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ABSTRACT

The Skills Commission for the 21st Century was established by the Maine Technical College System Board of Trustees to determine the critical complementary skills necessary for success in the workplace of the 1990s. This report presents the Commission's findings based on input from employers and other key groups in the state. Following introductory materials describing the Commission's charge and providing a list of members, part 1 details basic skills providing a foundation for all other skills, including academic and communication skills related to reading, writing, mathematics and computation, listening, and speaking; thinking skills related to reasoning, problem solving, decision making, and creative thinking; and personal qualities related to responsibility, self-esteem, sociability, self-management, ethics, flexibility, self-control, and a commitment to learn. Part 2 describes competency skills related to the ability to allocate time, money, material and facility resources, and human resources; interpersonal relations, such as participating as a member of a team, teaching others new skills, serving others, exercising leadership, negotiating, and working with diversity; acquiring and evaluating, organizing and maintaining, interpreting and communicating, and using computers to process information; understanding, monitoring and correcting, and designing systems; and selecting and applying technology. (Contains 16 resources.) (KP)

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ED 386 233

A REPORT FOR THE
MAINE TECHNICAL COLLEGE SYSTEM



SKILLS FOR THE



21ST CENTURY



by the Skills Commission for the 21st Century

JUNE 1994

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JL 950 423

June 1994

James Donovan, Chair
Board of Trustees
Maine Technical College System
323 State Street
Augusta, Maine 04330

Dear Chair Donovan and members of the Maine Technical College System Board of Trustees:

It is with great pleasure that we submit to you the report of the Skills Commission for the 21st Century.

The Commission was given the charge by the Board of Trustees of producing a report which identifies and defines those skills believed by the Commission to best represent the critical complementary skills necessary for success in the workplace of the 1990s. The 14-member Commission, which had input from a 35-member Select Advisory Committee, believes strongly that our students must be prepared for lifelong learning in an ever-changing world, if they are to be responsible citizens as well as productive employees. We believe that the key skills we've identified contribute to both of those goals.

The Commission began meeting in January 1994 with the goal of producing a report for the trustees which would:

- solicit input from key groups regarding what they consider to be the essential complementary skills
- specifically identify and define those skills
- recommend the specific skills that ought to be considered for integration or expansion into technical college curricula

This report is intended to be a beginning, and as such we hope it will be a document that will be shaped and modified by the trustees and technical college community as the work place—and the world economy—continue to change.

Maine business, labor and industry leaders have identified the skills required in a global economy. The goal of this document is to serve as a blueprint to guide the development of curricula—and validate current curricula—of the technical colleges in their unending commitment to ensuring that their graduates achieve the skills necessary for successful careers and fulfilling lives. In addition, it is the hope of the Commission that this report will influence the various other education providers in Maine, including our K-12 system, our universities and private colleges, and others who participate in the education of our citizens.

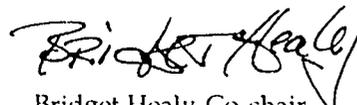
The Commission would like to give special thanks to Rollin Ives, who provided invaluable support and consultation throughout every step of the process.

On behalf of those who participated in the development of this document, we proudly submit the report of the Skills Commission for the 21st Century.

Sincerely,



Kevin Gildart, Co-chair
Assistant to the President
Bath Iron Works Corporation



Bridget Healy, Co-chair
Trustee
Maine Technical College System

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Parker Hannifin Corp.
Portland

Commission support and consultation provided by Rollin Ives, human services and education consultant.

Select Advisory Committee

The Select Advisory Committee was established by the Skills Commission to provide advice and subject matter input. Members of this committee have had the opportunity to review drafts of the Commission's report and have provided invaluable input throughout its development. The committee includes 35 members from business and industry, labor, the technical colleges and other educational institutions.

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Preface

In submitting its final report to the Trustees, the Commission felt strongly regarding a number of key points it believes must be continually considered if the report is to have its fullest possible impact. They are:

1. This document highlights the skills identified by leading Maine business and labor leaders as being illustrative of the skills they want their workers to possess.

2. The complementary skills which are identified and defined should not be seen as solely important and applicable to the workplace. These are critical *life skills* and as such include and go far beyond the workplace.

"...every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning and productive employment in our modern economy."

— (GOALS - THE NATIONAL EDUCATION GOALS - AMERICA 2000)

3. The role of the Maine Technical College System should be to help students achieve defined proficiency in those identified skills.

WHY THE COMMISSION WAS FORMED

Probably no issue is more important for the common welfare of Maine and this country than ensuring a well-educated, world class workforce capable of competing successfully in both the national and international arenas.

Ensuring this competitive workforce is made more challenging since recent studies of high school graduates have found that

"more than half our young people leave school without the knowledge or foundation required to find or hold a good job. These young people will pay a very high price. They face the bleak prospects of dead-end work interrupted only by periods of unemployment...Schools and workers must work smarter. Unless they do, neither our schools, our students, nor our businesses can prosper."

— (SCANS Report, Executive Summary).

In June 1993, following discussions and meetings with private sector leaders, the Maine Technical College System (MTCS) Board of Trustees discussed the importance of all graduates of the system having not only excellent academic and technical skills, but also the necessary

4. A critical component not addressed by this report is the level of proficiency commensurate with the degree awarded. The Commission recognizes that the various proficiency levels will necessarily span levels of sophistication and competence (e.g., "preparatory" to "advanced" and "specialist"). This will need to be determined through curriculum analysis, with appropriate outcome measures.

5. This document also identifies skills that will need to be introduced and incorporated well before matriculation in a Technical College if a student is to achieve proficiency.

6. This document also identifies the skills which will be developed, reinforced and enhanced through further education and workplace experience following graduation from a Technical College.

7. The MTCS should develop a specific implementation strategy for the report involving administrators, faculty and Program Advisory Committees in the development of that strategy.

complementary workplace skills such as problem solving, listening, negotiating, and knowing how to learn. They agreed that these essential skills are necessary to help ensure that their graduates thrive in today's and tomorrow's workplaces.

The Trustees determined that an important need for the current curriculum of the MTCS was both the identification and specific definition of these skills. They believed that the identification, definition, and integration of those skills would enhance the competitiveness of their two most important customers — their students and the business community — as well as the quality of society in general.

In addition to the traditional academic and technical skills, complementary skills are those such as critical thinking, communications, interpersonal interactions as well as personal qualities and other categories which are essential for the world class worker. These are skills which must not only be identified but also be taught and understood in an integrated fashion with the traditional technical and academic competencies.

While different from an individual's academic and technical knowledge, the complementary skills are believed to be critically important.

Preface

"...these competencies are applicable from the shop floor to the executive suite. In the broadest sense, the competencies represent the attributes that today's high performance employer seeks in tomorrow's employee."

-- (SCANS Report, Executive Summary)

Recent widely cited studies highlight the critical need for expanding and extending the scope of work-related education and training. These same studies have called for a partnership between education, business, labor and government working toward the goal of having a better educated workforce, a strong and more competitive economy, and an enlightened citizenry.

The Trustees were determined that the Maine Technical College System's graduates would be part of the vanguard of a new worker, one possessing a broad set of both complementary and academic/technical skills that will facilitate quality, versatility and learning on the job.

The Trustees also recognized that today's and tomorrow's workplace will increasingly require broader and more sophisticated skills by workers. While these skills are no guarantee of future success, their absence absolutely ensures lack of opportunities and choices.

"In fact, one might say that a new kind of American Worker is being ordered up. And this new worker will be expected to have a broad set of skills that were previously required only of supervisors and management."

-- (WORKPLACE BASICS, Carnevale, Gainer, Meltzer)

CREATION AND CHARGE OF THE COMMISSION

Being aware of the need for an organized and inclusive approach to identifying complementary skills, the MTCS Trustees and President Fitzsimmons believed it was critical to work with key groups (business, academic, labor, etc.) to identify and define the essential skills those groups believed should complement the traditional academic and technical skills.

The Trustees endorsed the formation of *The Skills Commission for The 21st Century*. They named Kevin Gildart, Assistant to the President of Bath Iron Works, and Bridget Healy, MTCS Trustee, as co-chairs and charged the Commission with producing a report by June 1994 which would:

- Identify and specifically define those complementary skills
- Review relevant research

- Solicit input from constituent groups regarding the essential complementary skills
- Recommend the integration and teaching of those skills into the existing Technical College curriculum

THE COMMISSION'S WORK

Beginning in January, 1994, and meeting on a once monthly basis through June, the Commission reviewed existing reports, research and studies (see bibliography) as they began identifying and defining complementary skills.

Building on the work of the 1991 Secretary's Commission on Achieving Necessary Skills (SCANS) report, the research of Carnevale, Gainer and Meltzer (*Workplace Basics: The Essential Skills Employers Want*), as well as the current best practices of a number of Maine's leading private sector businesses, the Commission gradually identified two fundamental categories they believed described complementary skills. Borrowing from and building on the conceptual framework of the *SCANS Report*, the Skills Commission identified, expanded, defined, debated and shaped the multiple categories and skills which comprise the final report.

The two basic categories which were identified by the Commission as essential for the versatile and quality worker (within which all other skills fall) are:

Foundation Skills: These are the essential skills that serve as the foundation for all other skills. They serve as the base upon which other competencies are built.

Competency Skills: These are the skills, tools and attributes effective workers must have and use.

The report is presented in two parts: Part 1 identifies and defines foundation skills; Part 2 identifies and defines competency skills.

“Good jobs depend on people who can put knowledge to work...new workers must be creative and responsible problem solvers and have skills and attitudes on which employers can build...”

—Secretary’s Commission on Achieving Necessary Skills, 1991

Part 1

Foundation Skills

DEFINITION: These are the essential skills that serve as the foundation for all other competency skills. They serve as the base upon which all other competencies are built.

Part 1 Foundation Skills

(Basic Academic & Communication Skills)

A. BASIC ACADEMIC AND COMMUNICATION SKILLS

1. Reading
2. Writing
3. Mathematics/Computation
4. Listening
5. Speaking

RATIONALE: These basic academic and communication skills are the absolute minimum for anyone entering the workforce.

Today's and tomorrow's workplace will increasingly require more sophisticated skills. People will be expected to understand, apply and expand their academic and communication skills. While these skills are no guarantee of future success, their absence absolutely ensures lack of opportunities and choices.

SKILL DEFINITION: The Technical College graduate will demonstrate proficiency commensurate with the level of the credential awarded.

SKILL WILL BE EVIDENCED BY PROFICIENCY IN:

1. READING

Having the ability to:

- a. Read diverse types of materials including sources of current events, technical documents, fiction, non-fiction, and poetry
- b. Locate, understand, interpret, summarize, problem solve and perform tasks from written information in prose and documents (including manuals, graphs, and schedules)
- c. Scan information quickly and select relevant data
- d. Judge the accuracy, appropriateness, style and plausibility of reports, proposals or theories of other writers
- e. Determine and comprehend the main idea or essential message from written materials
- f. Identify relevant details, facts and specifications
- g. Infer, locate and interpret the meaning of unknown or technical vocabulary

2. WRITING

Having the ability to:

- a. Communicate in a clear and concise fashion thoughts, ideas, information and messages in written materials such as memos, letters, directions, manuals, essays, reports, proposals, graphs, flow charts, etc.
- b. Write in a style, organization and format which is appropriate to the subject matter, purpose and audience
- c. Determine the need to include supporting documentation at an appropriate level of detail as required by the situation
- d. Proofread, edit and revise for correct information, appropriate emphasis, form, grammar, spelling and punctuation
- e. Locate language terminology and writing rules using handbooks and reference books
- f. Analyze, conceptualize, synthesize and summarize information in clear and concise writing

3. MATHEMATICS/COMPUTATION

Having the ability to:

- a. Identify, analyze, and solve problems
- b. Perform basic computations
- c. Define tasks in a contextual fashion
- d. Apply basic numerical concepts in practical situations
- e. Estimate arithmetic results without a calculator
- f. Interpret and apply tables, graphs, diagrams and charts to obtain or convey quantitative information
- g. Approach practical problem solving by choosing appropriately from a variety of mathematical techniques
- h. Construct logical explanations for real-world situations using quantitative data
- i. Express mathematical ideas and concepts orally and in writing

Part 1 Foundation Skills (Basic Academic & Communication Skills)

j. Recognize the role of chance in the prediction and occurrence of events

4. LISTENING

Having the ability to:

a. Receive, interpret and respond to verbal messages and cues (such as body language) in ways that are appropriate to the purpose

b. Recognize how listening style affects transmission, and receipt of information

c. Apply listening skills effectively in order to comprehend, learn, critically evaluate, appreciate or support the speaker

d. Listen for content, context, emotional meaning and following directions

5. SPEAKING

Having the ability to:

a. Organize ideas and communicate oral messages appropriate to listeners and situations

b. Participate in conversation and group presentations

c. Utilize effective questioning techniques

d. Recognize both value and danger of vagueness and ambiguity in conversation

e. Select an appropriate medium for conveying a message

f. Construct various metaphors and analogies to explain an idea

g. Demonstrate verbal language, voice inflection, level of language, and other cues (e.g., body language) appropriate in style, tone and level of complexity to the audience and the occasion

h. Speak clearly

i. Respond to listener feedback with appropriate style of response

j. Recognize and interpret the bias, stereotyping and multiple messages of language

k. Demonstrate a variety of different speaking styles and know how these different styles affect how people are perceived and what is heard

l. Recognize the value and impact their own and other's dominant style of communication has on speaking and understanding

Part 1 Foundation Skills (Thinking Skills)

B. THINKING SKILLS

1. Critical Thinking
 - a. Reasoning
 - b. Problem Solving
 - c. Decision Making
2. Creative Thinking

RATIONALE:

In any quality organization, it is critical that its employees be able to quickly and intelligently evaluate problems, as well as develop and perform strategies to overcome barriers and improve performance. People at all levels need to have excellent thinking and problem-solving skills to do this effectively.

SKILL DEFINITION:

The Technical College graduate will demonstrate proficiency commensurate with the level of the credential awarded.

SKILL WILL BE EVIDENCED BY PROFICIENCY IN:

1a. CRITICAL THINKING—REASONING

Having the ability to:

- a. Invoke thinking processes to make or revise an interpretation in a new context
- b. Discover rules or principles underlying the relationship between two or more objects or written text and then apply it to solving a problem
- c. Recognize and examine the assumptions underlying one's own beliefs
- d. Apply rules and principles to new situations
- e. Determine reasonable conclusions when given a set of facts and assumptions
- f. Weigh the potential consequences of several alternative courses of action
- g. Synthesize unconnected or loosely connected pieces of information to a useful context to gain an overview of a situation
- h. Recognize and use learning techniques to apply and adapt new knowledge/skills in familiar, unfamiliar and changing situations

i. Recognize when and how one learns best

j. Apply formal learning strategies (e.g. note taking or clustering items that share some characteristics) and informal learning strategies

k. Analyze arguments and generate insight into particular meanings and interpretations

1b. CRITICAL THINKING— PROBLEM SOLVING

Having the ability to:

- a. Obtain relevant and appropriate data
- b. Analyze data
- c. Recognize, observe and define problems in contextual situations
- d. Recognize and evaluate implicit and explicit assumptions underlying an argument or point of view
- e. Analyze arguments and develop logical reasoning patterns
- f. Frame useful questions in search of a solution (or in teaching)
- g. Break complex problems (or processes or projects) into component parts and consider or organize the parts in a systematic way
- h. Recognize potential discrepancy between what is and what should or could be
- i. Formulate innovative solutions for problem solving
- j. Explore different viewpoints
- k. Set priorities
- l. Identify possible reasons for discrepancy
- m. Gather/select sufficient information and devise and implement solutions within time and other resource constraints
- n. Formulate solutions in work situations where there is no correct answer

Part 1 Foundation Skills (Thinking Skills)

o. Evaluate and monitor progress and results of solutions and revise strategies as indicated by findings

p. Justify strategies and solutions

q. Apply the knowledge resulting from prior thought and/or prior learning

r. Identify and frame the problem

s. Identify root causes

t. Interact with problem elements in order to define the decision to be made, the ends to be achieved and the means which may be chosen

u. Clarify the sense of an uncertain situation that may initially make no sense

v. Examine problems multi-systemically

1c. CRITICAL THINKING—DECISION MAKING

Having the ability to:

a. Specify goals and constraints to reaching those goals

b. Recognize current decision-making patterns

c. Appreciate that some situations and problems cannot be solved through technical analysis

d. Generate, evaluate and choose best alternatives

e. Consider risk, rewards and ethical consequences

f. Acquire accurate information to make appropriate decisions

g. Formulate informed decisions based on limited information

h. Formulate decisions (choices) based on consideration of potential consequences (short term and long term)

i. Deal with contradictions

2. CREATIVE THINKING

Having the ability to:

a. Generate new ideas

b. Participate effectively in brain storming/creative problem-solving groups

c. Demonstrate the free and flexible use of imagination

d. Combine ideas or information in new ways

e. Devise connections between seemingly unrelated ideas

f. Re-shape goals in ways that reveal new possibilities

g. Promote divergent thinking in self and others

h. Recognize the roles of problem solving, personality styles, and group process in creative thinking

i. Recognize how background and life experiences have influenced perspectives and reinforced biases

j. Discover rules or principles underlying the relationship between two or more objects or written text and then apply it to solving a problem

k. Apply rules and principles to new situations

l. Determine reasonable conclusions when given a set of facts and assumptions

m. Weigh the potential consequences of several alternative courses of action

Part 1 Foundation Skills (Personal Qualities)

C. PERSONAL QUALITIES

1. Responsibility
2. Self-esteem
3. Sociability
4. Self-management
5. Ethics
6. Flexibility
7. Self-control
8. Commitment to Learn

RATIONALE:

Personal qualities are those attributes of character and personality that indicate a desired level of integrity, responsibility and versatility. These qualities are so important they can impede any person—at any level of an organization — if they are either absent or sufficiently weak. People with these identified qualities are an invaluable asset to any organization, are able to work together more effectively and are better able to function in today's leaner organizations.

SKILL DEFINITION:

The Technical College graduate will demonstrate proficiency commensurate with the level of the credential awarded.

SKILL WILL BE EVIDENCED BY PROFICIENCY IN:

1. RESPONSIBILITY

Having the ability to:

- a. Set and meet defined and realistic objectives
- b. Accept responsibility for personal decisions and actions
- c. Exert a high level of effort and perseverance toward goal attainment
- d. Define career and personal directions
- e. Identify education and training goals needed to reach career and personal goals
- f. Initiate self-directed activities
- g. Set high standards
- h. Appreciate the importance of community service
- i. Attend to details

j. Demonstrate a high level of concentration and perseverance even when assigned an unpleasant task

k. Demonstrate a commitment to quality reflecting knowledge of standards for work and completing the task(s) at or in excess of the expected quality level, within budget and on schedule

l. Demonstrate a commitment to continuous improvement of self

m. Demonstrate high standards of attendance and punctuality.

n. Display enthusiasm, vitality and optimism in approaching and completing tasks

o. Recognize importance of physical fitness

p. Recognize tasks or circumstances which may be wrongful or harmful to others

2. SELF-ESTEEM

Having the ability to:

a. Believe in self worth and maintain a positive view of self in face of adversity

b. Demonstrate realistic knowledge of own skills, abilities, and limitations and how this knowledge impacts the need for new information (either self-generated or from others)

c. Recognize impact on others

d. Risk making responsible mistakes in order to learn and effectively meet challenges

e. Generate new ideas and have the confidence to advance them

f. Help others generate new ideas and support their efforts to advance them

g. Distinguish/identify emotional capacity and needs and how to address them

h. Cope with stress, change, fair/unfair criticism, mistakes and failure constructively

Part 1 Foundation Skills (Personal Qualities)

3. SOCIABILITY

Having the ability to:

- a. Relate well to others, including those of diverse background and skill
- b. Demonstrate friendliness, adaptability, empathy, and politeness in new and ongoing (familiar) group settings
- c. Demonstrate kindness
- d. Demonstrate a versatile sense of humor
- e. Demonstrate thoughtfulness and respect for people
- f. Recognize the nature and roots of prejudice in themselves and others and the impact of that prejudice
- g. Assert self in familiar and unfamiliar social situations
- h. Respond appropriately as the situation requires
- i. Take an interest in what others say and do

4. SELF-MANAGEMENT

Having the ability to:

- a. Assess own knowledge and skills realistically and accurately
- b. Set well-defined and personal goals and understand education and training needed to achieve those goals
- c. Recognize signs of incremental success
- d. Appreciate the importance of a safe and healthy work environment (including ergonomics)
- e. Monitor progress toward attaining goals and motivate self to succeed through goal achievement
- f. Exhibit self-control and respond to feedback (when appropriate) unemotionally and non-defensively
- g. Assume additional responsibility without being asked
- h. Demonstrate qualities of being a self-starter and self-directed

i. Improve one's performance by competing against increasingly higher standards of excellence

j. Exhibit punctuality and other characteristics of time management

k. Demonstrate personal financial management (how to live within means)

l. Recognize and demonstrate appropriate behavior, language and dress in the workplace

5. ETHICS

Have the ability to:

- a. Choose ethical courses of action
- b. Demonstrate personal trust
- c. Demonstrate intellectual trust
- d. Recognize implications of decisions or behaviors that may break with commonly held personal or societal values
- e. Appreciate the impact of violating the beliefs, codes, and culture of an organization, of self, or of others
- f. Recognize how to apply values other than the pragmatic ones of economy, efficiency, simplicity and decision making

6. FLEXIBILITY

Having the ability to:

- a. Adapt to and work effectively with a variety of situations, individuals or groups
- b. Appreciate different and often opposing perspectives on an issue
- c. Adapt one's approach as the requirements of a situation change
- d. Adapt to changes in one's own organization or job requirements

Part 1 Foundation Skills (Personal Qualities)

7. SELF-CONTROL

Having the ability to:

- a. Manage emotions
- b. Restrain negative actions when provoked
- c. Respond constructively to negative action
- d. Maintain stamina under continuing stress
- e. Treat others with dignity and respect

8. COMMITMENT TO LEARN

Having the Ability to:

- a. Invoke thinking processes to make or revise an interpretation in a new context
- b. Demonstrate an eagerness to learn, not only to acquire abilities and skills, but also to become more insightful and understanding of others

c. Sustain a lifelong discipline of continual learning

d. Recognize the need to acquire new abilities/insights and assume personal responsibility for learning

e. Initiate formal and informal learning processes to acquire new abilities and insights

f. Continually seek to acquire, apply, and adapt new knowledge/skills in familiar, unfamiliar, and changing situations

g. Risk making responsible mistakes as part of the learning process

h. Recognize and examine the underlying assumptions of one's own beliefs

i. Recognize when and how one learns best

"Our future depends on high-performance work organizations and a highly competent workforce. It will be as different from our present as today's most advanced work and workplace are different from Henry Ford's assembly line."

---Secretary's Commission on Achieving Necessary Skills, 1991

Part 2

Competency Skills

DEFINITION: These competencies rest upon and are integrated with the foundation skills and personal qualities. They are generic skills necessary for quality performance in both the work place and the community.

Part 2 Competency Skills (Resources)

A. RESOURCES

1. Allocating Time
2. Allocating Money
3. Allocating Materials and Facilities
4. Allocating Human Resources

RATIONALE: These basic skills involve the understanding and effective management of time, space, people, products and funds. Any task will involve the effective use of some or all of these resources if it is to be high quality.

SKILL DEFINITION: The Technical College graduate will demonstrate proficiency commensurate with the level of the credential awarded.

SKILL WILL BE EVIDENCED BY PROFICIENCY IN:

1. ALLOCATING TIME

Having the ability to:

- a. Select relevant, goal-directed activities
- b. Prepare, follow and adjust schedules
- c. Predict the amount of time needed for task completion
- d. Prioritize activities
- e. Allocate and adjust time to activities

2. ALLOCATING MONEY

Having the ability to:

- a. Prepare and use budgets

b. Measure financial performance and understand what it means

c. Forecast cost and revenue

d. Maintain records to track budget performance and make appropriate adjustments to meet objectives

3. ALLOCATING MATERIAL & FACILITY RESOURCES

Having the ability to:

a. Evaluate the need for materials, supplies, parts, equipment, space and final products.

b. Acquire, store and distribute materials, supplies, parts, equipment, space or final products in order to make the best use of them

4. ALLOCATE HUMAN RESOURCES

Having the ability to:

a. Assess knowledge, skills, strengths and weaknesses of individuals and distribute work accordingly

b. Evaluate performance and provide feedback and coaching in a versatile and constructive fashion

c. Work effectively as a team member

d. Demonstrate knowledge and appreciation of employment and work place laws and regulations

e. Delegate and monitor tasks

f. Receive and use customer input

Part 2 Competency Skills (Interpersonal Relations)

B. INTERPERSONAL RELATIONS

1. Participating As A Member Of A Team
2. Teaching Others New Skills
3. Serving Others
4. Exercising Leadership
5. Negotiating
6. Working With Diversity

RATIONALE: Versatile and effective interpersonal skills have been called the "Lubricant" of the workplace. Today's and tomorrow's workers will have to work even more closely with customers, colleagues from various levels of the organization, as well as colleagues from other businesses and organizations. The ability to work well with others is a critical skill.

SKILL DEFINITION: The Technical College graduate will demonstrate the abilities commensurate with the level of the credential awarded.

SKILL WILL BE EVIDENCED BY PROFICIENCY IN:

1. PARTICIPATING AS A MEMBER OF A TEAM

Having the ability to:

- a. Work well with others
- b. Accept the input and contributions of others with respect
- c. Contribute to and solicit from the group: ideas, suggestions and cooperative effort
- d. Recognize and eliminate barriers caused by technical and or social/economic jargon
- e. Clarify ideas, issues and positions by asking reasonable questions
- f. Provide accurate, tactful, and focused feedback
- g. Develop and maintain a network of contacts with people who can provide information assistance or support
- h. Work well with diverse personalities, styles, cultures, and approaches
- i. Evaluate and productively use strengths of others and minimize weaknesses of others
- j. Share responsibility and credit

2. TEACHING OTHERS

Having the ability to:

- a. Help others learn
- b. Recognize learning styles of self and others

3. SERVING OTHERS

Having the ability to:

- a. Identify and assess the expectations of others including but not limited to clients, customers, constituents, etc.
- b. Work and communicate with others to respond to their expectations

4. EXERCISING LEADERSHIP

Having the ability to:

- a. Communicate ideas and feelings to illustrate, articulate or justify a position
- b. Assess one's own strengths and weaknesses in leadership style and attributes
- c. Keep task focused on the primary goal
- d. Persuade, influence, convince and motivate individuals and groups
- e. Determine appropriate leadership traits called for by the specific need and situation
- f. Exercise appropriate leadership to maximize input and participation from others
- g. Establish a favorable and encouraging environment for expressing competing and often conflicting ideas
- h. Acknowledge and support legitimate and acceptable policies, procedures and authority
- i. Utilize leadership skills to encourage and enable others to aspire and achieve all they are capable of
- j. Project emotional and intellectual stability
- k. Recognize the exchange process between leaders and followers
- l. Exhibit strategies for sound decision making

Part 2 Competency Skills (Interpersonal Relations)

m. Recognize and allow others to lead when the situation or circumstance allows or requires

n. Conduct a meeting

5. NEGOTIATING

Having the ability to:

a. Work toward agreement and consensus

b. Recognize common sources of conflict

c. Develop options for mutual gain

d. Solicit and acknowledge input on every issue

e. Recognize and respect divergent purposes and values

f. Focus on interests based on negotiation techniques. Attack positions and problems, not people and personalities

g. Insist on the use of objective criteria

h. Formulate an approach demanded by the circumstance

6. WORKING WITH DIVERSITY

Having the ability to:

a. Work well with individuals from diverse backgrounds and lifestyles .

b. Recognize the challenges and opportunities that arise from encouraging diversity

(Information)

C. INFORMATION

1. Acquiring and Evaluating Information
2. Organizing and Maintaining Information
3. Interpreting and Communicating Information
4. Using Computers to Process Information

RATIONALE: The ability to locate, acquire and use information from diverse sources is a critical skill. Information used effectively enables both individuals and organizations to evaluate, change, adapt and sustain high levels of performance.

SKILL DEFINITION: The Technical College graduate will demonstrate proficiency commensurate with the level of the credential awarded.

SKILL WILL BE EVIDENCED BY PROFICIENCY IN:

1. ACQUIRING & EVALUATING INFORMATION

Having the ability to:

a. Identify the need for data

b. Identify appropriate sources for data

c. Obtain data from existing sources

d. Evaluate relevancy and accuracy of data

2. ORGANIZING AND MAINTAINING INFORMATION

Having the ability to:

a. Organize, process, and maintain written or computerized records and other forms of information in a systematic fashion

3. INTERPRETING AND COMMUNICATING INFORMATION

Having the ability to:

a. Select and analyze information

b. Communicate the results to others using oral, written, graphic, pictorial or multi-media formats

4. USING COMPUTERS TO PROCESS INFORMATION

Having the ability to:

a. Employ computers to acquire, organize, analyze, and communicate information

Part 2 Competency Skills (Systems)

D. SYSTEMS

1. Understanding Systems
2. Monitoring and Correcting Performance
3. Improving or Designing Systems

RATIONALE: It is critical that individuals understand the intricate and important interconnections between what they are expected to know and do and what others (in and outside their work environment) know and do. Understanding the interrelations of these systems makes it easier to recognize how all parts comprise the whole and how each part affects each of the other parts.

SKILL DEFINITION: The Technical College graduate will demonstrate proficiency commensurate with the level of the credential awarded.

SKILL WILL BE EVIDENCED BY PROFICIENCY IN:

1. UNDERSTANDING SYSTEMS

Having the ability to:

- a. Identify and analyze social, organizational, technological and other systems
- b. Interact and operate effectively within social, organizational, technological, legal, environmental, political and other systems
- c. Recognize interdependent relationships within and among systems

d. Recognize the explicit and implicit power structures of an organization

e. Recognize what organizations are, what are the cultures, goals, values and traditional modes of operation in organizations and how these impact performance

2. MONITORING AND CORRECTING SYSTEMS PERFORMANCE

Having the ability to:

- a. Recognize and interpret performance variation patterns
- b. Diagnose deviations in the function of a system/ organization
- c. Predict impact of direct and indirect actions on system operations
- d. Take necessary action to enhance performance

3. IMPROVING OR DESIGNING SYSTEMS

Having the ability to:

- a. Suggest modifications to existing systems
- b. Develop new or alternative systems to improve performance

(Technology)

E. TECHNOLOGY

1. Selecting Technology
2. Applying Technology to Task

RATIONALE: The critical importance of technology has continued to grow during this century and will accelerate into the next. The skills involved in understanding, using and continuing to learn about technology are indispensable to the effective worker and business of the 21st century

SKILL DEFINITION: The Technical College graduate will demonstrate proficiency commensurate with the level of the credential awarded.

SKILL WILL BE EVIDENCED BY PROFICIENCY IN:

1. SELECTING TECHNOLOGY

Having the ability to:

a. Assess and select technological applications in technology to produce the desired results

2. APPLYING TECHNOLOGY TO TASK

Having the ability to:

a. Work with applications in technology to produce the desired results.

Resources

- America 2000 — An Education Strategy*. 1991. U.S. Department of Education.
- Bath Iron Works, Employee Development Programs
- Blue Cross and Blue Shield of Maine, Spring 1994 Training Programs
- Carnevale, A.P.; Gainer, L.J.; Meltzer, A.S. *Workplace Basics—The Skills Employers Want*. 1988.
- Center for Youth Apprenticeship at Southern Maine Technical College, *Program Standards (Metals Industries)*. 1994.
- Central Maine Technical College—Syllabus—PH 101: Critical Thinking (W.V. Frayer, Instructor).
- Eastern Maine Technical College—Humanities Department.
- Essential Work Competencies Project*. 1993. Maine Department of Labor.
- Fleet Bank of Maine Training Programs.
- “Integrating The Humanities into Associate Degree Occupational Programs.” 1988.
- Maine’s Common Core of Learning*. 1990. Commission on Maine’s Common Core of Learning.
- Nichols Portland Training Programs.
- Secretary’s Commission on Achieving Necessary Skills (SCANS) Report*. 1991. U.S. Department of Labor.
- Scriven, M. and Paul, R., “Defining Critical Thinking.” 1992. *Boston Globe*.
- Senge, Peter, M., *The Fifth Discipline (The Art and Practice of The Learning Organization)*. 1990.
- York County 2000*. 1985. Southern Maine Regional Planning Commission.

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