learning Results. This initiative became known as “MLR/CIP”—the Maine Learning Results-Curriculum Integration Project.*

The Maine State Board of Education and Maine’s Commissioner of Education, J. Duke Albanese, agreed to support MLR/CIP, and the Maine Department of Education has devoted considerable financial and human resources to realize the goals of this project.

**What are standards in the context of MLR/CIP?**

A *standard* is an authoritative body of criteria representing agreed-upon norms in the context of a given subject area. The Statewide Standards identify specific knowledge and performance in, for example, Automotive Technology or Information Technology and their corresponding industry-related duties/responsibilities, work tasks, and skill-sets. Maine Statewide Standards are informed by state and nationally recognized organizations and initiatives, such as the Secretary’s Commission on Achieving Necessary Skills (SCANS), the National Skill Standards Board, Vocational-Technical Education Consortium of States (V-TECS), and other sources listed in each Standard’s bibliography. Maine Statewide Standards represent the most current, comprehensive, and industry-validated guidelines for vocational-technical programs possible and are the result of collaboration across educational and industry lines.

**Maine Department of Education (MDOE) Expectations: What do the standards mean for educators?**

These standards establish statewide applied technology (vocational-technical) curriculum goals and align them with Maine Learning Results. Therefore, how should educators regard this document in terms of program quality, planning, and implementation? How should educators regard this document in terms of scope and accountability? What is *required* of instructors and students based on this document? What resources exist that can help instructors understand and implement these Standards? The following describe MDOE views and expectations regarding these Standards:

- ◆ **Statewide Standards represent a framework of core, universal content to which each related local program should align.**
- ◆ **These Standards should inform instructors’ curriculum, instruction, and assessment activities.**
- ◆ **Statewide Standards represent a *minimum* set of skills, knowledge, and performance that all students in similar programs should be able to demonstrate. Program instructors are encouraged to teach not only according to the Standards but also according to appropriate industry certifications.**
- ◆ **Local program instructors may choose not to teach certain aspects of the Standard *if those aspects are not relevant to local market needs as determined by program advisory committees, and if the rationale for not doing so is sound.* The decision to cut out any given aspect of the Standard must be weighed against the effect this will have on students’ understanding of “all aspects of the industry.”**
- ◆ **Quality implementation of the Standards will lead to an increase in effective and validated post-secondary articulation agreements.**
- ◆ **Use of the Standard will both assure and illustrate alignment with the Maine Learning Results cross-referenced within.**

- ◆ **Statewide Standards will be a cornerstone for approval of all new programs as expressed in the revised *Standard Criteria for Maine Secondary Applied Technology Education Programs*, due for publication in January 2002. Shortly thereafter, the new *Standard Criteria* will be admitted into State of Maine Rule, Education/General 05 071, Chapter 232.**
- ◆ **All currently operational vocational-technical programs must fully align with these Standards within a period of time to be determined by this department. The likely implementation date will be September 2003. The Standards will be an integral focus of the department’s site-based program review, which will resume in January 2002.**

*Resources and services for educators related to the Statewide Standards:*

- ◆ An essential design feature of the MLR/CIP process are **School-Based Learning Teams (SBLTs)**. These are teams of instructors at each vocational-technical center who will engage the Standards and formulate professional development goals around implementation of the Standards. The Center for Career Development (CCD) provides support to SBLTs through Curriculum Specialist services.
- ◆ Program Advisory committees can provide invaluable assistance. By reviewing the Standards with their committees, instructors will generate ideas to forward and enhance their work with students.
- ◆ Tech Updates—regional or statewide meetings of instructors in the same discipline—are another tool for focussing on best practices in implementing the Standards.
- ◆ CCD and MDOE staff can provide targeted assistance.
- ◆ MDOE program review will result in recommendations to improve Standards implementation.

All contributing participants to this Statewide Standard are included in the Acknowledgements section of the Standard. The Maine Department of Education wishes to thank particularly, the Center for Career Development, the Maine Association of Vocational Education Administrators (MAVEA), and all of the MLR/CIP contributors for their truly excellent work. MDOE is proud to adopt these *Statewide Standards*.

U  
**Introduction**  
U

This statewide standard was developed by the Center for Career Development for the Maine Department of Education Workforce Education Team, with direction from both practitioners in the industry and Maine secondary/post-secondary technology instructors. The statewide standard draws on state and national skill standards.

Given that Maine's school-to-work initiatives, such as the State's secondary vocational/technical programs, are required to incorporate the State of Maine Learning Results (MLR), it is imperative that the standard include a crosswalk to the Learning Results. Linkages identified in this document are *potential* only. Whether or not these or other MLR linkages become *actual* depends on how each instructor chooses to teach and assess these skills.

*Please note:*

- U The full text of MLR identified as applicable to this technology precedes the duties and tasks listed in this standard. Each MLR is designated by a reference code.
- U MLR applicable to any or all tasks in a specific duty (set of tasks) are indicated by their codes and listed under the duty name.
- U Duties and tasks present skills and knowledge needed by workers in this occupational area, beginning with the attributes all students should have, and followed by duty areas specific to this field or technology.
- U Tasks marked with an asterisk (\*) are core and are recommended for all students. However, curricula will vary by school, according to the discretion of the instructor and the Program Advisory Committee, which determines the needs of the geographic area served.

## Applicable Classification of Instructional Programs (CIP) Codes

U  
U

### US Department of Education CIP Codes

99.7000	Vocational Special Needs	General Studies/ Diversified Occupations
48.0701	Woodworker, General	An instructional program that prepares individuals to apply technical knowledge and skills to lay out and shape stock; assemble wooden articles or subassemblies; mark, bind, saw, carve, and sand wooden products; repair wooden articles, and use a variety of hand and power tools.
12.0505	Kitchen Personnel/ Cook, & Assistant Training	An instructional program that prepares individuals to serve under the supervision of chefs and other food service professionals as kitchen support staff and commercial food preparation workers. Includes instruction in kitchen organization and operations, sanitation and quality control, basic food preparation and cooking skills, kitchen and kitchen equipment maintenance, and quantity food measurement and monitoring.
20.0601	Custodial, Housekeeping & Home Services Workers and Managers	An instructional program that generally prepares individuals for occupations relating to commercial housekeeping and cleaning operations; and for providing housekeeping services to paying clients and to homebound individuals.

# U Glossary of Terms U

**Applied/Integrated Curriculum** — A strategy or method that helps students combine academic knowledge with technical skill to solve practical workplace or community problems.

**Assessment** — A procedure used to evaluate a student’s level of competence in a task or set of tasks.

**Classification of Instructional Programs (CIP)** — A taxonomy for instructional programs at all levels, developed by the U.S. Department of Education's Center for Education Statistics.

**Competencies** — The knowledge, skills, attitudes, and values that enable workers to perform their duties and responsibilities effectively and efficiently.

**Core Task** — The most essential units of work in the technology.

**Duty** — A group of related responsibilities (e.g., safety) composed of identifiable and measurable tasks.

**Maine Learning Results** — The long-range education goals and standards for student performance, setting out what Maine students should know and be able to do at each stage of their schooling: PreK-grade 2, grades 3-5, grades 5-8, and by graduation from high school.

**Performance Criteria** — A description of behavior, level of proficiency, or desired outcome by which to evaluate task results.

**Task** — A specific, meaningful unit of work that results in a product, service, or decision.

U

## DIVERSIFIED OCCUPATIONS/GENERAL TRADES

### Maine Learning Results Links – Codes and Text

U

*The following secondary-level Maine Learning Results [as printed July 1997 by the Maine Department of Education] were identified by members of the Curriculum Integration Project Diversified Occupations/General Trades Workgroup as relatively strongly linked to a typical diversified occupations/general trades program.*

#### **CPA00 CAREER PREP - PREPARING FOR THE FUTURE**

**Students will be knowledgeable about the world of work, explore career options, and relate personal skills, aptitudes, and abilities to future career decisions. Students will be able to:**

CPA01 Demonstrate the leadership and membership skills necessary to succeed as a member of a team.

CPA02 Analyze skills and abilities required in a variety of career options and relate them to their own skills and abilities.

CPA03 Demonstrate an understanding of the relationship between the changing nature of work and educational requirements.

CPA04 Demonstrate an understanding of basic business concepts such as profit and loss, the availability of skilled labor, market share, and customer service.

#### **CPB00 CAREER PREP - EDUCATION/CAREER PLANNING AND MANAGEMENT**

**Guided by self-assessment and personal career interests, students will integrate school- and work-based experiences to develop their career goals. Students will be able to:**

CPB01 Use a career planning process that includes self-assessment, personal development, and a career portfolio as a way to gain initial entry into the workplace.

CPB02 Demonstrate job-seeking skills.

CPB03 Assess personal, educational, and career skills that are transferable among various jobs.

CPB04 Explain the problems and possible benefits of involuntary changes in employment, including information on what actions the employee can take to make it easier to find a new position or to become self-employed.

#### **CPC00 CAREER PREP - INTEGRATED AND APPLIED LEARNING**

**Students will demonstrate how academic knowledge and skills are applied in the workplace and other settings. Students will be able to:**

CPC01 Demonstrate an understanding of the integration and application of academic and occupational skills in school, learning, work, and personal lives.

CPC02 Demonstrate knowledge of customer satisfaction strategies.

CPC04 Use mathematical, scientific, and technological tools to design and apply solutions to a community problem.

CPC05 Demonstrate an understanding of workplace safety and human factors in the development of products, services, or processes.

#### **CPD00 CAREER PREP - BALANCING RESPONSIBILITIES**

**Students will acquire and apply skills/concepts required to balance personal, family, community, and work responsibilities. Students will be able to:**

## Maine Learning Results Links – Codes and Text

CPD01 Illustrate how resources and support systems, available within a community, assist individuals in their roles as workers and family members.

CPD02 Use knowledge and theories of growth and development to help balance multiple responsibilities.

CPD03 Demonstrate an understanding of the importance of community involvement to family and community life.

CPD04 Demonstrate an ability to manage personal resources.

### **HEA00 HEALTH & PHYSICAL EDUCATION - HEALTH CONCEPTS**

**Students will understand health promotion and disease prevention concepts. Students will be able to:**

HEA01 Analyze the relationship between personal health practices and individual well-being.

HEA02 Describe the interrelationship of physical, mental, emotional, and social health throughout the stages of life.

HEA03 Evaluate the short- and long-term effects of risky behavior.

HEA04 Analyze the impact of personal health behaviors on body systems.

HEA05 Analyze how the environment relates to personal and community health.

HEA07 Analyze how public health policies and laws influence health promotion and disease prevention

### **HEB00 HEALTH & PHYSICAL EDUCATION - HEALTH INFORMATION, SERVICES, AND PRODUCTS**

**Students will know how to acquire valid information about health issues, services, and products. Students will be able to:**

HEB03 Access school and community health services (e.g., school nurse, family physician, emergency care).

HEB04 Analyze various health problems and identify those that require professional health care services (e.g., dental cavities, sports injuries).

### **HEC00 HEALTH & PHYSICAL EDUCATION - HEALTH PROMOTION AND RISK REDUCTION**

**Students will understand how to reduce their health risks through the practice of healthy behaviors. Students will be able to:**

HEC01 Analyze the extent to which individuals are responsible for enhancing health and safety in the community and the workplace.

HEC02 Demonstrate strategies to avoid, change, and report unsafe situations.

### **HED00 HEALTH & PHYSICAL EDUCATION - INFLUENCES ON HEALTH**

**Students will understand how media techniques, cultural perspectives, technology, peers, and family influence behaviors that affect health. Students will be able to:**

HED02 Evaluate the effect of media and other factors on personal, family, and community health.

### **HEE00 HEALTH & PHYSICAL EDUCATION - COMMUNICATION SKILLS**

**Students will understand that skillful communication can contribute to better health for themselves, their families, and the community. Students will be able to:**

HEE01 Demonstrate healthy ways to listen and communicate effectively with family, peers, and others.

HEE02 Demonstrate strategies that can be used to prevent or solve conflicts without harm.

HEE03 Analyze the possible causes of conflict in schools, families, and communities.

### **HEF00 HEALTH & PHYSICAL EDUCATION - DECISION-MAKING AND GOAL SETTING**

**Students will learn how to set personal goals and make decisions that lead to better health. Students will be able to:**

HEF01 Demonstrate various decision-making strategies that can be used to address behaviors which lead to trouble.

### **HPEA0 HEALTH & PHYSICAL EDUCATION - PHYSICAL FITNESS**

**Students will acquire the knowledge needed to be physically fit and take part in healthful physical activity on a regular basis. Students will be able to:**

## Maine Learning Results Links – Codes and Text

HPEA2. Participate in a variety of health-enhancing physical activities.

HPEA4 Demonstrate the knowledge, skills, and behaviors needed to maintain or modify levels of fitness.

**HPEB0 HEALTH & PHYSICAL EDUCATION - MOTOR SKILLS** Students will develop motor skills and apply these to enhance their movement and physical performance. Students will be able to:

HPEB3 Use biomechanical concepts and principles (concepts and principles related to the mechanics of the body) to develop skills for specific activities.

HPEB4 Apply biomechanical concepts and principles to analyze and improve their own performances and the performances of others (e.g., view a videotape of themselves performing a physical activity and analyze the performance).

**HPEC0 HEALTH & PHYSICAL EDUCATION - PERSONAL & SOCIAL INTERACTIONS** The student will demonstrate responsible personal and social behaviors in physical activity settings. Students will be able to:

HPEC3 Initiate independent and responsible personal behavior in physical activity settings.

HPEC4 Identify potentially dangerous consequences and outcomes of participation in physical activity.

HPEC6 Demonstrate appropriate etiquette, ways of interacting, care of equipment, and safety in the setting of an activity.

HPEC7 Apply a decision-making process to their safety and that of others in activity settings.

**LAA00 PROCESS OF READING** Students will use the skills and strategies of the reading process to comprehend, interpret, evaluate, and appreciate what they have read. Students will be able to:

LAA06 Use the context of a work to determine the figurative, idiomatic, and technical meanings of terms.

LAA08 Find the meaning of relatively uncommon technical terms used in informational texts.

LAA11 Represent key ideas and supporting details in various written forms (e.g., outline, paraphrase, concise summary).

**LAD00 INFORMATIONAL TEXTS** Students will apply reading, listening, and viewing strategies to informational texts across all areas of curriculum. Students will be able to:

LAD01 Scan a passage to determine whether a text contains relevant information.

LAD03 Use discussions with peers as a way of understanding information.

LAD05 Analyze and synthesize the concepts and details in informational texts.

**LAE00 PROCESSES OF WRITING AND SPEAKING** Students will demonstrate the ability to use the skills and strategies of the writing process. Students will be able to:

LAE02 Reflect on, evaluate, revise, and edit a sequence of drafts to improve and polish finished work.

**LAF00 STANDARD ENGLISH CONVENTIONS** Students will write and speak correctly, using conventions of standard written and spoken English. Students will be able to:

LAF01 Edit written work for standard English spelling and usage, evidenced by pieces that show and contain:

- no significant errors in the use of pronouns, nouns, adjectival and adverbial forms, and coordinating and subordinating conjunctions.
- no significant errors in the spelling of frequently used words and the correct use of commonly confused terms.
- no significant errors in the common conventions of capitalization and ending punctuation marks and common uses of the comma.
- few significant errors in the spelling of commonly misspelled and rare words, the less common capitalization conventions, the colon, semicolon, hyphen, dash, apostrophe, quotation marks, italics, marginal notes, and footnotes.

**LAH00 RESEARCH-RELATED WRITING AND SPEAKING** Students will work, write, and speak effectively when doing research in all content areas. Students will be able to:

## Maine Learning Results Links – Codes and Text

LAH01 Develop an appropriate strategy for finding information on a particular topic.

LAH02 Use referencing while doing research.

LAH03 Record significant information from events attended and interviews conducted.

LAH04 Identify and use library information services.

LAH07 Identify and use a variety of news sources (e.g., newspapers, magazines, broadcast and recorded media, artifacts), informants, and other likely sources for research purposes.

LAH08 Use search engines and other Internet resources to do research.

LAH11 Evaluate information for accuracy, currency, and possible bias.

### **MAB00 COMPUTATION**

**Students will understand and demonstrate computation skills. Students will be able to:**

MAB01 Use various techniques to approximate solutions, determine the reasonableness of answers, and justify the results.

### **MAC00 MATHEMATICS – DATA ANALYSIS AND STATISTICS**

**Students will understand and apply concepts of data analysis. Students will be able to:**

MAC02 Predict and draw conclusions from charts, tables, and graphs that summarize data from practical situations.

### **MAF00 MEASUREMENT**

**Students will understand and demonstrate measurement skills. Students will be able to:**

MAF01 Use measurement tools and units appropriately and recognize limitations in the precision of the measurement tools.

### **SSEA0 SOCIAL STUDIES - ECONOMICS - PERSONAL & CONSUMER ECONOMICS**

**Students will understand that economic decisions are based on the availability of resources and the costs and benefits of choices. Students will be able to:**

SSEA1 Conduct a cost-benefit analysis of a personal or business decision.

**SSEB0 SOCIAL STUDIES - ECONOMICS - ECONOMIC SYSTEMS OF THE UNITED STATES** Students will understand the economic system of the United States, including its principles, development, and institutions. Students will be able to:

SSEB3 Explain the positive and the negative impacts of advertising techniques on consumer behavior.

### **STJ00 SCIENCE & TECHNOLOGY - INQUIRY AND PROBLEM SOLVING**

**Students will apply inquiry and problem-solving approaches in science and technology. Students will be able to:**

STJ01 Make accurate observations using appropriate tools and units of measure.

STJ02 Verify, evaluate, and use results in a purposeful way. This includes analyzing and interpreting data, making predictions based on observed patterns, testing solutions against the original problem conditions, and formulating additional questions.

### **STL00 SCIENCE & TECHNOLOGY - COMMUNICATION**

**Students will communicate effectively in the application of science and technology. Students will be able to:**

STL03 Make and use appropriate symbols, pictures, diagrams, scale drawings, and models to represent and simplify real-life situations and to solve problems.

STL04 Employ graphs, tables, and maps in making arguments and drawing conclusions.

STL07 Use computers to organize data, generate models, and do research for problem-solving.

### **STM00 SCIENCE & TECHNOLOGY - IMPLICATIONS OF SCIENCE AND TECHNOLOGY**

**Students will understand the historical, social, economic, environmental, and ethical implications of science and technology. Students will be able to:**

STM02 Demonstrate the importance of resource management, controlling environmental impacts, and maintaining natural ecosystems.

## Maine Learning Results Links – Codes and Text

### **VAAOO VISUAL & PERFORMING ARTS - CREATIVE EXPRESSION**

**Students will create and/or perform to express ideas and feelings. Students will be able to:**

VAA01 Create a visual or performance piece to communicate an idea, feeling, or meaning using:

- ◆ a distinct style
- ◆ imagination and technical skill
- ◆ the creative process, reflection, and self-evaluation (problem-solving skills).

VAA04 Use the elements and principles of design to demonstrate multiple solutions to specific visual or performing arts problems.

VAA09 Use skills and knowledge of arts elements and principles, whenever applicable, to solve problems or enhance meaning in other disciplines.

**Statewide Standard ∪ *Diversified Occupations/General Trades***

Task		Performance Criteria
<b>A. Professional Attributes</b>		
<p><b>The following MLR link to all or some of the tasks in this duty area:</b>                      CPA01, CPA04, CPC02, CPC05, HEE01, HEE02, HPEC6</p>		
A1*	Displays high standards for attendance and punctuality.	Arrives on time and prepared to work; remains at worksite as scheduled and takes breaks as scheduled; calls in to report absence or delays.
A2*	Follows worksite policies pertaining to appearance.	Demonstrates appropriate personal hygiene and grooming; dresses appropriately for required duties and in compliance with safety regulations.
A3*	Displays appropriate workplace behavior.	Follows policies and procedures of work site; shows respect for self, others, and equipment; exhibits self-control; uses appropriate language; reports problems to supervisors.
A4*	Displays a positive work ethic.	Performs assignment to the best of one’s ability; shows initiative and willingness to learn or assume additional duties.
A5*	Stays on task.	Stays focused on activity appropriate length of time; moves to next task at appropriate time.
A6*	Displays planning and time management skills.	Sets goals; prioritizes tasks; completes assignments in a timely manner; shows initiative in performing work without prompting.
A7*	Displays a positive attitude.	Exhibits motivation; accepts feedback and suggestions for improvement; copes with mistakes, stressful situations, and failures constructively.
A8*	Works well under supervision.	
A9*	Functions as part of a team.	Fulfills personal responsibilities as a team member; asks for or offers help appropriately; works cooperatively.
A10*	Meets customer needs.	Greets each customer courteously and respectfully; takes appropriate action to satisfy customer; recognizes situations where it is beneficial or necessary to refer customer to co-worker or supervisor.
<b>B. Communications</b>		
<p><b>The following MLR link to all or some of the tasks in this duty area:</b>                      HEE01, HEE02, LAA08, LAA11, LAD01, LAD03, LAD05, LAE02, LAF01, LAH01, LAH02, LAH03, LAH04, LAH11</p>		
B1*	Applies listening skills.	Listens for, interprets, and recalls details and instructions in conversations and group meetings; follows oral directions and instructions.
B2*	Applies speaking skills.	Speaks clearly and directly; asks appropriate questions; expresses needs and wants; uses proper language etiquette in person and on the telephone.
B3*	Applies reading skills.	Locates and demonstrates understanding of written information necessary for completing a task/project.
B4*	Uses reading materials in a variety of formats.	Applies information contained in graphs, tables, charts, schedules, calendars.
B5*	Follows verbal directions.	Interprets and completes one, two, or multiple step tasks sequentially and accurately.
B6*	Follows written directions/instructions.	Interprets and completes tasks from written material accurately and efficiently.

**Statewide Standard ∪ *Diversified Occupations/General Trades***

<b>Task</b>		<b>Performance Criteria</b>
B7*	Applies writing skills.	Writes or prints legibly and neatly; completes written assignments such as personal information cards, applications and labels accurately.
B8*	Uses computers and other electronic devices to communicate with others.	
<b>C. Critical/Creative Thinking</b>		
<p><b>The following MLR link to all or some of the tasks in this duty area:</b>                      HEC02, HEE01, HEE02, LAA11, LAD01, LAD03, LAD05, LAH01, LAH04, LAH07, LAH08, MAC02, MAF01, STJ01, STJ02, STL04</p>		
C1*	Locates and researches information and data.	Identifies appropriate information sources; locates information in resources such as a telephone directory, newspaper index or reference book.
C2*	Applies problem-solving skills.	Identifies types of problems and methods for solving them; considers options with pros and cons for each; suggests reasonable solution(s).
C3*	Applies decision-making skills.	Identifies decision to be made; evaluates potential outcomes; consults instructors/supervisors or peers as appropriate.
C4*	Demonstrates functional reading skills.	Uses indexes and/or alphabetical order to locate information in sources such as a telephone book or newspaper; recognizes and understands labels, traffic and information signs; reads and follows written directions..
C5*	Performs math functions involving addition, subtraction, multiplication, division.	
C6*	Uses calculator.	
C7	Performs general information management tasks.	Keeps written and electronic information organized.
<b>D. Career Preparation</b>		
<p><b>The following MLR link to all or some of the tasks in this duty area:</b>                      CPA02, CPB01, CPB02, CPB03, LAA11, LAE02, LAF01</p>		
D1*	Sets goals.	Develops realistic personal performance goals; defines steps to reach long- and short-term goals; measures progress toward goals.
D2*	Identifies career that matches personal interests.	
D3*	Describes job duties and responsibilities of position.	
D4*	Identifies entry-level positions in the field of interest.	
D5*	Completes sample job application form.	Fills out necessary forms legibly, completely, and accurately.
D6*	Develops resume.	Collects information; edits; arranges in an attractive format; finished product is 100% error free.
D7*	Develops portfolio.	Compiles information such as a copy of transcript, letters of recommendation, references, samples of work and items illustrating personal interests and achievements such as awards and honors.
D8*	Develops cover letter.	

**Statewide Standard ∪ *Diversified Occupations/General Trades***

<b>Task</b>		<b>Performance Criteria</b>
D9*	Performs mock job interview.	Establishes and maintains eye contact; dresses, grooms appropriately; speaks courteously; discusses previous job positions, experience and interests.
<b>E. Safety</b>		
<p><b>The following MLR link to all or some of the tasks in this duty area:</b>                      CPA01, CPC05, HEA01, HEA04, HEA05, HEB03, HEC01, HEC02, HEE01, HEE02, HEF01, HPEB3, HPEC3, HPEC4, HPEC6, HPEC7, LAD05</p>		
E1*	Follows all safety guidelines and procedures while performing a task.	Complies with governmental and organizational safety guidelines/procedures relevant to assigned duties such as the use of personal protective equipment, handling of hazardous materials, and proper use of equipment..
E2*	Identifies, uses, and stores hazardous materials common to the work area.	Practices safe procedures for handling and storing all commonly used hazardous materials; recognizes OSHA hazardous labeling symbols; identifies where to find applicable MSDS (Material Safety Data Sheet) and extracts pertinent information
E3*	Uses ergonomically correct work methods	Complies with Occupational Safety and Health Administration (OSHA), state, and work site ergonomic guidelines such as lifting techniques and proper posture.
E4*	Follows emergency safety procedures.	Displays understanding of emergency safety procedures; responds appropriately during safety drills.
E5*	Maintains safe work area.	Keeps clean, well-organized, and manageable work station(s); identifies and reports hazardous and unsafe conditions.
<b>F. Independent Living and Community Job Site Skills</b>		
<p><b>The following MLR link to all or some of the tasks in this duty area:</b>                      CPA01, CPA03, CPA04, CPC02, CPC05, CPD03, CPD04, HEA01, HEA03, HEB03, HEC01, HEC02, HEE01, HEE02, HPEA2, HPEA4, HPEB3, HPEC3, HPEC4, HPEC6, HPEC7, LAD03, LAD05, LAH01, LAH08, MAC02, MAF01, STJ01, SSEA1</p>		
F1*	Recognizes and complies with safety guidelines and procedures while performing tasks.	
F2*	Identifies ways to maintain physical health.	
F3*	Identifies ways to maintain emotional health.	
F4*	Complies with social customs/rules.	Displays appropriate manners and common courtesy to others;
F5*	Adapts to changes.	
F6*	Demonstrates general coping skills.	
F7*	Performs self-help skills.	
F8*	Performs general housekeeping tasks as required in physical setting.	
F9*	Operates common commercial equipment and/or household appliances.	Practices safe operation according to manual instructions and stores when not in use.
F10*	Launders clothing.	Sorts clothing; operates washer and dryer according to instructions; folds and stores clean clothing.
F11*	Uses telephone independently.	Describes procedure for accessing emergency services, uses phone to obtain information or order services.
F12*	Exhibits effective consumer skills.	Purchases goods and supplies; compares prices and product features, uses resources such as sales flyers to make good purchasing choices.

**Statewide Standard ∪ *Diversified Occupations/General Trades***

<b>Task</b>		<b>Performance Criteria</b>
F13*	Demonstrates understanding of employment issues such as worker’s compensation, fair labor and child labor laws.	
F14*	Demonstrates understanding of basic legal issues concerning areas such as harassment and substance abuse.	
F15	Accesses personal care services.	Makes appointments; locates offices and plans route to get there.
F16*	Knows what resources are in the community and how to access them.	Identifies where to find specific items or services; describes or demonstrates procedures applicable to accessing community health services, post office services, recreational and entertainment facilities;.
F17*	Tells time and demonstrates an understanding of time concepts.	
F18*	Uses a calendar.	Locates specific days, weeks, months.
F19*	Manipulates money.	Identifies units, recognizes and writes correct currency notation; makes change correctly
F20	Develops a personal budget.	
F21	Performs basic banking transactions.	Completes items such as deposit and withdrawal slips; maintains and balances a transaction register..
F22*	Performs measurements. (linear, liquid, weight)	
F23*	Prepares a list of supplies needed to complete a job task.	
F24	Identifies departments in a place of business such as a grocery store.	
F25	Plans menus	Constructs basic menus that are balanced for color, ingredients, cooking method, variety, and style
F26	Prepares a list of supplies needed to complete a menu.	
F27	Shops for items on a list.	
F28	Writes a food preparation schedule.	
F29	Sets a table.	

**G. Food Service – Health and Safety**

**The following MLR link to all or some of the tasks in this duty area:**  
 CPA01, CPC05, HEA07, HEC01, HEC02, HEF01, HPEC3, HPEC6, HPEC7, LAD05

G1*	Identifies ways to avoid cuts or burns.	Uses guards and safety gloves; unplugs equipment after use; Operates ovens, burners, and fryers according to manufacturer and company policy.
G2*	Follows traffic patterns such as established entrance-exit doors to kitchen.	
G3*	Uses electrical appliances/equipment safely.	Unplugs electrical appliances and equipment before cleaning; inspects cords for grounded plugs and evidence of wear; reports malfunctions to supervisor; operates and stores equipment away from water.
G4*	Practices proper personal hygiene.	Uses hat or hair net; washes hands frequently while on duty and ensures that fingernails are clean; changes uniform and apron when soiled; wears service gloves when directly handling food.
G5*	Demonstrates proper hand-washing procedure.	

**Statewide Standard ∪ *Diversified Occupations/General Trades***

<b>Task</b>		<b>Performance Criteria</b>
G6*	Practices proper food storage procedures.	Covers and stores food to prevent biological, chemical, and physical contamination; stores all food items according to recommended temperatures as outlined in local, state, and national codes.
G7	Stores and handles convenience foods.	Follows SERVSAFE guidelines for recommended storage and handling of convenience foods.
G8	Describes characteristics of spoiled foods.	
G9*	Uses sanitizers for cleaning.	Chooses proper cleaning/sanitizing compounds; applies according to manufacturer instructions and company guidelines.
G10*	Keeps surfaces wiped down.	Follows <i>clean as you go</i> procedures for floors, counters, and shelves.
G11*	Sweeps and mops floor.	
G12*	Picks up and disposes of trash.	
G13*	Follows cleaning schedules.	Washes, dries, and sanitizes floors; dusts ceiling lights, intakes, and air vents; sanitizes utensil racks; degreases, washes, and dries hood filters; cleans laundry and trash receptacles; washes and scrubs kitchen walls and borders.
G14*	Cleans and sanitizes equipment and utensils.	Ensures that utensils and equipment are free of grease, stains, and food particles; maintains cleanliness of utensil storage areas; washes, dries, and sanitizes kitchen equipment.
G15*	Operates/cleans dishwasher.	Ensures that dishwasher temperatures are within the proper range; uses proper type and amounts of cleaning agents; ensures that washed dishes and utensils are free of grease, stains, and food particles.
G16	Stores equipment.	Places heavy items on lower storage shelves; ensures that floors, doorways, stairs, and corridors are clear of equipment.

**G1. Food Service – Food Preparation**

**The following MLR link to all or some of the tasks in this duty area:**

CPA01, CPC02, CPC05, HEA07, HEC01, HEC02, HEF01, HPEC3, HPEC6, HPEC7, LAA08, LAD01, LAD05, MAF01, STLO3, STJ01, VAA01, VAA04

G1.1	Identifies kitchen terms and equipment.	
G1.2	Identifies measuring terms and abbreviations and relates to the correct measuring tool.	
G1.3	Measures liquids, dry ingredients and ingredients by weight.	Uses the correct utensil and process; measures accurately.
G1.4*	Adjusts controls for time and temperature.	Monitors walk-in coolers, refrigerators, and freezers for proper operation and temperature; reports missing or broken thermometers; Monitors serving temperatures of prepared meals and ensures that they remain within recommended range; adjusts temperature as necessary
G1.5*	Uses microwave.	Selects correct utensils/dishes, and selects appropriate cooking time/power level for item.
G1.6*	Demonstrates knife skills.	

**Statewide Standard ∪ *Diversified Occupations/General Trades***

<b>Task</b>		<b>Performance Criteria</b>
G1.7*	Prepares fruits and vegetables.	Selects appropriate tools and equipment; removes unserviceable portions, such as stems, seeds, and cores; washes and peels completely; maximizes use of serviceable portion; follows standardized recipes or production sheets.
G1.8*	Arranges fruit/veggie platters.	Selects and arranges on appropriate dishes; applies sauce and garnish as specified; ensures that items are selected, washed, trimmed, and portioned according to production sheet; garnishes and stores finished dishes under refrigeration.
G1.9*	Prepares salads.	Selects appropriate greens in amount specified; washes, trims, and performs selected techniques for preparation; prepares, arranges, and garnishes salads as specified.
G1.10*	Prepares sandwiches.	Gathers ingredients; inspects for freshness, Proportions ingredients according to company policy; performs procedures such as chopping, mixing, and slicing; ensures that fillings are of proper consistency and seasoning; ensures that sliced fillings are of uniform weight and size.
G1.11	Prepares breakfast foods.	Determines proper cooking method as outlined on recipe, production sheet, or by customer request; ensures that cooked eggs are of uniform color and texture; produces batters of the proper consistency; determines doneness by color, consistency, and cooking time.
G1.12	Prepares ice cream dishes.	
G1.13	Prepares desserts.	
G1.14	Prepares hor d'oeuvres.	
<b>G2. Food Service – Line Work</b>		
<p><b>The following MLR link to all or some of the tasks in this duty area:</b>                      CPC02, CPC05, HEA07, HEC02, HPEC6, SSEA1, STJ01</p>		
G2.1*	Sets up food stations.	Ensures that food station is organized and stocked for prompt service; arranges plates, bowls, cups, silverware, and utensils in a sanitary and efficient manner.
G2.2*	Performs sidework.	Replenishes condiments and sundries; replenishes food and items at serving sites.
G2.3*	Fills beverage dispensers.	
G2.4*	Brews coffee.	
G2.5*	Prepares tea.	
G2.6*	Prepares and portions soft drinks/fruit juices.	
G2.7*	Greets guests.	
G2.8*	Takes orders from guests.	
G2.9*	Places orders for preparation.	
G2.10*	Picks up food orders and serves to guests.	
G2.11*	Processes sales check.	
G2.12*	Accepts payment from guests.	
<b>G3. Food Service – Production Baker</b>		
<p><b>The following MLR link to all or some of the tasks in this duty area:</b>                      HEA05, HEA07, HPEC6, MAF01, STJ01, VAA01</p>		
G3.1*	Scales ingredients.	

**Statewide Standard ∪ *Diversified Occupations/General Trades***

<b>Task</b>		<b>Performance Criteria</b>
G3.2*	Converts standard recipes.	
G3.3*	Uses portion control formulas.	
G3.4*	Prepares and applies icings.	
G3.5*	Prepares toppings.	
G3.6*	Prepares fillings.	
G3.7*	Mixes and handles batters and doughs.	
G3.8*	Prepares quickbreads such as muffins, popovers.	
G3.9*	Prepares cookies.	
G3.10*	Prepares pie crust.	
G3.11*	Prepares pies using pre-baked shells.	
G3.12*	Prepares yeast-raised products.	
G3.13*	Prepares doughnuts.	
G3.14*	Stores prepared baked goods.	
G3.15*	Prepares products for freezing.	
<b>H. Horticulture</b>		
<p><b>The following MLR link to all or some of the tasks in this duty area:</b>                      CPA04, CPC02, CPC04, CPC05, HEA05, HEB03, HEC01, HEC02, HPEB3, HPEC3, HPEC4, HPEC6, HPEC7, LAA08, LAA11, LAD01, LAD03, LAD05, LAH01, LAH03, LAH04, LAH07, LAH08, MAB01, MAC02, MAF01, SSEA1, STJ01, STL03, STL07, STM02, VAA04</p>		
H1*	Identifies horticulture terms and equipment.	
H2*	Identifies and uses common gardening tools safely and correctly.	Selects correct tool for the task; operates and maintains equipment and tools according to manufacturer manuals and company policy.
H3	Sharpens garden tools.	
H4*	Demonstrates understanding of the need for water, light, and soil for plants.	
H5*	Waters plants.	
H6*	Formulates and applies fertilizer.	
H7*	Controls light requirements.	
H8*	Controls temperature requirements.	
H9*	Controls growth rate with retardants.	
H10*	Controls plant pests.	Determines type of pest, appropriate control measures and amount of chemical to apply; uses recommended procedure to apply treatment; maintains record of treatments and handles and stores hazardous materials properly.
H11*	Reports disease and plant damage.	
H12*	Recognizes healthy plants; removes diseased plants.	
H13*	Mixes growing media materials.	
H14*	Mixes fertilizer into growing media.	Determines correct amounts of fertilizer based on soil test results and applies through proper and safe use of application equipment.
H15*	Prepares seedbed.	Clears growing area of weeds, litter and leaves; cultivates soil to a depth of 6"; adds organic matter, starter fertilizer, and pre-plant herbicides to meet the recommended environmental conditions for particular plant species.
H16*	Levels or smoothes planting area.	
H17*	Plants seeds.	
H18*	Plants bulbs.	

**Statewide Standard ∪ *Diversified Occupations/General Trades***

<b>Task</b>		<b>Performance Criteria</b>
H19*	Monitors plant growth.	Plant materials are properly staked, pruned, cleaned, edged, mulched, watered and fertilized according to company plan and time guidelines.
H20*	Cares for potted plants.	Monitors environmental conditions [temperature, light, space and water] and corrects signs of poor condition due to culture, disease or insects.
H21*	Transplants seedlings.	
H22*	Thins seedlings.	
H23*	Pinches and disbuds flowering plants	
H24*	Identifies flower parts.	
H25*	Identifies seedpod formations.	
H26*	Collects and dries seeds.	
H27*	Identifies characteristics of annuals and recognizes common varieties.	
H28*	Identifies characteristics of perennials and recognizes common varieties.	
H29*	Identifies common houseplants.	
H30	Propagates houseplants from offsets, by leaf cuttings and by root division.	
H31*	Repots plants.	
H32	Cuts flowers.	Cuts, cleans and conditions flowers; stores in sanitized containers with proper water level and temperature.
H33*	Labels plants.	Ensures label information is correct and legible, locates label according to company policy.
H34*	Recognizes and divides mature plantings that need thinning.	Divides plants according to procedure and replants and appropriate amount in a given area.
H35	Creates a container garden.	Selects appropriate number and type of plants and transplants into container; assembles with minimum wastage; plants should be complimentary and product should be visually appealing with appropriate balance, color combinations, harmonies, line, form and texture..
H36	Assembles corsages or bouquets	Selects appropriate number and type of flowers and supplies; creates product that is visually appealing.
H37*	Processes incoming plants and materials.	Receives, unloads, unpacks and checks quality and quantity of materials against invoice; removes and disposes of packing materials; places merchandise in the correct location.
H38*	Prepares plants for delivery.	Selects, harvests grades plants according to customer and company requirements and specifications; wraps plants and loads/stacks so that they can be transported safely without damage or collapsing.
H39*	Records sales of merchandise.	Records merchandise and customer information correctly; validates discount, cash, check and credit transactions according to company policy.
<b>I. Grounds Maintenance</b>		
<p><b>The following MLR link to all or some of the tasks in this duty area:</b>                      CPC04, CPC05, HEA01, HEA04, HEA05, HEC01, HEC02, HPEB3, HPEC3, HPEC4, HPEC6, LAD03, LAD05, MAC02, MAF01, STJ01, STM02, VAA01</p>		
I1*	Prepares compost pile.	Ensures plant material and soil is applied in layers; moistens and turns as needed.

**Statewide Standard ∪ *Diversified Occupations/General Trades***

<b>Task</b>		<b>Performance Criteria</b>
I2	Installs sod.	Prepares ground with fertilizer and limestone and levels to receive sod; rolls out sod as closely as possible to the roll beside it; trims sod where necessary.
I3*	Mows lawns.	Operates mower following safety procedures; mows lawn at the prescribed height; follows the company mowing pattern without damaging bushes, trees, and plantings; performs all trimming correctly.
I4*	Sharpens blades.	Ensures that blade has no burns or nicks, has a keen edge, and is balanced.
I5*	Fertilizes plants.	Applies fertilizer uniformly at recommended strengths for particular plant species.
I6*	Rakes.	
I7*	Prunes bushes and hedges.	
I8*	Removes leaves, clippings and debris.	
I9*	Removes snow.	Operates snowblower/snowplow to remove snow from traffic and pedestrian areas safely and without damage to lawns, bushes, or buildings.
I10	Repairs and paints picnic and playground equipment.	
I11	Services water-irrigation systems.	Repairs pipelines; replaces sprinkler heads; sets time clock; drains and charges system.

**J. Automobile Reconditioning**

**The following MLR link to all or some of the tasks in this duty area:**

CPA01, CPA04, CPC02, CPC05, HEA01, HEA04, HEC01, HEC02, HEF01, HPEB3, HPEC3, HPEC4, HPEC6, HPEC7, LAA08, LAD01, LAD03, LAD05, MAC02MAF01, SSEA1, STM02, STJ01, VAA01

J1*	Follows safety guidelines and procedures.	Complies with governmental and organizational safety guidelines/procedures relevant to assigned duties such as the use of personal protective equipment, handling of hazardous materials, and proper use of equipment
J2*	Follows regulations concerning use and disposal of hazardous materials.	Recognizes symbols used to denote hazardous materials; follows OSHA guidelines and company protocols for safe handling and storage.
J3*	Provides customer service.	Practices courtesies such as the use fender covers, disposable seat covers and floor mats to avoid soiling car; leaves controls such as radio station and temperature at customer’s settings; ensures customer personal belongings are returned with vehicle.
J4*	Uses power equipment.	Operates machines such as power buffers, high pressure washers, or shampooers according to manufacturer recommendations and in compliance with safety regulations.
J5	Selects proper supplies and chemicals needed to clean/protect vehicle.	Uses the least aggressive/abrasive cleaner to accomplish the job; checks that cleaning compounds are compatible before using on a vehicle; follows manufacturer recommendations for applicators to be used with products.
J6*	Completes pre-delivery checklist.	Checks off each item to verify the task has been completed in compliance with shop standards;

**Statewide Standard ∪ *Diversified Occupations/General Trades***

<b>Task</b>		<b>Performance Criteria</b>
J7*	Washes/dries vehicle.	Performs task with car out of direct sun and where air temperature will allow products to function properly. Removes any tar or other non-water soluble substances from vehicle exterior; mixes vehicle wash soap according to manufacturer instructions; uses correct sequence of washing operations, dries with a terry cloth and inspects to ensure vehicle is uniformly clean with no missed areas.
J8*	Washes windows and mirrors.	Uses glass cleaning agent and lint-free cloth or paper to clean interior and exterior windows; inspects for streaks, road or insect residue and uses 0000 steel wool or razor blade for difficult spots; ensures the top edge of moveable glass is cleaned; repeats cleaning until glass is spotless
J9*	Prepares vehicle for interior cleaning.	Removes floor mats, trash and debris from interior; uses compressed air to blow dirt and dust from vents and other inaccessible areas.
J10*	Vacuums interior fabric surfaces.	Cleans seats, seat backs, headliner and carpets; inspects for stains.
J11*	Cleans interior vinyl surfaces.	Cleans all areas such as the dashboard, instrument panel, door panels and vinyl seats with a detail brush or lint free rag and appropriate cleaner.
J12	Treats interior odors.	Identifies source of odor such as mold, mildew or bacterial growths; selects correct product such as a ph neutral solution, disinfectant or ozone machine to eliminate odors and follows manufacturer recommendations for application.
J13*	Shampoos/cleans upholstery.	Uses appropriate stain removal process and cleaning product; follows manufacturer recommendations for application.
J14*	Shampoos/cleans rugs.	Uses appropriate stain removal process and cleaning product; follows manufacturer recommendations for application.
J15*	Applies fabric guard	Follows product manufacturer recommendations for application and completes in correct sequence.
J16*	Applies vinyl dressing.	Follows product manufacturer recommendations for application and completes in correct sequence.
J17*	Cleans trunk compartment.	Removes and stores personal items; removes and cleans mat; vacuums, treats stains, spray cleans and reassembles.
J18*	Reconditions chrome.	
J19*	Reconditions wheels.	Checks that cleaner will not damage or discolor the wheel; follows manufacturer recommendations for product application; avoids painted surfaces.
J20*	Cleans tires.	Scrubs tires with a brush and cleanser; cleans to the tread line, rinses, dries and applies protectant.
J21*	Selects proper supplies/chemicals to recondition vehicle paint surfaces.	Determines if vehicle finish is conventional or clearcoat; Describes properties of various types of compounds and their uses; chooses the least aggressive/abrasive product for the job.
J22*	Applies rubbing/buffer and polishing compounds.	Follows recommended process and sequence for applying products.
J23*	Hand buffs.	
J24*	Power buffs.	

**Statewide Standard ∪ *Diversified Occupations/General Trades***

<b>Task</b>		<b>Performance Criteria</b>
J25*	Applies waxes, sealants and polymers.	Follows recommended process and sequence for applying products; avoids rubber and vinyl trim; removes wax residue from exterior cracks, door jambs and gutters; inspects to ensure vehicle is uniformly coated with the wax product.
J26	Applies touch up paint.	
J27*	Degreases engine and engine compartment.	Covers and wet-proofs engine parts and accessories that should not get wet; ensures full coverage with degreasing product, use appropriate tools to scrub clean, including hard to reach places; pressure rinses; repeats cleaning cycle as necessary until no grease or dirt remains.
J28*	Cleans engine components.	Follows approved sequence of operations; uses appropriate type and amount of cleaner for each component; works with caution to avoid damaging engine parts.
J29*	Replaces air cleaner and inspects belts, hoses, fluid levels.	
J30*	Applies engine paint.	Masks around the area to be painted; sprays thin even coats of paint and follows manufacturer recommendations for application and drying time between coats.
J31*	Applies vinyl pinstripes to a vehicle.	Cleans area with wax and grease remover; applies tape according to approved process so that tape is in the proper position, smooth and flat and the ends cut neatly at the panel edge.
J32	Performs minor fabric upholstery repairs.	
J33	Performs minor vinyl seat and dashboard repairs.	
<b>K. Small Engine Repair – Fundamental Skills</b>		
<p><b>The following MLR link to all or some of the tasks in this duty area:</b>                      CPC05, HEA05, HEC01, HEC02, HPEC6, LAD01, LAD03, LAD05, MAC02, MAF01, STJ01, STM02</p>		
K1*	Follows safety procedures for working with small engines..	
K2*	Uses general and special hand tools.	
K3*	Uses precision measuring tools.	
K4	Selects proper grades and types of bolts and nuts.	
K5*	Demonstrates correct torquing and tightening techniques.	
K6*	Uses gaskets and sealants.	
K7	Repairs damaged thread using heli-coil.	Threads are correct size and depth and hold when the bolt is tightened to its specific torque.
K8*	Repairs damaged thread using tap and die set.	Threads are correct size and depth and hold when the bolt is tightened to its specific torque.
K9	Identifies engine assemblies and systems.	
K10	Examines engine parts for damage or wear.	Inspects, measures and records actual size or worn dimension of parts; compares measurements to manufacturer specifications and compiles list of parts needing repair or replacement.
K11	Prepares a list of parts and supplies needed to complete a repair.	
K12	Prepares small engine for storage.	Ensures engine is clean, lubricated as specified, and fuel is drained; protects stored engine from moisture.

**Statewide Standard ∪ *Diversified Occupations/General Trades***

<b>Task</b>		<b>Performance Criteria</b>
K13	Cleans, repairs, paints decks, frames and sheet metal covers/shrouds.	
K14	Services, cleans and sharpens chains.	
K15	Services, cleans and sharpens cutting blades.	
<b>K1. Small Engine Repair – Preventive Maintenance</b>		
<b>The following MLR link to all or some of the tasks in this duty area:</b> CPC05, HEA05, HEC01, HEC02, LAD01, LAD03, LAD05, MAF01, STJ01		
K1.1*	Cleans exterior engine and cooling fins.	Ensures the exterior is free from dust and grease and that the cooling fins and air passages are unobstructed.
K1.2*	Lubricates chassis.	
K1.3*	Services air cleaners.	Ensures the cleaned element allows filtered air to flow to the carburetor.
K1.4*	Changes engine oil.	Drains and disposes of used oil appropriately; fills crankcase to proper level with new oil of viscosity and type recommended by manufacturer.
K1.5	Replaces crankcase oil filter.	Torques filter to manufacturer’s specifications; ensures filter does not leak oil while engine is operating.
K1.6	Services a crankcase breather.	Inspects breather valve and gasket for wear or damage; replaces as necessary and ensures reinstalled breather is free of grease and dirt.
K1.7*	Services governor mechanisms.	Inspects condition of linkage, freedom of movement of linkage and spring tension; repairs and adjusts so that engine speed is regulated according to manufacturer specifications.
<b>K2. Small Engine Repair – Fuel Systems</b>		
<b>The following MLR link to all or some of the tasks in this duty area:</b> CPC05, HPEC3, HPEC6, LAD01, LAD03, LAD05, MAC02, MAF01, STJ01, STL04, STM02		
K2.1*	Services fuel tank and fuel lines.	Clears rust and sediment from fuel lines and tank or replaces if necessary; ensures fuel flows freely through the lines..
K2.2*	Services fuel filter sytems.	Cleans filter or replaces if necessary so that equipment operates according to manufacturer’s specifications.
K2.3*	Services carburetors.	Cleans all parts and inspects for wear and damage, assembles with new gaskets, seals or replacement parts from repair kit according to manufacturer specifications.
K2.4	Services fuel pumps.	Cleans all parts and inspects diaphragm for cracks, damage or stiffness and operating levers, springs, valves and balls for wear or damage; repairs or replaces parts as necessary; reassembles/reinstalls.
<b>K3. Small Engine Repair – Charging Systems</b>		
<b>The following MLR link to all or some of the tasks in this duty area:</b> CPC05, HPEC4, HPEC7, LAD01, LAD03, LAD05, LAH07, MAC02, MAF01, STJ01, STLO3, STM02		
K3.1	Uses electrical troubleshooting techniques.	
K3.2*	Services the battery.	Cleans case, cable clamps and battery posts or replaces if needed and charges to the specified gravity recommended by manufacturer.

**Statewide Standard ∪ *Diversified Occupations/General Trades***

<b>Task</b>		<b>Performance Criteria</b>
K3.3*	Services a manual recoil starter.	Ensures that the engine crankshaft rotates when the rope is pulled and the rope rewinds when released; rope is not worn and unwinds freely without binding; rewind mechanism engages and disengages properly.
K3.4	Services a combination starter-generator system.	Cleans and removes dirt and dust particles; checks for tight cable connections; inspects for worn bearings, thrown solder, evidence of brush wear or binding, and wear, roughness or out of round condition of commutator; replaces parts as necessary.
K3.5*	Services an alternator system.	Checks output and determines that voltage is within specified range so that system provides electrical power and charges the battery according to manufacturer specifications.

**K4. Small Engine Repair – Ignition Systems**

**The following MLR link to all or some of the tasks in this duty area:**

CPC05, HPEC3, HPEC6, LAD01, LAD03, LAD05, MAC02, MAF01, STJ01, STL03, STL04

K4.1*	Services and installs spark plugs.	Selects, gaps, installs and torques according to manufacturer specifications.
K4.2*	Maintains magneto ignition system.	Inspects crankshaft bearing for wear, flywheel for damage, the strength of the magnets and flywheel key for partial shearing. Checks contact points condition, condenser capacitance, leakage and resistance, coil performance and wiring and connections for soundness; replaces parts as necessary, reassembles and adjusts system so that it performs according to manufacturer specifications..
K4.3*	Services a solid state ignition system.	Checks for spark; inspects magnetic strength of flywheel, grounding and connections to ignition switch and armature air gap. Tests coil and solid state module to ensure performance according to manufacturer specifications.
K4.4*	Services a battery ignition system.	Inspects contact point assembly for wear, condenser for capacitance, leakage and resistance, coil, wiring, connections and insulation for damage and tests coil performance; Adjusts contact point setting, engine idle rpm and ignition timing to manufacturer specifications.

**K5. Small Engine Repair – Cooling Systems**

**The following MLR link to all or some of the tasks in this duty area:**

CPC05, HPEC3, HPEC6, LAD01, LAD03, LAD05, MAC02, MAF01, STJ01, STL03, STL04

K5.1*	Tests cooling system operation.	Checks for proper circulation and cooling.
K5.2*	Inspects coolant.	
K5.3*	Services thermostats, fans and radiators.	
K5.4*	Services water pumps, lines and connections	

**K6. Small Engine Overhaul**

**The following MLR link to all or some of the tasks in this duty area:**

CPC05, HPEC3, HPEC6, LAD01, LAD03, LAD05, MAC02, MAF01, STJ01, STL03, STL04

**Statewide Standard ∪ *Diversified Occupations/General Trades***

<b>Task</b>		<b>Performance Criteria</b>
K6.1*	Tests compression.	
K6.2*	Repairs valves and valve seats.	Valves will seat and support compression as specified by the manufacturer.
K6.3*	Repairs pistons, ring, and rod assemblies.	Inspects assemblies for scoring, wear spots, cracks and discoloration; determines if piston, piston pin and piston rod measure within tolerances specified by manufacturer; repairs or replaces and reassembles according to manufacturer specifications..
K6.4*	Repairs or replaces cylinders.	Inspects and measures cylinder for wear and damage; repairs the cylinder by ridge reaming, deglazing or honing according to manufacturer recommendations or replaces block or sleeve if cylinder is damaged or wear exceeds manufacturer maximum specifications.
<b>L. Retail/Point-of-Sale Operations</b>		
<p><b>The following MLR link to all or some of the tasks in this duty area:</b>                      CPA01, CPA04, CPC02, CPC04, HEC02, HEE01, HPEB3, HPEC6, HPEC7, LAA11, LAH03, MAB01, SSEA1, SSEB3, VAA01</p>		
L1*	Practices good customer service techniques.	Provides prompt service; treats customer with courtesy and interest; maintains eye contact while describing products/services realistically and positively.
L2*	Validates deliveries.	Verifies that merchandise received matches purchase order; records discrepancies and communicates to appropriate personnel.
L3*	Tickets merchandise.	Ensures that price on ticket, price list, and register price match; attaches ticket to merchandise according to company policy.
L4*	Stocks/re-stocks merchandise.	Rotates stock; ensures that appropriate amount and variety of stock is displayed according to company policy.
L5*	Arranges items for display.	Places merchandise so that display organizes products and presents them attractively.
L6*	Takes inventory.	Classifies and counts items in stock and records totals according to company policy.
L7*	Identifies and reports shortages and overages.	Notifies appropriate personnel of discrepancies.
L8*	Takes orders.	Repeats order to guest to ensure accuracy; records order accurately.
L9*	Totals orders.	
L10*	Operates a cash register.	Processes transactions according to company procedures; maintains cash register drawer according to organization’s system.
L11*	Makes change.	
L12	Prepares receipts for deposit.	Rolls coins and counts bills accurately; ensures accurate listing on deposit slip of all cash and checks; verifies that total matches items listed.
L13*	Explains business policies to customers.	Describes customer-related policies such as guarantees, approved payment methods, returns, exchanges, or cancellations.
L14*	Answers customer inquiries.	Responds clearly, concisely, and accurately to customer questions; refers customer to other personnel as appropriate.

**Statewide Standard ∪ *Diversified Occupations/General Trades***

<b>Task</b>		<b>Performance Criteria</b>
L15*	Sets up displays.	Places merchandise according to plan so that display presents products attractively.
L16*	Monitors display areas for neatness.	Ensures that display area is free of dirt and dust; replaces damaged or missing parts of display.
L17*	Monitors premises for safety hazards.	Inspects area for potential dangers such as torn carpeting, blocked aisles or exits, and unsteady displays; corrects unsafe situations or reports to appropriate personnel.
L18*	Maintains up-to-date product/service knowledge.	Explains company products/services in terms such as function, quality, and special features.
L19*	Maintains up-to-date knowledge of pricing and inventory.	Displays awareness of current prices, including sale prices, and whether items are in stock on order.
L20*	Maintains organized selling area.	Reshelves and tidies selling area; ensures that area is free of litter, discarded merchandise, dirt, and dust.
L21*	Provides phone service.	Responds to caller with concise and courteous product/service prices and information; balances response to phone inquiries with prompt service to walk-in customers.

**M. Hospitality/Housekeeping**

**The following MLR link to all or some of the tasks in this duty area:**  
CPA01, CPC02, CPC05, HEC02, HPEB3, HPEC6

M1	Follows all safety guidelines and procedures in performance of tasks.	Uses appropriate personal protective equipment; uses cleaning chemicals according to directions; Operates equipment according to manufacturer’s recommendations and instructions.
M2	Reports maintenance and equipment needs, security, and lost-and-found items	Reports issues to supervisor promptly; completes required paperwork accurately and legibly.
M3	Secures work assignment.	Obtains daily room-assignment sheet; reviews room status.
M4	Prioritizes work.	Organizes work so that make-ups and check-outs are completed as scheduled.
M5	Stocks/restocks carts.	Furnishes linen cart with caddie, amenities, supplies, linens, and equipment needed to clean assigned rooms; returns to linen room as needed to restock items.
M6	Uses knocking procedure.	Follows company policy to notify guest of staff presence; ensures guest privacy and convenience.
M7	Positions cart.	Places cart in front of door to prevent unauthorized entrance while cleaning.
M8	Inspects guest rooms.	Checks condition of room for damage, items needing repair or replacement; checks that HVAC, light-bulbs, fans and window shades are in working order
M9	Checks security.	Ensures door and window locks function properly.
M10	Sets temperature.	Ensures that room temperature is set at appropriate level according to company policy.
M11	Disposes of trash and used items.	Removes all trays and trash; checks between cushions and under beds; removes dirty towels; discards used soap and amenities.
M12	Makes up beds.	Places fresh linens on beds and ensures that they are neat and smooth; disposes of soiled linens according to company policy.

**Statewide Standard U *Diversified Occupations/General Trades***

<b>Task</b>		<b>Performance Criteria</b>
M13	Dusts rooms.	Ensures that items such as furniture, lamp bases, shades, vents, and pictures are free of dust and dirt.
M14	Cleans ceilings, overhead lights, blinds and vents.	
M15	Cleans bathroom fixtures..	Cleans basin, shower, tub, counter areas and walls with cleaning solution; wipes and polishes mirrors and hardware; checks drains for hair or debris; uses bowl brush and cleaning solution to ensure all areas of toilet, including under bowl lip, are scrubbed and sanitized.
M16	Restocks bathrooms.	Ensures that terry, tissues, glasses, soap, and amenities are available in prescribed quantity..
M17	Vacuums rooms.	Ensures that rugs and floor are free of dirt, grime; vacuums from far end of room toward door; vacuums all closets and under furniture and returns furniture to proper position;.
M18	Returns carts.	Takes cart back to designated area and restocks or empties cart according to company policy.
M19	Completes property reports.	Ensures that room-attendant property reports are completed, including information on maintenance, inventory, and key replacements.
M20	Signs out.	Complies with company sign-out policy; communicates with supervisor for special instructions before signing out; follows tip-out procedures and tip declaration according to company policy and state law.

**N. Laundry Worker**

**The following MLR link to all or some of the tasks in this duty area:**

CPC02, CPC05, HEC01, HEC02, H[EB3, HPEC3, HPEC6, MAC02, MAF01, STJ01, STL03

N1	Performs tasks according to safety precautions and procedures associated with laundry operations..	
N2	Receives laundry.	Records customer identifying information and instructions for articles to be laundered; fills in account details for commercial customers; ensures articles are identified with the customer’s number or mark and any defects are noted.
N3	Checks that bundles of laundry contain articles listed	Checks laundry in and out against list; records any discrepancies.
N4	Sorts laundry.	Places articles into piles according to specifications such as by color, fabric type, or by route/account number or code.
N5	Follows pre-laundering procedures.	Inspects items for spots, tears or other defects; uses techniques for stain removal, bleach treatment and treatment for different types of textiles.
N6	Weighs laundry loads.	Weighs soiled laundry to nearest pound.
N7	Calculates amount of cleaning solution needed.	Follows standard instructions to mix soaps, detergents, bleach and other compounds in accordance with amount, type and condition of laundry to be treated.
N8	Operates washing machine.	Follows standard instructions to select the correct size of machine for the load; ensures machine is evenly packed and balanced; sets dials to the correct temperature and time requirements.

**Statewide Standard ∪ *Diversified Occupations/General Trades***

<b>Task</b>		<b>Performance Criteria</b>
N9	Monitors computerized washing and drying systems,	
N10	Operates dryer.	Follows standard instructions to select the correct size of machine for the load; sets dials to the correct temperature and time requirements.
N11	Operates folders.	Follows established production and finishing standards.
N12	Operates presses.	Follows established production and finishing standards.
N13	Operates ironers.	Follows established production and finishing standards.
N14	Inspects laundered articles.	Ensures the articles meet finishing standards and without defects such as newly missing buttons.
N15	Reports damaged items.	
N16	Calculates price for laundry load.	
N17	Packs laundered orders.	Folds or bags laundry according to company policy.
N18	Stores supplies and equipment.	
N19	Cleans assigned work area.	

**O. Building Maintenance**

**The following MLR link to all or some of the tasks in this duty area:**

CPA04, CPC02, CPC05, HEC01, HEC02, HPEB3, HPEC6, HPEC7, LAD05, MAC02, MAF01, SSEA1, STJ01, STL03

O1*	Stores materials and equipment.	
O2*	Determines trueness using plumb lines and levels.	
O3*	Demonstrates safe and proper use and storage of hand tools.	
O4*	Demonstrates safe and proper use and storage of power tools.	
O5*	Selects appropriate tool(s) for a task.	
O6*	Selects correct anchors, fasteners and adhesives for a specific application...	
O7*	Identifies types/grades of abrasive materials.	
O8*	Interprets symbols and abbreviations used in plans..	
O9*	Develops materials list.	
O10*	Estimates costs of materials.	
O11*	Replaces/installs exterior doors/hardware.	Restores to original working condition, replacing or remounting screens, glass, hinges, and door closers.
O12*	Caulks doors and windows.	Fills to the level of the surrounding surface without "spillover"; ensures that no air enters or leaves the building through the filled crack.
O13*	Repairs gutters.	Performs repairs as necessary ; reinstalls to correctly carry water as designed without leakage.
O14*	Replaces sidings.	Removes damaged siding such as clapboard, shingle, and vinyl; replaces with new material; paints or stains wood surfaces to blend with the existing surface.
O15*	Repairs storm doors.	
O16*	Repairs stairs.	Replaces damaged wood; ensures that tread is secure and stairs are safe.
O17*	Repairs railings.	Secures railings to walls/posts; ensures that railings are smooth, free of splinters, and at the height required by OSHA regulations.

**Statewide Standard ∪ *Diversified Occupations/General Trades***

<b>Task</b>		<b>Performance Criteria</b>
O18*	Repairs floor/wall ceramic tiles.	Removes broken tile and prepares surface; installs and grouts new tile to look like original.
O19*	Repairs drywall.	Nails/screws drywall to the wall or ceiling; tapes joints; ensures that finished surface is smooth and that nail/screw heads and tape are not visible.
O20*	Replaces acoustical tile.	Nails, clips, or sticks replacement tiles in place with proper adhesive; ensures that work is true to plane and line; ensures that special fittings around pipes, sleeves, and fixtures are snug and that glued tiles adhere tightly to the backing material.
O21	Cleans/maintains floors.	Operates buffing and scrubbing machines; uses appropriate product and procedures.
O22	Cleans carpets and upholstery.	Operates hot water extraction equipment; uses appropriate product and procedures.

**P. Carpentry & Woodworking – Fundamental Skills**

**The following MLR link to all or some of the tasks in this duty area:**

CPA04, CPC02, CPC05, HEC01, HEC02, HPEB3, HPEC6, HPEC7, LAD05, MAC02, MAF01, SSEA1, STJ01, STL03

P1*	Demonstrates knowledge of the proper storage and care of building materials.	
P2*	Identifies common types/grades of wood.	
P3*	Squares stock.	
P4*	Measures materials.	Uses squares, measuring tapes or rules to measure to within 1/8” accuracy.
P5*	Performs math functions using fractions.	
P6*	Calculates linear, square and board feet.	
P7*	Determines trueness using plumb lines and levels.	
P8*	Demonstrates safe and proper use and storage of hand tools.	
P9*	Demonstrates safe and proper use and storage of power tools.	
P10*	Selects appropriate tool(s) for a task.	
P11*	Selects correct anchors, fasteners and adhesives for a specific application...	
P12*	Uses clamps.	
P13*	Identifies types/grades of abrasive materials.	
P14	Interprets symbols and abbreviations used in construction drawings.	
P15	Develops materials list.	
P16	Estimates costs of materials.	
P17*	Operates portable power tools.	
P18*	Operates stationary power tools.	

**P1. Carpentry – Framing**

**The following MLR link to all or some of the tasks in this duty area:**

CPC05, HEC01, HEC02, HPEB3, HPEC6, HPEC7, LAD05, MAC02, MAF01, STJ01, STL03

P1.1*	Practices safe work procedures with ladders and scaffolds.	
P1.2*	Frames wall sections.	

**Statewide Standard ∪ *Diversified Occupations/General Trades***

<b>Task</b>		<b>Performance Criteria</b>
P1.3*	Frames door/window openings.	
P1.4*	Frames floor openings.	
P1.5*	Installs exterior wall sheathing.	
P1.6*	Cuts/installs rafters.	
P1.7*	Installs roof deck.	
<b>P2. Carpentry – Exterior Finishing</b>		
<p><b>The following MLR link to all or some of the tasks in this duty area:</b>                      CPC05, HEC01, HEC02, HPEB3, HPEC6, HPEC7, LAD05, MAC02, MAF01, STJ01, STL03</p>		
P2.1	Installs shingles.	
P2.2*	Installs roof ventilation/flashing	
P2.3*	Installs air/ vapor barrier.	
P2.4*	Installs vinyl siding.	
P2.5*	Installs vinyl trim.	
P2.6*	Installs exterior doors.	
<b>P3. Carpentry – Interior Finishing</b>		
<p><b>The following MLR link to all or some of the tasks in this duty area:</b>                      CPC05, HEC01, HEC02, HPEB3, HPEC6, HPEC7, LAD05, MAC02, MAF01, STJ01, STL03</p>		
P3.1*	Installs batt insulation.	
P3.2*	Installs drywall.	
P3.3*	Performs sanding.	
P3.4*	Tapes and finishes joints.	
P3.5*	Installs baseboards.	
P3.6*	Prepares surface for finish.	
P3.7*	Prepares and applies finishing materials.	
P3.8*	Installs builder hardware.	
P3.9*	Installs prefabricated cabinets.	
<b>P4. Woodworking – Constructing &amp; Fastening Joints</b>		
<p><b>The following MLR link to all or some of the tasks in this duty area:</b>                      CPC05, HEC01, HEC02, HPEC6, HPEC7, LAD05, MAC02, MAF01, STJ01, STL03</p>		
P4.1*	Fastens stock with wood glue and clamps	
P4.2*	Fastens stock and joints with nails, screws, bolts and staples.	
P4.3*	Fills and finishes nail and screw holes.	
P4.4*	Installs wood plugs.	
P4.5*	Installs dowels in joints.	Fastens and glues doweled joints and segments.
P4.6	Constructs dado joints.	
P4.7	Constructs a mortise-and-tenon joint.	
P4.8*	Constructs butt joints.	
P4.9*	Constructs miter joints.	
<b>P5. Woodworking – Finishing Surfaces</b>		
<p><b>The following MLR link to all or some of the tasks in this duty area:</b>                      CPC05, HEC01, HEC02, HPEC6, HPEC7, LAD05, MAC02, MAF01, STJ01, STL03, VAA01, VAA04</p>		
P5.1*	Prepares wood surfaces for finishing.	Removes excess glue; stains, bleaches, fills and seals wood.

**Statewide Standard ∪ *Diversified Occupations/General Trades***

<b>Task</b>		<b>Performance Criteria</b>
P5.2*	Sands wood surfaces.	
P5.3*	Identifies stains and application procedures.	
P5.4*	Applies clear and pigmented finishes to wood surfaces.	
<b>Q. General Trades – Electrical Duties</b>		
<p><b>The following MLR link to all or some of the tasks in this duty area:</b>                      CPC05, HEC01, HEC02, HPEB3, HPEC6, HPEC7, LAD05, MAC02, MAF01, STJ01, STL03</p>		
Q1*	Follows electrical safety procedures.	Complies with national, state, and local electrical codes; follows lockout/tagout procedures; identifies locations and use of power-kill switches.
Q2*	Reviews blueprints, schematics, and specifications.	Locates, interprets and uses applicable information appropriately.
Q3*	Follows work instructions.	Secures and comprehends all oral, written and electronic information necessary for completing a task or project.
Q4*	Identifies electrical equipment requirements.	Matches required voltage, amperage and phasing to manufacturer and NEC (National Electrical Code) specifications.
Q5*	Identifies blown fuses and faulty breakers.	Removes and replaces; restores electrical circuit.
Q6*	Replaces electrical cords and plugs.	Uses proper connections and follows all applicable electrical codes.
Q7*	Replaces batteries.	Removes old battery; cleans terminals/connectors; installs new battery; tests connections and operation.
Q8*	Services sockets and switches.	Removes old socket/switch; makes proper connections on new socket/switch; re-installs and tests operation.
Q9*	Repairs fluorescent lighting.	Replaces ballasts, sockets, or starters as necessary; ensures that lights operate without loud hum or flickering.
Q10*	Mounts electrical boxes, panels and conduit.	Attaches electrical boxes, panels and conduit securely in the locations identified and according to all applicable codes.
Q11	Installs conduit.	Measures, cuts, and installs properly; verifies that conduit is securely attached, does not sag, and that components are in the specified locations.
Q12	Identifies and pulls conductors.	Labels wires; uses wire soap and appropriate tools when necessary; pulls wires without damage to conductors or insulation.
Q13*	Wires circuits of 120V and 240V according to code.	
Q14*	Replaces/adjusts electrical motor belts.	
Q15	Services pilot systems.	
Q16	Cleans condensing unit.	
Q17	Cleans an evaporator coil.	
Q18	Replaces thermostats/controls.	
Q19	Replaces furnace or cooling filter.	
Q20	Inspects/cleans heat exchangers.	
<b>Q1. General Trades – Plumbing Duties</b>		
<p><b>The following MLR link to all or some of the tasks in this duty area:</b>                      CPC05, HEC01, HEC02, HPEB3, HPEC6, HPEC7, LAD05, MAC02, MAF01, STJ01, STL03</p>		
Q1.1*	Identifies plumbing fixtures depicted on a blueprint.	

**Statewide Standard ∪ *Diversified Occupations/General Trades***

<b>Task</b>		<b>Performance Criteria</b>
Q1.2	Identifies types of main shutoff valves.	
Q1.3*	Performs water-pressure test.	
Q1.4*	Insulates water lines.	
Q1.5*	Cuts, cleans and glues plastic pipe.	
Q1.6*	Cuts, cleans and solders copper pipe.	
Q1.7	Cuts and threads pipe.	
Q1.8	Forms a flare.	
Q1.9	Assembles a compression fitting.	
Q1.10*	Locates and repairs leaks in pipes and lines.	
Q1.11*	Cleans traps, drains and vents.	
Q1.12*	Opens clogged drain.	
Q1.13	Identifies backflow prevention.	
Q1.14*	Drains water from plumbing.	
Q1.15*	Services water heater.	
Q1.16*	Repairs/replaces plumbing fixtures.	
Q1.17*	Repairs/replaces/installs plumbing accessories.	
Q1.18*	Replaces faucet washers.	
Q1.19*	Replaces pressure control switches on water pumps.	

**Q2. General Trades – Masonry Duties**

**The following MLR link to all or some of the tasks in this duty area:**

CPC05, HEC01, HEC02, HPEB3, HPEC6, HPEC7, LAD05, MAC02, MAF01, STJ01, STL03

Q2.1*	Identifies types of masonry cements.	Selects masonry cement appropriate for a particular job/application.
Q2.2*	Estimates amount of material needed for a job.	
Q2.3*	Sets forms.	
Q2.4*	Mixes concrete.	Concrete mix is smooth, uniform and of consistency that can be poured and worked properly.
Q2.5*	Pours and finishes concrete.	
Q2.6*	Mixes mortar.	
Q2.7*	Spreads mortar.	
Q2.8*	Cut hole in masonry wall.	Uses drill to make hole in the correct location; Hole goes through wall without causing surrounding masonry to crack or break.
Q2.9*	Cuts bricks and blocks accurately.	
Q2.10*	Fills cracks in masonry surface.	Cracks are filled level with the surface with no chipped or sunken places.
Q2.11*	Patches/repairs concrete structures.	
Q2.12*	Removes, repairs, and/or replaces blocks.	
Q2.13*	Lays a stretcher course.	
Q2.14*	Attaches line.	
Q2.15*	Applies head joints.	
Q2.16*	Builds a rack-back lead.	
Q2.17*	Builds a straight lead.	
Q2.18*	Builds corners.	
Q2.19*	Builds rectangle brick columns.	
Q2.20*	Identifies types and sizes of brick.	
Q2.21*	Removes, repairs, and/or replaces bricks.	
Q2.22	Mixes plaster.	Mix is smooth and evenly mixed with no dry spots and the consistency for optimal application.
Q2.23	Removes loose plaster.	

**Statewide Standard ∪ *Diversified Occupations/General Trades***

<b>Task</b>		<b>Performance Criteria</b>
Q2.24	Repairs cracks and holes in plaster surface.	
Q2.25	Stores bagged cement and plaster.	
<b>Q3. General Trades – Welding Operations</b>		
<b>The following MLR link to all or some of the tasks in this duty area:</b> CPC05, HEA01, HEC01, HEC02, HEF01, HPEC3, HPEC4, HPEC6, LAD05, LAH01, MAC02, MAF01, STJ01, STL03		
Q3.1*	Prepares surfaces.	Removes all foreign matter, such as rust, so that weld holds securely.
Q3.2*	Selects welding method.	Chooses appropriate method such as oxygen/acetylene, MIG (metal arc inert gas), TIG (tungsten inert gas), or air-arc for specific welding applications.
Q3.3*	Selects rods.	Chooses appropriate rod, such as brazing or steel, for particular welding application.
Q3.4*	Selects current.	Uses polarity switch to generate positive or negative current; chooses appropriate electrode for welding application.
Q3.5*	Makes welds.	Ensures that weld is consistent in order to maximize weld strength.
Q3.6	Solders with propane torch, soldering gun or soldering iron.	
<b>Q4. General Trades – Cutting Operations</b>		
<b>The following MLR link to all or some of the tasks in this duty area:</b> CPC05, HEA01, HEC01, HEC02, HEF01, HPEC3, HPEC4, HPEC6, LAD05, LAH01, MAC02, MAF01, STJ01, STL03		
Q4.1*	Prepares surfaces.	Removes foreign matter to ensure that surface is clean and can be cut precisely.
Q4.2*	Sets up regulators and tanks.	Sets tank and regulator according to type and thickness of material to be cut.
Q4.3*	Selects cutting tips.	Chooses tip by size and shape to produce most effective and efficient cut.
Q4.4*	Adjusts flames.	Ensures that flame size, shape, and temperature are appropriate for cutting application.
Q4.5*	Makes cuts.	Wears eye, arm, and hand protection according to degree of slag expected at cutting surface.
Q4.6*	Conducts shut-down procedures.	Shuts down valves on tank; allows cool-down before storing cutting tools.
<b>Q5. General Trades – Machine Tool</b>		
<b>The following MLR link to all or some of the tasks in this duty area:</b> CPA01, CPC05, LAA06, LAA07, LAD03, LAD05, LAH01, LAH02, MAC02, MAF01, STJ01, STL03		
Q5.1*	Follows all machine and work center safety procedures.	Adheres to machine/work center-specific safety precautions and procedures.
Q5.2	Uses blueprints and specifications.	For a given job, locates, interprets and uses applicable blueprints, sketches and specifications appropriately.
Q5.3	Plans sequence of operations.	For a given job, analyzes relevant data, determines desired outcomes and develops a feasible planned sequence of operations.
Q5.4	Cares for precision instruments.	Precision instruments must be free of rust and grease and stored in designated case/cabinet.

**Statewide Standard  $\cup$  Diversified Occupations/General Trades**

<b>Task</b>		<b>Performance Criteria</b>
Q5.5	Measures work with dial calipers.	Workpiece must be within a tolerance of +/- 0.001".
Q5.6	Measures work with outside micrometer.	Workpiece must be within +/- 0.001" tolerance when inside diameter of the workpiece is measured.
Q5.7	Measures work with 6" pocket rule.	Measurement must be within a tolerance of +/- 1/64".
Q5.8	Measures work with tape measure.	The measurement must be within a tolerance of +/- 1/64".
Q5.9	Cares for hand tools.	Hand tools must meet job specifications or manufacturer's standards.
Q5.10	Drills holes with portable drill.	The drilled hole must be within a tolerance of +/- 1/64" and/or meet blueprint specifications.
Q5.11	Polish metal.	Workpiece polished to blueprint specifications.
Q5.12	Cleans and lubricates drill press.	The drill press must be cleaned and lubricated according to service manual specifications.
Q5.13	Drills hole to size.	Hole must be drilled in workpiece (on the drill press) to blueprint specifications to a tolerance of +/- 0.005".
Q5.14	Drills workpiece with drill jigs.	Drilled workpiece must be within a tolerance of +/- 0.005" on decimal dimension, +/- 1/64" on fraction dimensions and/or meet blueprint specifications.
Q5.15	Cleans and lubricates power saws.	The power saws must be cleaned and lubricated according to manufacturer's specifications and band guide must be adjusted to allow clearance of 0.001" to 0.002".
Q5.16	Cuts material to length with power hacksaw.	Workpiece must be cut within a tolerance of +/- 1/32".
Q5.17	Replaces saw blades.	The replaced saw blades must be aligned and adjusted to operator's manual specifications.
Q5.18	Selects and sets speeds and feeds for sawing operations.	The speed and feed for sawing operation must be selected and set as specified in machinist's handbook for workpiece.
Q5.19	Cleans and lubricates lathes.	Lathe must be cleaned and lubricated according to manufacturer's specifications.
Q5.20	Drills holes with lathe.	Drilled hole must be within blueprint specifications with a tolerance of +/- 0.005" for drills up to 1" diameter.
Q5.21	Faces workpiece.	Workpiece to be within tolerance of +/- 1/64" of the scribed line.
Q5.22	Performs lathe filing.	Diameter of workpiece must be within blueprint specifications and filed to a tolerance of +/- 0.001".
Q5.23	Polishes workpiece	The polished diameter to be within +/- 0.0005" tolerance of the blueprint specifications.
Q5.24	Sets lathe speed and finish cut workpiece.	Workpiece must meet blueprint specifications and held to a tolerance of (+0.002"/(-0.000")) for work under 4" diameter.
Q5.25	Sets lathe speed and rough cut workpiece.	Workpiece must meet blueprint specifications and be within a tolerance of +/- 0.015" to +/- 0.030".
Q5.26	Turns workpiece between centers on the lathe.	Workpiece must be within tolerance of +/- 0.005" on decimal dimensions and +/- 1/64" on fraction dimensions and/or meet blueprint specifications.
Q5.27	Forms mill workpiece.	Workpiece must meet blueprint specifications and fit radius gauge or template.
Q5.28	Mills work with end mill.	Workpiece must meet blueprint specifications and be within a tolerance of +/- 0.005" on decimal dimensions and +/- 1/64" on fractions dimensions.
Q5.29	Squares workpiece using table vise.	Workpiece must meet blueprint specifications, be square, and to a tolerance of +/- 0.005" on decimal dimensions and +/- 1/64" on fraction dimensions.

**Statewide Standard ∪ *Diversified Occupations/General Trades***

<b>Task</b>		<b>Performance Criteria</b>
Q5.30	Arc welds workpiece in flat position.	Workpieces must be welded to blueprint specifications.
Q5.31	Cuts work with cutting torch.	Workpiece must meet blueprint specifications and meet a tolerance of +/- 1/16".

## Appendix A : Bibliography

- Commission on Maine's Common Core of Learning. *Maine's Common Core of Learning: An Investment in Maine's Future*. Augusta, ME: Maine Department of Education, 1990.
- Dictionary of Occupational Titles – O\*NET/Occupational Information Network* (online version of DOT). US Department of Labor, Employment and Training Administration (ETA). 12/21/98  
<<http://www.onetcenter.org>>
- Illinois Occupational Skill Standards Credentialing Council. *Floristry Cluster*. January 1997
- Maine Department of Education. *State of Maine Learning Results*. Augusta, ME: MDOE, 1997.
- Maine Department of Education, Workforce Education Team. *Statewide Technology Standard: Horticulture*. South Portland, ME: Center for Career Development, 2001
- Maine Technical College System. *Skills for the 21st Century*. Augusta, ME: MTCS, 1994.
- Maine Association of Vocational Education Administrators. Maine Learning Results/Curriculum Integration Project: *Personal Learning Plan – Career Preparation for High School Students*. South Portland, ME: Center for Career Development, 1999
- Michigan Center for Career & Technical Education, Task List Database: *Automotive Detailing and Reconditioning; Baker's Helper; Basic Cabinet Making and Millwork; Building & Home Maintenance Services; Carpentry/Millcabinet; Clerk, Self-Service Store; Diversified Occupations; Essentials of Commercial Foods; Food Preparation and Service Worker; Small Engine Technician*. 4/3/01  
<<http://www.mccte.educ.msu.edu/cs/tasklist/>>
- Missouri State University Task List. *Building Maintenance; Cabinetmaking*. 1/26/01  
<<http://tiger.coe.missouri.edu/~vama/TL/>>
- Morgan, Robert L., and Hunt, E. Stephen. *Classification of Instructional Programs 2000*. Washington, DC: National Center for Educational Statistics. —Public Comment Draft.
- National Center for Construction Education and Research (NCCER). *Competencies/Objectives – Core Curriculum and Carpentry*. Gainesville, FL: NCCER, 1999
- Norton, Robert E. *DACUM Handbook*. 2<sup>nd</sup> ed. Columbus, OH: Ohio State University, Center on Education for Employment, 1997.
- Pelavin Associates for the Secretary's Commission on Achieving Necessary Skills. *SCANS in the Schools*. Washington, DC: US Department of Labor, 1992.
- Research & Curriculum Division. *Business Administration: Skill Standard for Maine Career Advantage Internship*. South Portland, ME: Center for Career Development, 1999
- Research & Curriculum Division. *Culinary Arts Standard for Maine Career Advantage Internship*. South Portland, ME: Center for Career Development, 1996

Research & Curriculum Division. *Hospitality: Skill Standard for Maine Career Advantage Internship*. South Portland, ME: Center for Career Development, 1996

Research & Curriculum Division. *Machine Tool Technology: Skill Standard for Maine Career Advantage Internship*. South Portland, ME: Center for Career Development, 1998

University of Missouri, *Auto Detailing Curriculum Guide*. Columbia, MO: Instructional Materials Laboratory, 1996

Virginia Department of Education. Office of Career and Technical Education Services. Essential Competencies Lists: *Building Trades I, II, III; Industrial Cooperative Training*. April 2001  
<<http://www.pen.k12.va.us/VDOE/Instruction/CTE/>>

Vocational-Technical Education Consortium of States (V-TECS). *A V-TECS Curriculum Guide for Building Repairer*. Decatur, GA: Southern Association of Colleges and Schools, 1997

Vocational-Technical Education Consortium of States (V-TECS). *A V-TECS Curriculum Guide for Carpenter*. Decatur, GA: Southern Association of Colleges and Schools, 1997

## Appendix B : Acknowledgements

U

U

### Curriculum Integration Project: Horticulture Workgroup

Paddy Clark, *Facilitator* – Research & Curriculum Division – Center for Career Development

#### Secondary Vocational/Technical Program Instructors

Katherine Powers  
Bath Regional Vocational Center  
Bath

Beth Morang  
Capital Area Technical Center  
Augusta

Mike Brunelle  
Capital Area Technical Center  
Augusta

Pam Reed  
Capital Area Technical Center  
Augusta

Mike Nicholas  
Capital Area Technical Center  
Augusta

Rene Albison  
Capital Area Technical Center  
Augusta

Harold Ellis  
Capital Area Technical Center  
Augusta

Sheila Harvell  
Kenneth Foster Technology Center  
Farmington

Mario Pascarelli  
Lewiston Regional Technical Center  
Lewiston

Walter Kreppin  
Maine Applied Technology Region #10  
Brunswick

Bonnie Tracy  
Mid-Maine Technical Center  
Waterville

Vincent Laraia  
Caribou Regional Technical Center  
Caribou

Jeannette Vanidestine  
Lake Region Vocational Center  
Naples

Cindy Irving  
Lake Region Vocational Center  
Naples

Robert Kinens  
Region #02 Houlton  
Houlton

Clare Stinson  
Mid-Coast School of Technology  
Rockland

Frank Stroutamyer  
Region #11 Oxford Hills  
Norway

David Buck  
School of Applied Tech at Region 9  
Rumford

Catherine Dunn  
Portland Arts and Technology High School  
Portland

Philip Divinsky  
Portland Arts and Technology High School  
Portland

Bill Coverstone  
Portland Arts and Technology High School  
Portland

Jane Orciani  
Sanford Regional Vocational Center  
Sanford

Larry Barrows  
Region #07 Waldo County  
Belfast

Doug Raymond  
Region #07 Waldo County  
Belfast

**Maine Association of Vocational Education**

**Administrators (MAVEA) Liaison**

Deborah Guimont, Director  
School of Applied Tech at Region 9  
Rumford

**Maine Technical College Faculty Representatives**

To be Determined

**Secondary Academic Programs and Industry**

**Advisors**

To be Determined

**This standard developed by—**



**Research & Curriculum Division  
Center for Career Development**  
*Part of the Maine Technical College System*

Southern Maine Technical College  
2 Fort Road v South Portland, ME 04106  
Tel: 207-767-5210 Fax: 207-767-2542

*The Maine Technical College System does not discriminate and complies with applicable laws prohibiting discrimination on the grounds of race, color, religion, sex, national origin or citizenship status, age, disability, or veteran's status in employment, education, and all other areas of the System. The System provides reasonable accommodation to qualified individuals with disabilities upon request.*

*This document is available from—*

**Curriculum Resource Center of Maine (CRCOM)**

200 Hogan Road

Bangor, Maine 04401

Voice: (207) 942-1311 Fax: (207) 942-1391

It is also available online and may be downloaded  
at [www.utc.utc4.k12.me.us/crcom/](http://www.utc.utc4.k12.me.us/crcom/)