



# **Ohio Health**

## **Technical Competency Profile (TCP)**

2004

# Ohio Health Technology Competency Profile

James Piper  
Director  
College Tech Prep Curriculum Services  
The University of Toledo

Joyce Boudreau  
State Consultant, Health Careers Education  
Office of Career-Technical and Adult Education  
Ohio Department of Education

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## INTRODUCTION

The Ohio Health Technology Competency Profile was originally developed in 2002 under the auspices of the Joint Council of the Ohio Board of Regents and the State Board of Education. Due to changes in federal legislative and the health care industry it was necessary to revise the document to bring the educational preparation of College Tech Prep students in line with current standards and procedures. This document is a revision of the 2002 document which was completed collaboratively with the Ohio Board of Regents, the Ohio Department of Education, and the College Tech Prep Curriculum Services at The University of Toledo.

The document provides a framework for a broad-based educational response to the shortage of health care professionals. The fast growing health care industry provides more than 300 different careers with preparation at the professional level, the technical level, and aide or assistant level.

The profile includes health care competencies that are grounded in academic subject areas and built around a health care core and three occupational pathways: Therapeutic, Diagnostic, and Health Informatic Services. Generated using the Ohio College Tech Prep model of curriculum development and the National Health Care Skills Standards, the profile reflects the educational pathways, career opportunities, skills and credentials required for Ohio's health care professionals. The profile reflects programming design flexibility, which represents many options for educational studies and career planning.

Representatives from a broad cross-section of Ohio's health care industries played a critical role in defining the vision and scope of health care professionals, and by identifying the essential skills for current and future health care employees. Secondary and post-secondary educators representing Ohio schools and colleges identified essential competencies with proficiency standards met by the attainment of the Associate Degree. The profile identifies continued education and career progression. Ohio's Academic Standards are referenced to reflect higher academic course work in preparation for continued educational studies. Health care's regulatory agencies are referenced as resources for conducting a crosswalk between the profile and program accreditations, industry validated standards, and licensure or certifications. A list of business/industry representatives and educators participating in the development of the profile and regulatory agency resources appear in the appendices.

The Ohio Health Technology Profile will be used as the basis for the development of an integrated delivery system that provides opportunities for new and challenging health care programs and courses. Career-Technical Education, College Tech Prep, and post-secondary degree programs will be enhanced and expanded through the use of the Health Technologies curriculum. Samples of delivery models are referenced in Appendix C.

This profile is available on the Internet at: [www.techprephio.org](http://www.techprephio.org) At this location, users can download copies of the entire profile or conduct searches on a number of key variables.

For additional information contact:

College Tech Prep Curriculum Services  
The University of Toledo  
2801 W. Bancroft St., MS924  
Toledo, Ohio 43606-3390  
Phone: 419-530-7289  
Email: [jpiper@utoledo.edu](mailto:jpiper@utoledo.edu)

Health Careers Education Services  
Ohio Department of Education  
25 South Front Street, Sixth Floor  
Columbus, Ohio 43215  
Phone: 614-466-2901  
Email: [Joyce.Boudreau@ode.state.oh.us](mailto:Joyce.Boudreau@ode.state.oh.us)

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Thanks are also due to the following:

<b>Project Director:</b>	James Piper, Director, College Tech Prep Curriculum Services, The University of Toledo
<b>Project Liaison:</b>	Joyce R. Boudreau, State Consultant, Health Careers Education, Career-Technical and Adult Education Ohio Department of Education
<b>Special Technical Assistance:</b>	Cyndy Jackman, Clinical Director II, Cincinnati Children's Hospital Medical Center
	Carolyn Laemmle, Clinical Laboratory Technology Faculty, Cincinnati State Technical & Community College
	Barbara D. McCarren, Curriculum & Instructional Specialist, Great Oaks Institute of Technology & Career Development
	Mary Van Sickle, Supervisor of Health Technology Pickaway-Ross Career & Technology Center
<b>Information Services:</b>	Roxanna Foster, Web Developer, College Tech Prep Curriculum Services, The University of Toledo
<b>Administrative Support:</b>	Pamela Smith, Administrative Assistant, College Tech Prep Curriculum Services, The University of Toledo

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## **COLLEGE TECH PREP**

College Tech Prep is a high school and college career path linked to business, industry, and labor that insures a specified seamless pathway from high school to college to careers, meeting Ohio's technological employment needs.

A College Tech Prep student is enrolled in a state approved Tech Prep education program. A College Tech Prep Program means a program of study that:

- Combines, at a minimum, two years of secondary education (as determined by Ohio definitions) with a minimum of two years of postsecondary education in a non-duplicative, sequential course of study.
- Integrates academic and technical instruction and utilizes work-based and work-site learning, where appropriate and available.
- Provides technical preparation in a career field such as engineering technology; applied science; mechanical, industrial or practical art or trade; agriculture; health occupations; business; or applied economics.
- Builds student competencies in mathematics, science, reading, writing, communications, economics, and workplace skills through applied, contextual academics and integrated instruction, in a coherent sequence of courses.
- Leads to an associate or baccalaureate degree or a BAT (Bureau of Apprenticeship Training) apprenticeship requiring a minimum of two years in a specific career field.
- Leads to placement in appropriate employment or to further education.

## HEALTH TECHNOLOGY STATE COMPETENCY PROFILE

In recognition of the need for a highly skilled health care workforce, the U.S. Department of Education in 1992 funded the National Health Care Skill Standards Project (NHCSSP). This project was a collaborative endeavor among health services, labor, and the education community to better prepare tomorrow's health care worker by developing skill standards today.

The NHCSSP involved representatives from key constituencies in a comprehensive process of research, review, and revision to ensure that the resulting standards meet the needs of the industry. The standards make explicit the knowledge and skills health care workers need in order to provide quality health care.

The Ohio Health Technology Competency Profile (TCP) is based upon these standards to provide the foundation for better worker preparation, both in school and on the job. The goals of the College Tech Prep educational tract are to provide a seamless transition from secondary to postsecondary health programs, value added curriculum, and educational continuity. This TCP provides a common language, common goals, and a common reference point for employers, workers, students, labor, educators, and consumers.

**Under the Ohio Tech Prep initiative, high schools and colleges preparing students for specific health care licensure and certification examinations are individually responsible to ensure that their Tech Prep health program meets all of the requirements of the appropriate accrediting agency(ies).**

## MODEL FOR OHIO HEALTH TECHNOLOGY COMPETENCY PROFILE (TCP)

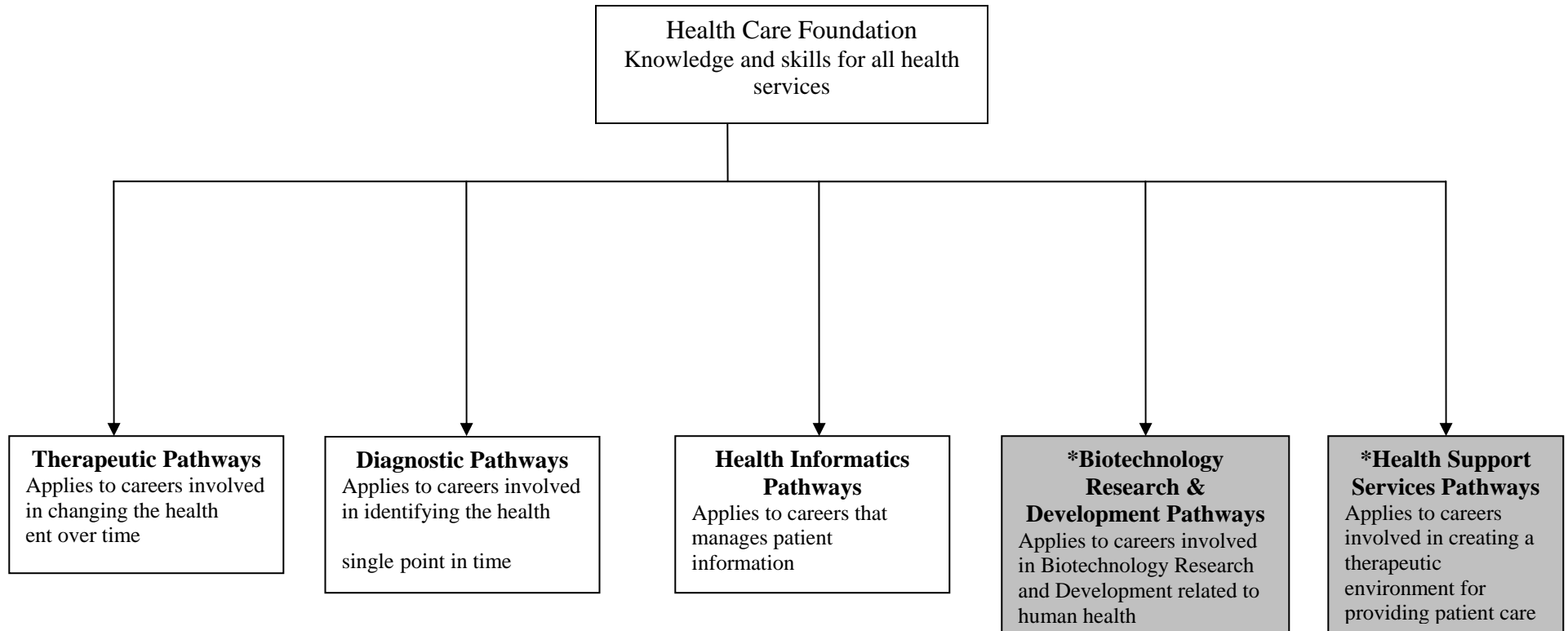
The competencies in the following Health TCP were developed in accordance with the Health Care Core Standards developed by The National Consortium on Health Science and Technology Education. These standards specify the knowledge and skills that the vast majority of health care workers should have. The health care core standards include:

- I. Academic Foundation
  - Human Structure and Function
  - Disease and Disorders
- II. Communication
  - Communication Skills
  - Reporting
  - Technical Reports
- III. Systems
  - Systems Theory
  - Health Care Delivery System
  - Health Care Delivery Systems Results
  - System Change
- IV. Employability Skills
  - Key Employability Skills
  - Interpersonal Communication
  - Personal Growth and Development
  - Career Decision-Making
- V. Legal Responsibilities
  - Legal Implications
  - Legal Practices
- VI. Ethic
  - Legal and Ethical Boundaries
  - Ethical Practices
  - Cultural, Social, and Ethnic Diversity
- VII. Safety Practices
  - Infection Control
  - Personal Safety
  - Environmental Safety
  - Common Safety Hazards
  - Emergency Procedure and Protocols
- VIII. Teamwork
  - Health Care Teams
  - Team Member Participation

In addition to competencies in the above core areas, the later part of the document includes competencies in the following pathway areas: therapeutic, diagnostic, health information, biotechnology research and development, and health support services (see diagram on the following page). This health profile also encompasses the Health Services Career Cluster Integrated Technical and Academic Competencies (ITAC) (1999) developed by the Vocational Instructional Materials Laboratory with funding from the Ohio Department of Education Division of Career-Technical and Adult Education.



**OHIO MODEL OF HEALTH CARE STANDARDS  
DEVELOPED FROM  
THE NATIONAL CONSORTIUM ON HEALTH SCIENCE AND TECHNOLOGY EDUCATION**



\*To be developed

# **COLLEGE TECH PREP OHIO HEALTH TECHNOLOGY COMPETENCY PROFILE**

## **Model Descriptor**

The base of the model provides a solid foundation and represents the College Tech Prep Health Career Plan of two years of programming during high school, two years of learning at the Community College Level, and two years of study at the Baccalaureate Level. The points on the base represent education and career progression. The career pathway may occur at any time from high school and continue throughout adulthood and represents principles of life long learning.

Located in the epicenter of the model are 11 components. These components represent the content in the Health Care Foundation Core. The 11 components provide the foundation skills essential to all health careers. These concepts are: Anatomy and Physiology, Variations of Health, Communication, Information Technology Applications, Systems, Employability Skills, Legal Responsibilities, Ethics, Safety Practices, Teamwork, Health Maintenance Practices.

Encompassing the epicenter there are five elliptic circles. Each represents one of the health career pathways. Three of these elliptic circles represent the Health Career Pathways. These are: Therapeutic Pathway, Diagnostic Pathway, and Health Informatics Pathway. The fourth and fifth elliptical circles, Biotechnology Research and Development Pathway and Health Support Services Pathway are to be developed.

Surrounding the five elliptic circles and the common core are components that provide strength and support to the model. These circles represent: work-based learning, industry-based credentials and industry-validated standards, program accreditation, teacher credentials and contextual academic coursework in language arts, mathematics, sciences, social studies, foreign language, and technology. On the circumference of the model and embracing the model is assessment. The arrows point in each direction and represent the concept of a dynamic process that is ever changing and evolving. This on-going assessment provides strength to the model by ensuring currency of practice and accountability to the individuals in a health career.



# KEY TO PROFILE CODES

## IMPORTANCE OF COMPETENCIES

All of the competencies in this document represent the minimum requirements for a College Tech Prep health program. It is the responsibility of the local consortia to further define and/or expand the key indicators for each competency. Each competency will be taught at either the introductory or proficiency level by the completion of the Tech Prep program, which is the minimum of an Associate Degree.

The intent of this document is to integrate high academics with skill acquisition. Technical skills are a required component. However, the degree of skill acquisition may vary based on the educational setting.

**I = Introduce** (Learner will demonstrate knowledge and comprehension of the competency.)

**P = Proficient** (Learner will demonstrate ability to apply knowledge of and/or perform the competency.)

**R = Reinforced** (Competencies marked proficient at the secondary level are to be reinforced at the associate degree level.)

**Grade Level:**     **12** = by the end of grade 12

**AD** = by the end of the Associate Degree

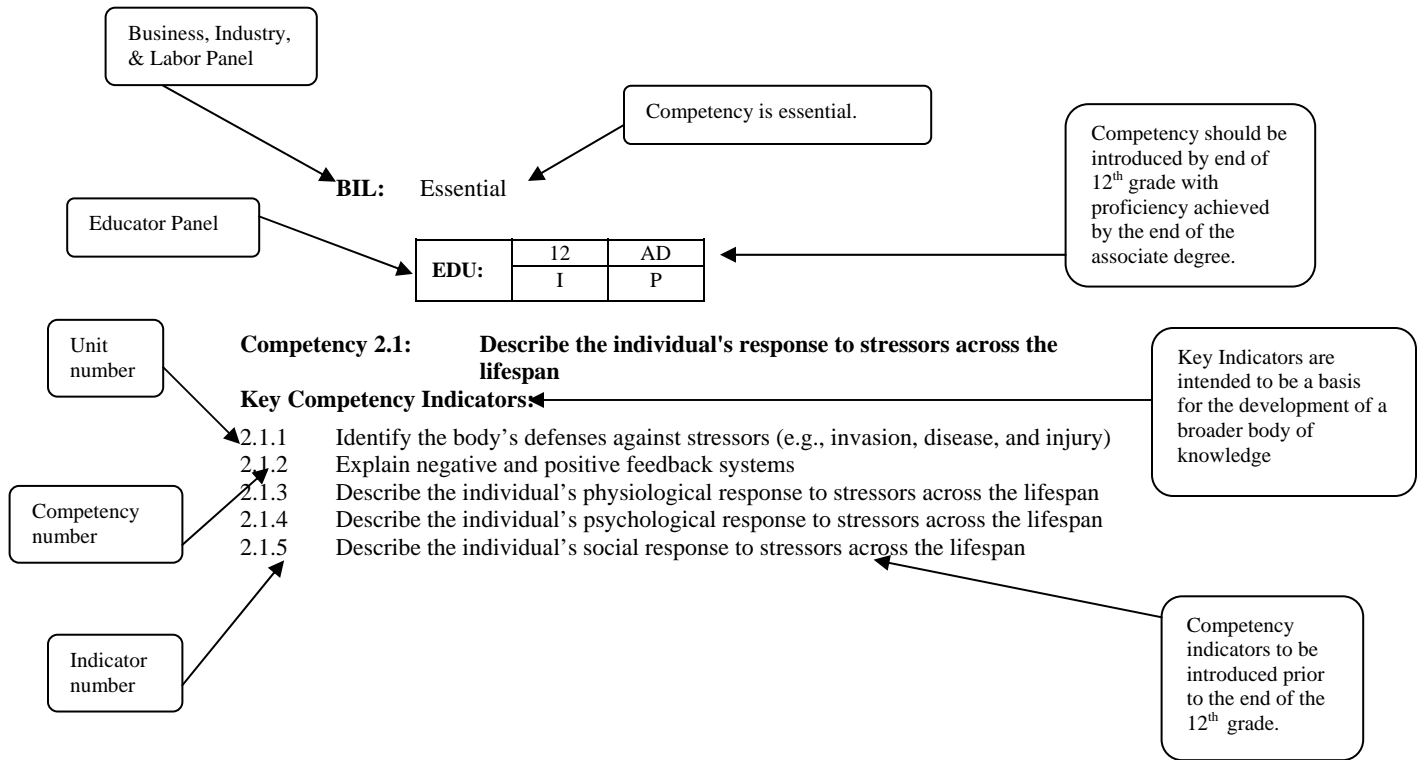
All essential competencies have been assigned a P (Proficient) by end of the Associate Degree. [There may be instances where both Introduce and Proficient are at either the 12<sup>th</sup> grade or the Associate Degree.] Local consortia may raise the levels I (Introduce), P (Proficient) or R (Reinforced) during the local leveling process to meet local business needs.

## ACADEMIC CONNECTION (AC)

All Tech Prep programs are responsible for meeting the academic content standards that are referenced in the appendix of this document.

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EXAMPLE:



## HEALTH TECH PREP PROGRAM PROFILE

Page	Unit	
	1-11	<b>Health Care Foundation Required for ALL programs</b>
2	1	Anatomy and Physiology
3	2	Variations of Health
4	3	Communication
6	4	Information Technology Applications
7	5	Systems
9	6	Employability Skills
10	7	Legal Responsibilities
11	8	Ethics
12	9	Safety Practices
14	10	Teamwork
15	11	Health Maintenance Practices
		<b>Health Science Pathways</b>
<b>Pathway Units: Health Science pathways offered are decided by the Tech Prep Consortium and local districts based on the educational setting and the career pathway</b>		
17	12	Therapeutic Pathway
24	13	Diagnostic Pathway
31	14	Health Informatics Pathway
	15	*Biotechnology Research & Development Pathway
	16	*Health Support Services Pathway

\*To be developed

**Under the Ohio Tech Prep initiative, high schools and colleges preparing students for specific health care licensure and certification examinations are individually responsible to ensure that their Tech Prep health program meets all of the requirements of the appropriate accrediting agency(ies).**

# **HEALTH CARE FOUNDATION**

## **UNITS 1-11**

## Unit 1: Anatomy and Physiology

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 1.1: Describe the basic structure and functions of cells, tissues, organs, and systems as they relate to homeostasis**

**Key Indicators:**

- 1.1.1 Define homeostasis
- 1.1.2 Describe basic life functions

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 1.2: Demonstrate knowledge of human growth and development across the lifespan**

**Key Indicators:**

- 1.2.1 Identify developmental tasks for each age group (neonate, infant, child, adolescent, adult, and geriatric)
- 1.2.2 Identify health issues for each age group (neonate, infant, child, adolescent, adult, and geriatric)

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 1.3: Compare the interdependence of the body systems**

**Key Indicators:**

- 1.3.1 Identify the body systems
- 1.3.2 Describe the functions of the body systems
- 1.3.3 Describe the interdependence of the body systems



## Unit 2: Variations of Health

**BIL:** Essential

<b>EDU:</b>	12	AD
	I	P

**Competency 2.1:** Describe the individual's response to stressors across the lifespan

**Key Indicators:**

- 2.1.1 Identify the body's defenses against stressors (e.g., invasion, disease, and injury)
- 2.1.2 Explain negative and positive feedback systems
- 2.1.3 Describe the individual's physiological response to stressors across the lifespan
- 2.1.4 Describe the individual's psychological response to stressors across the lifespan
- 2.1.5 Describe the individual's social response to stressors across the lifespan

**BIL:** Essential

<b>EDU:</b>	12	AD
	I	P

**Competency 2.2:** Summarize common categories of variations of health

**Key Indicators:**

- 2.2.1 Classify etiology of common categories of variations of health
- 2.2.2 Describe the manifestation of common categories of variations of health
- 2.2.3 Identify potential diagnostic procedures
- 2.2.4 Compare traditional and complementary therapies

## Unit 3: Communication

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 3.1: Demonstrate communication techniques**

**Key Indicators:**

- 3.1.1 Practice the appropriate methods of giving and receiving information
- 3.1.2 Contrast therapeutic and social communications
- 3.1.3 Identify selected cultural differences that may affect therapeutic and social communication

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**BIL: Essential**

EDU:	12	AD
	I	P

**Competency 3.4: Summarize Health Insurance Portability and Accountability Act (HIPAA)**

**Key Indicators:**

- 3.4.1 Demonstrate knowledge of HIPAA standards
- 3.4.2 Apply HIPAA standards

## Unit 4: Information Technology Applications

**BIL:**            **Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 4.1:**            **Discuss the role of technology in Healthcare**

**Key Indicators:**

- 4.1.1 Summarize general technology trends
- 4.1.2 Identify trends in monitoring devices
- 4.1.3 Identify trends in diagnostics testing
- 4.1.4 Employ technology applications that support therapeutic intervention

**BIL:**            **Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 4.2:**            **Utilize technology in health care**

**Key Indicators:**

- 4.2.1 Identify software programs appropriate for specific needs
- 4.2.2 Manage health care information using selected software program(s)

## Unit 5: Systems

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 5.1: Explain systems theory**

**Key Indicator:**

- 5.1.1 Identify the components of systems theory
- 5.1.2 Discuss how key systems affect quality of care

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 5.2: Investigate various health care system delivery models**

**Key Indicators:**

- 5.2.1 Research health care system delivery models
- 5.2.2 Compare delivery models

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 5.3: Analyze the interdependence of health care professions within a given health care delivery system**

**Key Indicators:**

- 5.3.1 Research the roles of health professionals within a given health care delivery system
- 5.3.2 Relate the scope of practice for each of the health care professions
- 5.3.3 Describe the contribution of each health care professional within the interdisciplinary health care delivery system

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 5.4: Investigate factors that may affect various health delivery systems**

**Key Indicators:**

- 5.4.1 Examine current trends in health care
- 5.4.2 Describe current issues in health care
- 5.4.3 Discuss current accreditation agencies and standards

## Unit 6: Employability Skills

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 6.1: Demonstrate characteristics that enhance employment opportunities**

**Key Indicators:**

- 6.1.1 Discuss desirable personal and professional attitudes, behaviors, and work habits
- 6.1.2 Discuss the process and documents needed for obtaining a health care position

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 6.2: Interact appropriately with diverse groups**

**Key Indicators:**

- 6.2.1 Recognize the impact of diversity in the workplace
- 6.2.2 Demonstrate appropriate strategies and solutions for dealing with conflicts and differences
- 6.2.3 Identify strategies for understanding and working with various diverse groups

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 6.3: Develop a career plan in each of the following health care pathways: diagnostic, therapeutic, and health informatics**

**Key Indicators:**

- 6.3.1 Identify educational requirements and availability of educational opportunities for different health careers
- 6.3.2 Explore specific health care career interests (e.g., shadowing, worksite experiences, professional readings)
- 6.3.3 Research projected growth of various health care careers

## Unit 7: Legal Responsibilities

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 7.1: Perform duties according to regulations, policies, laws, and legislated rights of clients/patients**

**Key Indicators:**

- 7.1.1 Explain legal responsibilities, limitations, and implications of actions
- 7.1.2 Comply with legal responsibilities specified by state practice act(s) and other pertinent legislation
- 7.1.3 Compare/contrast the roles of various regulatory agencies

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 7.2: Survey mandated standards in the health care industry**

**Key Indicator:**

- 7.2.1 Describe mandated standards for workplace safety, harassment, labor, and employment laws
- 7.2.2 Identify legal responsibilities specified by state practice act(s) and other pertinent legislation as it relates to mandated reporting of client/family abuse
- 7.2.3 Identify legal responsibilities specified by state practice act(s) and other pertinent legislation and regulatory agencies as it relates to confidentiality (i.e. HIPAA)

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 7.3: Differentiate between licensure, certification, registration, and legislated scope of practice**

**Key Indicators:**

- 7.3.1 Describe licensure, certification, registration, and legislated scope of practice
- 7.3.2 Identify behaviors that violate acceptable practice



## Unit 8: Ethics

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 8.1: Differentiate between legal and ethical issues**

**Key Indicators:**

- 8.1.1 Define “legal”
- 8.1.2 Define “ethical”
- 8.1.3 Compare/contrast legal and ethical health care
- 8.1.4 Apply legal and ethical concepts to health care practice

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 8.2: Practice responsibly within the ethical framework**

**Key Indicators:**

- 8.2.1 Identify codes of ethics within the health care profession
- 8.2.2 Develop an individual ethical framework
- 8.2.3 Demonstrate ethical behavior when interacting with colleagues both internal and external to the agencies
- 8.2.4 Maintain appropriate boundaries in all professional interactions

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 8.3: Evaluate the implications of health care ethics**

**Key Indicators:**

- 8.3.1 Compare/contrast personal, professional, and organizational ethics
- 8.3.2 Explain the role of the health care ethics committee within the health care organization
- 8.3.3 Develop strategies to deal with conflict between personal and organizational ethics

## Unit 9: Safety Practices

**BIL:** Essential

<b>EDU:</b>	12	AD
	I	P

**Competency 9.1: Survey state and federal regulations concerning safety, health, and protection of the environment**

**Key Indicators:**

- 9.1.1 Identify current Occupational Safety and Health Administration (OSHA) regulations
- 9.1.2 Identify current Environmental Protection Agency (EPA) regulations
- 9.1.3 Identify current Center for Disease Control (CDC) guidelines
- 9.1.4 Identify current Nuclear Regulatory Commission (NRC) regulations
- 9.1.5 Identify current Federal Drug Administration (FDA) regulations
- 9.1.6 Identify current Clinical Laboratory Improvement Act (CLIA) regulations

**BIL:** Essential

<b>EDU:</b>	12	AD
	I	P

**Competency 9.2: Demonstrate practices that contribute to the creation of a hazard-free, accident-free environment**

**Key Indicators:**

- 9.2.1 Follow procedures established to prevent accidents
- 9.2.2 Handle substances in accordance with Material Safety Data Sheets (MSDS) and other applicable regulatory guidelines
- 9.2.3 Discuss the principles of ergonomics and body mechanics

**BIL:** Essential

<b>EDU:</b>	12	AD
	I	P

**Competency 9.3: Examine emergency preparedness plans in a variety of health care settings**

**Key Indicators:**

- 9.3.1 Describe different types of emergency preparedness plans
- 9.3.2 Identify procedures to be followed in the event of a disaster
- 9.3.3 Discuss health care issues related to Homeland Security
- 9.3.4 Construct an emergency preparedness plan for a health care setting

**BIL:**            **Essential**

<b>EDU:</b>	12	AD
	P	R

**Competency 9.4:**            **Complete requirements for First Aid/CPR certification (e.g., American Heart Association or American Red Cross)**

**Key Indicators:**

- 9.4.1    Maintain first-aid certification
- 9.4.2    Maintain cardiopulmonary resuscitation (CPR) certification

## Unit 10: Teamwork

**BIL:**            **Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 10.1:**            **Explain the roles and responsibilities of the individual as part of the health care team**

**Key Indicators:**

- 10.1.1 Identify the roles and responsibilities of the individual as part of the health care team
- 10.1.2 Discuss attitudes and behaviors that promote positive interaction between members of the health care team

**BIL:**            **Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 10.2:**            **Perform responsibly as a team member**

**Key Indicators:**

- 10.2.1 Organize assignments
- 10.2.2 Complete assignments in timely and effective manner
- 10.2.3 Assist other members of the health care team
- 10.2.4 Recognize the patient and family as key members of the health care team (i.e. Safe, Timely, Effective, Efficient Patient Centered Care {STEEP})

## Unit 11: Health Maintenance Practices

**BIL:**            **Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 11.1:**            **Examine the psychosocial and physiological needs of the health care provider**

**Key Indicators:**

- 11.1.1 Identify stresses in the health care profession (e.g., death, dying, staffing shortages, critical incidents)
- 11.1.2 Express feelings related to being a health care provider (e.g., appropriate forum, at the appropriate time)
- 11.1.3 Describe coping strategies, resources, and support persons
- 11.1.4 Differentiate between healthy and unhealthy behaviors
- 11.1.5 Identify health screenings and preventive examinations

**BIL:**            **Essential**

<b>EDU:</b>	<b>12</b>	<b>AD</b>
	<b>I</b>	<b>P</b>

**Competency 11.2:**            **Evaluate health and wellness across the lifespan**

**Key Indicators:**

- 11.2.1 Describe measures that promote wellness across the lifespan
- 11.2.2 Examine potential health hazards in lifestyles, life practices, and the physical environment
- 11.2.3 Identify community resources for prevention and management of health problems

**BIL:**            **Essential**

<b>EDU:</b>	<b>12</b>	<b>AD</b>
	<b>I</b>	<b>P</b>

**Competency 11.3:**            **Evaluate nutrition across the lifespan**

**Key Indicators:**

- 11.3.1 Explain basic nutritional concepts
- 11.3.2 Summarize nutritional requirements across the lifespan
- 11.3.3 Identify regional, cultural, and religious food preferences
- 11.3.4 Identify safety issues regarding food handling and storage
- 11.3.5 Create consumer nutritional health product awareness

# **THERAPEUTIC PATHWAY**

## **UNIT 12**

# THERAPEUTIC PATHWAY

## Career Pathway Description

This pathway includes careers involved in the treatment and care of those who are in need of health care services. Careers in this pathway focus on the promotion and maintenance of wellness and on the prevention and treatment of physical, mental and emotional disorders of clients.

## College Tech Prep Program/Student

A College Tech Prep student is enrolled in a state approved Tech Prep education program. A College Tech Prep Program means a program of study that:

- Combines, at a minimum, two years of secondary education (as determined by Ohio definitions) with a minimum of two years of postsecondary education in a non-duplicative, sequential course of study
- Integrates academic and technical instruction and utilizes work-based and work-site learning, where appropriate and available
- Curriculum competencies are driven by standards of business, industry, accreditation, and/or credentialing agencies
- Creates a career pathway of multiple entry and exit points
- Promotes the seamless pathway from secondary to postsecondary education
- Provides value-added educational experiences
- Provides a common language, common goals, and a common reference point for employers, workers, students, labor, educators, and consumers

## Career Pathways

College Tech Prep is two years of secondary education plus an associate degree. This career pathway correlates to the Tech Prep 2 plus 2 program. Health Technologies Tech Prep can be delivered in a variety of educational settings at career/technical centers, comprehensive school districts, or partnering with the consortia community colleges and universities. Examples of delivery options:

- Satellite programming at an associate school
- Health Academy
- Partnerships with Health Care Providers/Facilities for delivery of technical skills

Health Care Exploration is a component of the health care pathway. This component can be delivered through community service learning projects, job shadowing, internships, mentorships, capstone experience/projects, site visits with guest speakers, and college visits.

## **Unit 12: Therapeutic Pathway Competencies**

(Pathway Units: Health Pathways are decided by the Tech Prep Consortium and local districts based on the educational setting and the career pathway)

**The student ascertaining the appropriate certificates/credentials associated with the therapeutic pathway program of study determines technical competencies.**

<b>Program of Study</b>
<b>Health Care Core:</b>
Anatomy and Physiology Variations of Health Communication Information Technology Applications Systems Employability Skills Legal Responsibilities Ethics Safety Practices Teamwork Health Maintenance Practices
<b>Therapeutic Pathway</b>

**Under the Ohio Tech Prep initiative, high schools and colleges preparing students for specific health care licensure and certification examinations are individually responsible to ensure that their Tech Prep health program meets all of the requirements of the appropriate accrediting agency(ies).**



## Therapeutic Pathway Careers

### Secondary

Nurse Aide  
Licensed Practical Nurse  
Dental Assistant  
Patient Care Technician  
Dietary Aide  
Medical Assistant  
Personal Trainer  
Home Health Aide  
Emergency Medical Technician  
Veterinary Aide

### Associate Degree

Licensed Practical Nurse  
Dental Assistant  
Dental Hygienist  
Registered Nurse (ADN)  
Dietetic Technician  
Respiratory Therapy Technician  
Physical Therapist Assistant  
Paramedic  
Emergency Medical Technician

### Bachelor's Degree

Physician Assistant  
Physical Therapist  
Radiation Therapist  
Registered Nurse (BSN)  
Occupational Therapist  
Respiratory Therapist  
Speech-Language Pathologist  
Audiologist  
Athletic Trainer  
Registered Dietitian

### Professional Careers with education beyond Bachelor's Degree

Dentist  
Physical Therapist  
Optometrist

Physician  
Nurse Practitioner  
Ophthalmologist

Veterinarian  
Exercise Physiologist  
Chiropractor

Listed are one or more credentials a student may ascertain in preparing for careers in the therapeutic pathway.

## Credentials

### Secondary

STNA – State tested Nurse Assistant  
LPN – Licensed Practical Nurse  
CPR – Cardiopulmonary Resuscitation  
First Aid  
Emergency Medical Technician (Ohio, Age 18 to take exam)  
Ohio Dental Assisting  
Registered Medical Assistant  
Home Health Aide  
Certified Personal Trainer

### Postsecondary

STNA – State tested Nurse Assistant  
LPN - Licensed Practical Nurse  
CPR – Cardiopulmonary Resuscitation  
First Aid  
Emergency Medical Technician  
Certified Dental Assistant  
Certified Medical Assistant  
Respiratory Therapy Technician  
Certified Personal Trainer  
Registered Nurse

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 12.1: Interact with client/patient**

**Key Indicators:**

- 12.1.1 Explain planned procedures and goals to clients/patients
- 12.1.2 Respect clients'/patients' cultural differences
- 12.1.3 Use facility guidelines to give health care information
- 12.1.4 Use language appropriate to situation
- 12.1.5 Identify the different types of information collected
- 12.1.6 Access resources needed to remove communication barriers (e.g., client/patient with limited English)
- 12.1.7 Demonstrate privacy and confidentiality measures and procedures (i.e. HIPAA)
- 12.1.8 Maintain professional boundaries

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 12.2: Convey essential client/patient information to appropriate team members**

**Key Indicators:**

- 12.2.1 Observe and report unsafe environmental conditions
- 12.2.2 Recognize and report unusual occurrences
- 12.2.3 Maintain confidentiality (i.e. HIPAA)
- 12.2.4 Recognize and report changes in patient's condition

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 12.3: Demonstrate competency in measuring client/patient vital signs and other indicators of health status within the scope of practice**

**Key Indicators:**

- 12.3.1 Measure vital signs and other indicators
- 12.3.2 Report client/patient vital signs or other indicators of health status
- 12.3.3 Record client/patient health status according to facility protocol
- 12.3.4 Provide input to the plan of care

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 12.4: Apply the principles of proper body mechanics and ergonomics**

**Key Indicators:**

- 12.4.1 Demonstrate proper personal body mechanics and ergonomics
- 12.4.2 Instruct client/patient and family in proper body mechanics
- 12.4.3 Demonstrate proper positioning and moving of client/patient
- 12.4.4 Utilize available tools for ease in moving/transporting patients

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 12.5: Utilize appropriate methods of data collection**

**Key Indicators:**

- 12.5.1 Identify methods and types of data collected in health care
- 12.5.2 Differentiate between subjective and objective data
- 12.5.3 Record and report information
- 12.5.4 Maintain professional standards in all documentation activities

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 12.6: Contribute to the development of a plan of care**

**Key Indicators:**

- 12.6.1 Identify the purpose of a plan of care
- 12.6.2 Identify the components of a plan of care
- 12.6.3 Provide input in the development of plan of care based on the scope of practice

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 12.7: Implement procedures accurately in support of the plan of care**

**Key Indicators:**

- 12.7.1 Describe the procedures within the scope of practice
- 12.7.2 Perform procedures accurately and in a timely fashion
- 12.7.3 Document procedure according to facility policy

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 12.8: Evaluate client/patient status within the scope of practice**

**Key Indicators:**

- 12.8.1 Use appropriate evaluation methods
- 12.8.2 Critique client/patient response to procedures/plan of care
- 12.8.3 Provide input to modify plan of care accordingly

# **DIAGNOSTIC PATHWAY**

## **UNIT 13**

# DIAGNOSTIC PATHWAY

## Career Pathway Description

This pathway includes careers involved in the performance of tests or evaluations to identify the presence or absence of illness or injury. Careers in this pathway focus on ascertaining the status of body functions and conditions and determining the cause and nature of diseases and disorders.

## College Tech Prep Program/Student

A College Tech Prep student is enrolled in a state approved Tech Prep education program. A College Tech Prep Program means a program of study that:

- Combines, at a minimum, two years of secondary education (as determined by Ohio definitions) with a minimum of two years of postsecondary education in a non-duplicative, sequential course of study
- Integrates academic and technical instruction and utilizes work-based and work-site learning, where appropriate and available
- Curriculum competencies are driven by standards of business, industry, accreditation, and/or credentialing agencies
- Creates a career pathway of multiple entry and exit points
- Promotes the seamless pathway from secondary to postsecondary education
- Provides value-added educational experiences
- Provides a common language, common goals, and a common reference point for employers, workers, students, labor, educators, and consumers

## Career Pathways

College Tech Prep is two years of secondary education plus an associate degree. This career pathway correlates to the Tech Prep 2 plus 2 program. Health Technologies Tech Prep can be delivered in a variety of educational settings at career/technical centers, comprehensive school districts, or partnering with the consortia community colleges and universities. Examples of delivery options:

- Satellite programming at an associate school
- Health Academy
- Partnerships with Health Care Providers/Facilities for delivery of technical skills

Health Care Exploration is a component of the health care pathway. This component can be delivered through community service learning projects, job shadowing, internships, mentorships, capstone experience/projects, site visits with guest speakers, and college visits.

## **Unit 13: Diagnostic Pathway Competencies**

(Pathway Units: Health pathways are decided by the Tech Prep Consortium and local districts based on the educational setting and the career pathway)

**The student ascertaining the appropriate certificates/credentials associated with the diagnostic pathways program of study determines technical competencies.**

### **Program of Study**

#### **Health Care Core**

Anatomy and Physiology  
Variations of Health  
Communication  
Information Technology Applications  
Systems  
Employability Skills  
Legal Responsibilities  
Ethics  
Safety Practices  
Teamwork  
Health Maintenance Practices

#### **Diagnostic Pathway**

**Under the Ohio Tech Prep initiative, high schools and colleges preparing students for specific health care licensure and certification examinations are individually responsible to ensure that their Tech Prep health program meets all of the requirements of the appropriate accrediting agency(ies).**

## **Diagnostic Pathway Careers**

### **Secondary**

Emergency Medical Tech (Basic)  
Phlebotomist  
Para Optometric  
Pharmacy Aide  
Surgical Technician  
Radiology Aide

### **Associate Degree**

Emergency Medical Tech-Paramedic  
Pharmacy Technician  
Radiographer  
Medical Lab Technician  
Para Optometric  
Certified Surgical Technician  
Diagnostic Medical Sonographer  
Nuclear Medical Technician  
Radiation Therapy Technician

### **Bachelor's Degree**

Cytotechnologist  
Computer Tomography  
Histotechnologist  
Medical Technologist  
Nuclear Medicine Technologist  
Radiographer

## **Professional Careers with education beyond Bachelor's Degree**

Pharmacist

Radiologist

Pathologist

Optometrist

Listed are one or more credentials a student may ascertain in preparing for careers in the diagnostic pathway.

## **Credentials**

### **Secondary**

CPR – Cardiopulmonary Resuscitation  
First Aid  
Certified Phlebotomist  
Emergency Medical Technician  
(Ohio, Age 18 to take exam)

### **Postsecondary**

CPR – Cardiopulmonary Resuscitation  
First Aid  
Certified Phlebotomist  
Emergency Medical Technician  
Certified Surgical Technician



**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 13.1: Interact with client/patient**

**Key Indicators:**

- 13.1.1 Explain planned procedures and goals to clients/patients
- 13.1.2 Respect clients'/patients' cultural differences
- 13.1.3 Use facility guidelines to give health care information
- 13.1.4 Use language appropriate to situation
- 13.1.5 Identify the different types of information collected
- 13.1.6 Access resources needed to remove communication barriers (e.g., client/patient with limited English)
- 13.1.7 Demonstrate privacy and confidentiality measures and procedures (i.e. HIPAA)
- 13.1.8 Maintain professional boundaries

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 13.2: Convey essential client/patient information to appropriate team members**

**Key Indicators:**

- 13.2.1 Observe and report unsafe environmental conditions
- 13.2.2 Recognize and report unusual occurrences
- 13.2.3 Maintain confidentiality (i.e. HIPAA)
- 13.2.4 Recognize and report changes in patient's condition

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 13.3: Apply the principles of proper body mechanics and ergonomics**

**Key Indicators:**

- 13.3.1 Demonstrate proper personal body mechanics and ergonomics
- 13.3.2 Instruct client/patient and family in proper body mechanics
- 13.3.3 Demonstrate proper positioning and moving of client/patient

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 13.4: Process procedural request**

**Key Indicators:**

- 13.4.1 Identify purpose and intent of request (e.g., physician’s order, requisition)
- 13.4.2 Resolve apparent inconsistency or error in the request

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 13.5: Prepare the supplies, equipment, and client/patient for procedures, according to facility protocol**

**Key Indicators:**

- 13.5.1 Identify and gather equipment necessary for procedures
- 13.5.2 Maintain and calibrate equipment
- 13.5.3 Explain procedures and give related information to client/patient
- 13.5.4 “Right Patient, Right Treatment” protocol

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 13.6: Perform procedures to create precise and accurate diagnostic data**

**Key Indicators:**

- 13.6.1 Use appropriate supplies and equipment
- 13.6.2 Monitor quality of sample or specimen
- 13.6.3 Examine results of procedure to assure a quality result
- 13.6.4 Maintain proper documentation of quality assurance procedures

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 13.7: Evaluate the procedure and results****Key Indicators:**

- 13.7.1 Analyze results for diagnostic quality
- 13.7.2 Recognize abnormal results
- 13.7.3 Select alternative protocol, as needed, within established guidelines

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 13.8: Produce and report results using appropriate communication channels****Key Indicators:**

- 13.8.1 Use appropriate means to produce reports
- 13.8.2 Disseminate reports appropriately following HIPAA regulations
- 13.8.3 Report results in a timely manner

# **HEALTH INFORMATICS PATHWAY**

## **UNIT 14**

# HEALTH INFORMATICS PATHWAY

## Career Pathway Description

The Health Informatics Pathway includes careers involved in the management of medical information. Careers in this pathway focus on the compilation, maintenance and retrieval of records, reports and statistical data on clients receiving health services.

## College Tech Prep Program/Student

A College Tech Prep student is enrolled in a state approved Tech Prep education program. A College Tech Prep Program means a program of study that:

- Combines, at a minimum, two years of secondary education (as determined by Ohio definitions) with a minimum of two years of postsecondary education in a non-duplicative, sequential course of study
- Integrates academic and technical instruction and utilizes work-based and work-site learning, where appropriate and available
- Curriculum competencies are driven by standards of business, industry, accreditation, and/or credentialing agencies
- Creates a career pathway of multiple entry and exit points
- Promotes the seamless pathway from secondary to postsecondary education
- Provides value-added educational experiences
- Provides a common language, common goals, and a common reference point for employers, workers, students, labor, educators, and consumers

## Career Pathways

College Tech Prep is two years of secondary education plus an associate degree. This career pathway correlates to the Tech Prep 2 plus 2 program. Health Technologies Tech Prep can be delivered in a variety of educational settings at career/technical centers, comprehensive school districts, or partnering with the consortia community colleges and universities. Examples of delivery options:

- Satellite programming at an associate school
- Health Academy
- Partnerships with Health Care Providers/Facilities for delivery of technical skills

Health Care Exploration is a component of the health care pathway. This component can be delivered through community service learning projects, job shadowing, internships, mentorships, capstone experience/projects, site visits with guest speakers, and college visits.

## **Unit 14: Health Informatics Pathway Competencies**

(Pathway Units: Health pathways are decided by the Tech Prep Consortium and local districts based on the educational program and the

## **Health Informatics Pathway Careers**

### **Secondary**

Admissions Clerk  
Medical Secretary  
Medical Transcriptionist  
Medical Record Coder

Health Unit Coordinator  
Claim Processor  
Clinical Data Specialist  
Patient Information Coordinator

### **Associate Degree**

Medical Records Technician  
Medical Information Coordinator  
Coordinator of Review Activities  
Review Processing/Diagnostic  
Related Groups Specialist

Health Information Coder  
Data Coordinator

### **Bachelor's Degree**

Medical Records Administrator  
Medical Librarian  
Manager, Data Entry  
Research Analyst

Health Information Manager  
Clinical Data Systems Manager

Listed are one or more credentials a student may ascertain in preparing for careers in the information services cluster.

## **Credentials**

### **Secondary**

Certified Health Unit Coordinator

### **Postsecondary**

Certified Health Unit Coordinator  
Registered Records Administrator  
Registered Health Information Technologist  
Certified Medical Billing Specialist  
Certified Medical Transcriptionist  
Certified Medical Record Coder

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 14.1: Prepare information for various qualitative and quantitative purposes**

**Key Indicators:**

- 14.1.1 Analyze information for various purposes
- 14.1.2 Use computer software to generate reports
- 14.1.3 Identify requirements of external agencies (i.e., insurance companies, courts, and regulatory bodies, follow HIPAA regulations)

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 14.2: Retrieve required information from the health care record**

**Key Indicators:**

- 14.2.1 Locate information in the record for various purposes (i.e., filing, coding, or information processing)
- 14.2.2 Recognize standardized coding systems and uniform data definitions
- 14.2.3 Perform data entry of narrative information

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 14.3: Secure data and confidentiality by controlling access and release of information**

**Key Indicators:**

- 14.3.1 Describe the sources, routes, and flow of information within the health care environment
- 14.3.2 Verify system information as accurate and complete



**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 14.4: Identify the content and multiple uses of health information**

**Key Indicators:**

- 14.4.1 Describe the components of the health record
- 14.4.2 Follow legal aspects and regulations of documentation in requests for information (i.e. HIPAA)
- 14.4.3 Transcribe health information

**BIL: Essential**

<b>EDU:</b>	12	AD
	I	P

**Competency 14.5: Maintain health care information**

**Key Indicators:**

- 14.5.1 Use appropriate automated systems
- 14.5.2 Maintain filing, storage, and retrieval systems

# **APPENDICES**

## Appendix A

### RESOURCE LIST

Dental Board, Ohio State  
Vern Riffe Center  
77 South High Street, 18<sup>th</sup> Floor  
Columbus, OH 43215-6135  
614-466-2580  
[www.state.oh.us/den](http://www.state.oh.us/den)  
Contact for: Dental Assistant, Dental  
Hygienist, Dental Lab Technician

Dietetics, Ohio Board of  
Vern Riffe Center  
77 South High Street, 18<sup>th</sup> Floor  
Columbus, OH 43215-6119  
614-466-3291

Education, Department of  
Career-Technical & Adult Education  
Health Careers  
Joyce Boudreau, Consultant  
25 South Front Street  
Columbus, OH 43215-4183  
614-466-3430

Fastrak ITAC  
Located on the Ohio Department of  
Education website:  
[www.ode.state.oh.us/ctae](http://www.ode.state.oh.us/ctae)

Health, Department of  
246 North High Street  
P.O. Box 118  
Columbus, OH 43215  
614-466-3543  
Contact for: TCEP - Training Competency  
Evaluation Program for STNA

Nursing, Board of  
17 South High Street, Suite 400  
Columbus, OH 43215-3413  
[www.state.oh.us/nur](http://www.state.oh.us/nur)  
Contact for: Practical Nursing, Associate  
Degree Nursing, Bachelor of Science in  
Nursing, Dialysis Technician

Occupational Therapy, Physical Therapy  
and Athletic Trainers Board  
Vern Riffe Center  
77 South High Street, 16<sup>th</sup> Floor  
Columbus, OH 43266-0317  
614-466-3774

Ohio Department of Aging  
LeVeque Tower  
50 West Broad Street, 9<sup>th</sup> Floor  
Columbus, OH 43215-3363  
614-466-5500  
Contact for: Home Health Aide

Ohio League of Nursing  
20545 Center Ridge Road, Suite 205  
Rocky River, OH 44116  
440-331-2721

Ohio Optometric Association  
250 East Wilson Bridge Road  
Columbus, OH 43085  
614-781-0708

Ohio Respiratory Care Board  
Vern Riffe Center  
77 South High Street, 18<sup>th</sup> Floor  
Columbus, OH 43266-0777  
614-752-9218  
[www.state.oh.us/rcb](http://www.state.oh.us/rcb)

Optometry, State Board of  
Vern Riffe Center  
77 South High Street, 16<sup>th</sup> Floor  
Columbus, OH 43266-0317  
Toll Free 888-565-3044

Program Accreditation Information:

AAMA - American Association of Medical  
Assistance  
CAAHEP - Commission on Accreditation of  
Allied Health Education Programs  
NLNAC - National League for Nursing  
Accrediting Commission

Public Safety, Department of  
Division of Emergency Medical Services  
1970 West Broad Street  
P.O. Box 182081  
Columbus, OH 43223-1102  
Toll Free 800-233-0785

## Appendix B

### HEALTH TECHNOLOGY PROFILE REVIEW PANELS

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#### **FOCUS GROUP**

January 29, 2001

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- Purpose:** To determine the academic structure of the Health TCP.
- Participants:**
- David Collins**, Dean, Allied Health Technologies, Sinclair Community College
  - Christine Genovese**, Bowling Green State University - Firelands
  - Charlet Grooms**, Nursing Education Consultant, Liaison Member, Board of Nursing
  - Gingy Harshey-Meade**, CEO, Ohio Nurses Association, Ohio Nurses Foundation, Health Pro Network
  - Jan Hinkle**, Dean of Nursing, Marion Technical College
  - Frederick Law**, Lakeland Community College
  - Jane F. Mahowald**, Executive Director, Ohio League of Nursing
  - Lynne Peterson**, Associate Dean, Hocking College
  - Judy Rayburn**, Assistant Dean, Curriculum & Instruction; Chair, Allied Health & Public Service' Acting Chair, Engineering, Central Ohio Technical College
  - John Thornton**, Dean, Health Technologies, Stark State College of Technology
  - Molly Weiland**, Dean, School of Health & Nursing, Hocking College

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#### **FUTURING PANEL**

February 6, 2001

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- Purpose:** To define vision and scope of health and identify critical occupational areas.
- Participants:**
- Amy Bennett**, Assistant Executive Director, Ohio Pharmacists Association

**Louise Conway**, Dietetic Program Director, Columbus State Community College

**Richard Cornett**, CEO, Ohio Optometric Association

**Allen Fabian**, Assistant Director, Technical Training, Roxane Laboratories

**Tom Greene**, Vice President, Human Resources, Medical Mutual of Ohio

**Kerry Loeffler**, Vice President, Greater Cincinnati Health Council

**Carrie McCarter**, Program Manager, OSU Adult Day Program

**Joe Ruggles**, Vice President, Member Development, Ohio Hospital Association

**Lori Shealy**, Board of Directors, Ohio Health Information Management

**John Smalley**, Director of Human Resources, Southeastern Ohio Regional Medical Center

**Linda L Wagner**, Manager, Employee Education, Grant-Medical Center/Riverside Methodist Hospital

**J. C. Wallace**, Ohio Department of Development

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## **ISSUE RESOLUTION PANEL**

April 2, 2001

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**Purpose:** To resolve several concerns related to the structure and content of the new health profile.

**Participants:**

- Mr. Richard Cornett**, CEO, Ohio Optometric Association
- Ms. Charlet Grooms**, Nursing Education Consultant, Liaison Member, Board of Nursing
- Ms. Gingy Harshey-Meade**, CEO, Ohio Nurses Association, Ohio Nurses Foundation, Health Pro Network
- Ms. Jan Hinkle**, Dean of Nursing, Marion Technical College
- Dr. Carolyn Laemmle**, Assistant Dean, Health Technologies, Cincinnati State Technical & Community College

**Ms. Jane F. Mahowald**, Executive Director, Ohio League of Nursing

**Ms. Barbara D. McCarren**, Quality Support, Great Oaks Institute of Technology & Career Development

**Ms. Carrie McCarter**, Program Manager, OSU Adult Day Program

**Ms. Polly Owen**, Chairperson, Nursing & Related Services, Columbus State Community College

**Ms. Lynne Peterson**, Associate Dean, Hocking College

**Dr. Judith D. Rayburn**, Assistant Dean, Curriculum & Instruction; Chair, Allied Health & Public Service; Acting Chair, Engineering, Central Ohio Technical College

**Ms. Jennie Royer**, Tech Prep Director, Stark County Tech Prep Consortium

**Ms. Sandy Rudawsky**, Vice President, Patient Care Services, Berger Health Systems

**Mr. Joe Ruggles**, Vice President, Member Development, Ohio Hospital Association

**Mr. John Smalley**, Director, Human Resources, Southeastern Ohio Regional Medical Center

**Ms. Kathy Sommers**, Program Coordinator, Wayne County Schools Career Center

**Mr. John Thornton**, Dean, Health Technologies, Stark State College of Technology

**Ms. Linda L. Wagner**, Manager, Education Services, Grant Medical Center/Riverside Methodist Hospital

**Ms. Molly Weiland**, Dean, School of Health & Nursing, Hocking College

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**BUSINESS/INDUSTRY/LABOR REVIEW PANEL**

May 2, 2001

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**Purpose:** To identify essential and recommended skills for health professionals.

**Participants:** **Ms. Dala DeWitt**, Director, School of Nursing/Education, Community Hospital

**Mr. Allen Fabian**, Associate Director, Operations Training, Boehringer-Ingelheim, Roxane Laboratories, Inc.

**Ms. Rosemary Feka**, Nurse Educator, Bureau of Children with Medical Handicaps, Ohio Department of Health

**Ms. R. Ann Fitzgerald**, Director of Leadership Development & Career Resource Center, Humility of Mary Health Partners

**Mr. Mike Flugge**, Enforcement Officer, Ohio State Dental Board

**Ms. Charlet Grooms**, Nursing Education Consultant, Liaison Member, Board of Nursing

**Ms. Mandy Haiber**, Licensed Optician, Certified Paraoptometrist, Ohio Optometric Association

**Ms. Jani Hendrix**, Leadership Trainer/Coordinator, Aetna US Health Care

**Mr. Paul Laemmle**, Retired, Vice President, Laboratory Services, The Health Alliance

**Mr. William S. Lee**, Deputy Director of Employee Services, Ohio Department of Health

**Mr. Christopher H. Logsdon**, Executive Director, Ohio Respiratory Care Board

**Ms. Jane F. Mahowald**, Executive Director, Ohio League of Nursing

**Ms. Cathy Moore**, RN, Nurse Educator, VA Medical Center

**Ms. Kathy Phillips**, Enforcement Officer/Investigator, Ohio State Dental Board

**Mr. Louis Pomerantz**, Ohio Department of Health

**Ms. J. Erin Riehle**, Director, Project Search, Children's Hospital Medical Center

**Ms. Rita Snyder**, Regional Director of Accreditation, Mercy Health Partners

**Ms. Kaye J. Vahalik**, RHIA, Independent Health Information Consultant

**Ms. Linda L. Wagner**, Manager, Employee Education Services, Grant Medical Center/Riverside Methodist Hospital



**Ms. Rebecca Zechman**, Director of Education Services, Pro Medica Health System

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**TECHNICAL EDUCATOR REVIEW PANEL**

May 2, 2001

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**Purpose:** To identify when and to what depth essential and recommended health skills should be addressed.

**Participants:**

**Ms. Jennifer Barr**, MT, M.Ed., CMA, Allied Health Tech Prep Coord., Sinclair Community College

**Kay Biggs**, CMA, Coordinator, Medical Assisting, Columbus State Community College

**Mr. John Blauch**, RN, EMT-P; Instructor, Allied Health Tech, Auburn Career Center

**Mr. James Byrne**, BS, RT (R), Coordinator, Radiography, Columbus State Community College

**Ms. Julie Gill**, RT Program Director & Assistant Professor, Muskingum Area Technical College

**Ms. Rebecca Grace**, Medical Instructor, Licking County Joint Vocational School

**Dr. Karen J. Hale**, Dept. Chair, Technical Education; Instructor, Medical Technologies, Mayfield Excell TECC

**Ms. Vicki J. Huntsman**, Asst. Professor, Medical Laboratory/Chemistry, Muskingum Area Technical College

**Ms. Loxie Kistler**, Academic Director, Allied Health, University of Cincinnati Clermont

**Dr. Carolyn Laemmle**, Assistant Dean, Health Technology, Cincinnati State Community College

**Ms. Janell Lang**, Dean, Health Technologies, Owens Community College

**Ms. Keri Latham**, Medical Assisting Instructor, Wayne County School Career Center

**Ms. Myrna Little**, Instructor, Allied Health Technology, U. S. Grant Career Center

**Ms. Anne Loochtan**, Chairperson, Allied Health, Columbus State Community College

**Ms. Barbara D. McCarren**, Quality Support, Great Oaks Institute of Technology & Career Development

**Ms. Ruth Ann Ravenna**, Clinical Science I Instructor/Clinical Coord., Cincinnati Public Schools, Hughes Center

**Ms. Robin Schoonover**, Instructor, Health Tech Prep, Buckeye Hills Career Center

**Ms. Karen Short**, Director, Practical Nursing, Northwest State Community College

**Ms. Kathy Sommers**, Program Coordinator, Wayne County Schools Career Center

**Dr. Janis Thompson**, Instructor of Biology, Lorain County Community College

**Ms. Mary Van Sickle**, Supervisor, Health Technology, Pickaway-Ross JVSD

**Ms. Jill Vanuch**, Instructor, JVS Springfield-Clark County

**Ms. Lyne Walby**, Medical Tech Prep Instructor, Vanguard Tech Prep

**Ms. Karen Weck**, Medical Technologies Program Coordinator, Millstream CTC, Findlay City Schools

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## **TECHNICAL WRITING TEAM**

May-July, 2001

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**Purpose:** To review the recommendations and editing of previous panels and create a document for final review.

**Participants:**

**Joyce Boudreau**, Facilitator, Consultant, Health Careers Education, Career-Technical & Adult Education, Ohio Department of Education

**Carolyn Laemmle**, Assistant Dean, Health Technologies, Cincinnati State Technical & Community College

**Barbara D. McCarren**, Quality Support, Great Oaks Institute of Technology & Career Development

**J. Erin Riehle**, Director, Project Search, Children's Hospital Medical Center

**Kathy Sommers**, Program Coordinator, Wayne County Schools Career Center

**Mary Van Sickle**, Supervisor, Health Technology, Pickaway-Ross Joint Vocational School District

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## STAKEHOLDER REVIEW PANEL

November 2, 2001

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- Purpose:** To refine Ohio Health Technology Competency Profile through dialogue among all stakeholders.
- Participants:**
- Jennifer Barr**, Chairperson, Medical Assistant Technology, Sinclair Community College
  - Kay Biggs**, CMA, Coordinator, Medical Assistant, Columbus State Community College
  - John Blauch**, RN, Allied Health Tech Instructor, Auburn Career Center
  - Allen T. Fabian**, Associate Director, Operations Training, Boehringer Ingelheim, Roxane Laboratories, Inc.
  - Rosemary Feka**, RN, Nurse Educator, Bureau for Children with Medical Handicaps/ODH
  - Rebecca Grace**, Medical Instructor, Licking County Joint Vocational School
  - Dr. Karen J. Hale**, Technical Education Chairman, Mayfield City Schools
  - Vicki J. Huntsman**, Assistant Professor, Medical Laboratory/Chemistry, Muskingum Area Technical College
  - Carolyn Laemmle**, Ed.D., MT (ASCP); Health Division Faculty, Cincinnati State Technical and Community College
  - Paul Laemmle**, Retired, Vice President, Laboratory Services, The Health Alliance
  - Janell Lang**, Dean, Health Technologies, Owens Community College
  - William S. Lee**, Deputy Director, Ohio Department of Health
  - Myrna Little**, RN, BSN, M.Ed.; Allied Health Tech Prep Instructor, U. S. Grant Career Center
  - Jackie Loversidge**, Nursing Education Consultant, Ohio Board of Nursing
  - Jane F. Mahowald**, Executive Director, Ohio League of Nursing
  - Barbara D. McCarren**, RN, BS Psychology, M.Ed.; Supervisor, Great Oaks Institute of Technology & Career Development
  - Cathy Moore**, RN, Nurse Educator, VA Medical Center
  - Ruth Ann Ravenna**, Health Pathway Manager  
Southwest Ohio Tech Prep Consortium

**J. Erin Riehle**, Director, Disability Services, Cincinnati Children's Hospital

**Kathy Sommers, RN, MBA**; Program Coordinator, Wayne County Schools Career Center

**Dr. Janis Thompson**, Assistant Professor of Biology, Lorain County Community College

**Mary Van Sickle, RN, BSN, M.Ed.**; Supervisor of Health Technology, Pickaway-Ross CTC

**Karen Weck**, Medical Technologies Instructor, Findlay City Schools

**Ruth Yerardi**, Nurse Executive, VA Medical Center

**Rebecca Zechman**, Director of Educational Services, ProMedica Health System

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## TECHNICAL WRITING REVISION PANEL

April 20, 2004

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**Purpose:** Revise and conform the TCP to recent legislative changes.

**Participants:** **Cyndy Jackman**, Clinical Director II, Cincinnati Children's Hospital Medical Center

**Carolyn G. Laemmle**, Clinical Laboratory Technology Faculty, Cincinnati State Technical and Community College

**Barbara D. McCarren**, Curriculum and Instructional Specialist, Great Oaks Institute of Technology and Career Development

**Mary B. Van Sickle**, Supervisor of Health Technology, Pickaway-Ross Career and Technology Center

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## ELECTRONIC REVIEW PANEL

May – July 2004

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**Purpose:** Review legislative revisions

**Participants:** **Barbara Arnold**, Director, Volunteer Resources, Information Desk & Concierge Services, The Toledo Hospital/Toledo Children's Hospital

**Allen Fabian**, Associate Director of Operations Training,  
Boehringer Ingelheim, Roxane Laboratories, Inc.

**Kathy Hemmelgarn**, RN, MS, Mercer County Community  
Hospital Educational Services

**Nancy Lashey**, RN, College Tech Prep Mentor, Marion Area  
Partners TP Consortium

**Cathy Moore**, Nurse Educator, VAMC

**Janet Nelson**, Medical Assistant Instructor, Tri Star Compact  
Memorial High School

**Ruth Ann Ravenna**, Health Pathway Manager, Southwest Ohio  
Tech Prep Consortium

**Erin Riehl**, Director of Disabilities Services, Cincinnati Children's  
Hospital

**Dr. Janis Thompson**, Assistant Professor of Biology, Lorain  
Community College

**Karen Walker**, Diversified Health Instructor, Four County Career  
Center

**Suzanne Wambold PhD, RN, RDCS**, Chair, Health Professions,  
University of Toledo

**Ruth Yeradi**, Nurse Executive, VAMC

## Appendix C

### SAMPLE PROGRAM DELIVERY MODELS

(Incorporate appropriate academic coursework)

#### Delivery Models Examples

##### Example 1:

Junior Year: Core Units 1-11  
 Senior Year: 1<sup>st</sup> Semester - Unit 12: Therapeutic Pathway &/or  
 Unit 13: Diagnostic Pathway  
 2<sup>nd</sup> Semester - Internships in Therapeutic or Diagnostic Pathway  
 Post-Secondary: Specialization area  
 Diagnostic: Rad Tech or Med Lab  
 Therapeutic: PN, ADN

##### Example 2:

Junior Year: Core Units 1-11  
 Senior Year: 1<sup>st</sup> Semester – Unit 14: Health Informatics Pathway  
 2<sup>nd</sup> Semester - Internships in Informatics Pathway  
 Post-Secondary: Specific to H.I.T.

##### Example 3:

Junior Year: Core Units 1-11  
 Senior Year: Unit 12, 13 & 14: Three (3) pathways offered as choices:  
 Unit 12: Diagnostic Pathway: Medical Assisting, Dental Assisting  
 Unit 13: Therapeutic Pathway: LPN, Sports Medicine, Pre-Nursing  
 Unit 14: Informatics Pathway: Health Unit Coordinator, Medical  
 Transcriptionist  
 Post-Secondary: Choose specialization in the pathway

##### Example 4:

Junior Year: 1<sup>st</sup> Semester - Units 1-11  
 2<sup>nd</sup> Semester - Unit 13: Diagnostic Pathway  
 Senior Year: More specialized area such as Dental Assisting, Phlebotomy, EMT and an  
 Internship  
 Post-Secondary: Specialization in pathway

##### Example 5:

Junior Year: Core Units 1-11  
 Senior Year: Unit 12: Therapeutic Pathway with job shadowing. Internships required  
 during the last quarter.  
 Post-Secondary: Specialization area of interest

## **Appendix D**

### **SAMPLE PATHWAY FORMS**

Sample forms on the following pages are templates used in determining the seamless pathway for programs.

(High School)

(Career Center)

(Community College)

**College Tech Prep Program**

(School Year)

9 <sup>th</sup> GRADE	CREDIT	10 <sup>th</sup> GRADE	CREDIT	11 <sup>th</sup> GRADE	CREDIT	12 <sup>th</sup> GRADE	CREDIT
<b>Recommended Prerequisites for Grade 11 of Tech Prep</b>				<b>Recommended for College Portion of Tech Prep</b>			
<b>Junior Year Tech Center/College Technical Courses</b>				<b>Senior Year Tech Center/College Technical Courses</b>			
<b>*Technical Subjects</b>		<b>On-transcript _____ College Credits</b>		<b>*Technical Subjects</b>		<b>_____ College Credits</b>	
<b>Articulated Credits: - _____ Community College</b>							

This template is used to facilitate Ohio College Tech Prep Pathways and is submitted by the Ohio College Tech Prep Consortium with the application.  
 Revised 6/20/03



**DEGREE: ASSOCIATE OF** \_\_\_\_\_  
**- College Tech Prep** \_\_\_\_\_

(Career Center)

(Name of College Tech Prep Program)

<b>Term Taken</b>	<b>First Term</b>	<b>Pre-requisite</b>	<b>Co-requisite</b>	<b>Quarter Credit Hours</b>	<b>University Pathway Equivalent</b>	<b>Completed as Tech Prep Component</b>
<b>Term Taken</b>	<b>Second Term</b>	<b>Pre-requisite</b>	<b>Co-requisite</b>			
<b>Term Taken</b>	<b>Third Term</b>	<b>Pre-requisite</b>	<b>Co-requisite</b>			

**DEGREE: ASSOCIATE OF** \_\_\_\_\_  
**- College Tech Prep** \_\_\_\_\_

(Career Center)

(Name of College Tech Prep Program)

<b>Term Taken</b>	<b>Fourth Term</b>	<b>Pre-requisite</b>	<b>Co-requisite</b>	<b>Quarter Credit Hours</b>	<b>University Pathway Equivalent</b>	<b>Completed as Tech Prep Component</b>
<b>Term Taken</b>	<b>Fifth Term</b>	<b>Pre-requisite</b>	<b>Co-requisite</b>			
<b>Term Taken</b>	<b>Sixth Term</b>	<b>Pre-requisite</b>	<b>Co-requisite</b>	<b>Quarter Credit Hours</b>	<b>University Pathway Equivalent</b>	<b>Completed as Tech Prep Component</b>

## Appendix E

### ACADEMIC AND CAREER CLUSTER ITACs

Health Services Career Cluster ITAC (Integrated Technical & Academic Competencies) consists of the foundational competencies common to health occupations. They provide a broad foundation for entry-level, technical and professional careers. ITACs are available from the Vocational Instructional Materials Laboratory at the Center on Education and Training for Employment, The Ohio State University, Columbus, Ohio, 1-800-848-4815, [www.cete.org/products](http://www.cete.org/products)

Fastrak (Specialization) ITACs consists of competencies critical to success in a specific health occupation. These are available from the Ohio Department website at [www.ode.state.oh.us/ctae](http://www.ode.state.oh.us/ctae).

Recommended Academics. The Health Stakeholders Panel recommended the following academic coursework in preparing for secondary graduation requirements and successful completion of a Tech Prep Health Care program. Availability of academic course offerings may require alternatives such as post-secondary options or distance learning. Secondary graduation requirements are:

- English Language Arts - four years;
- Math - three years recommended Algebra completed by end of tenth grade;
- Science - 3 years with recommended Biology, Chemistry, and Physics;
- Social Studies - recommended basic Economics/Social Studies, U.S. History, and Government;
- Foreign Language and Comprehensive Arts - should be completed by the end of the tenth grade; and
- Electives - such as, Physical Education and Health, should be completed by the end of tenth grade.

## Ohio Academic Performance Objectives

The Ohio Health Technical Competency Profile requires rigorous academic preparation so all students will achieve the academic performance objectives established by the Ohio Department of Education. A listing of sample academic performance objectives follow on pages 77-80. For a more detailed explanation of the Ohio Academic Objectives contact:

Karen Paschal  
Document Resource Center  
Ohio Department of Education Bookstore  
25 South Front Street  
Columbus OH 43215  
Website: [www.ode.state.oh.us](http://www.ode.state.oh.us)  
Email: [kpachal@ode.state.oh.us](mailto:kpachal@ode.state.oh.us)  
Phone: 614-728-3471  
Fax: 614-752-3956

Please request documents by the following titles:

Model Competency-Based Mathematics Program

Science: Ohio's Model Competency-Based Program

Model Competency-Based Language Arts Program

Social Studies: Ohio's Model Competency-Based Program

Comprehensive Arts Education: Ohio's Model Competency-Based Program

Foreign Languages: Ohio's Model Competency-Based Program

The Ohio Academic Content Standards are under revision. Language Arts and Math have been adopted by the Ohio Board of Education and will be posted on the website at [www.ode.state.oh.us](http://www.ode.state.oh.us)

**Ohio Academic Performance Objectives****Mathematics Performance Objectives****11-12 Number, Number Sense & Operation**

- A. Demonstrate that vectors and matrices are systems having some of the same properties of the real number system.
- B. Develop an understanding of properties of and representations for addition and multiplication
- C. Apply factorials and exponents, including fractional exponents, to solve practical problems.
- D. Demonstrate fluency in operations with real numbers, vectors and matrices, using mental computation or paper and pencil calculations for simple cases and technology for more complicated cases.
- E. Represent and compute with complex numbers.

**11-12 Measurement**

- A. Explain differences among accuracy, precision and error, and describe how each of those can affect solutions in measurement situations.
- B. Apply various measurement scales to describe phenomena and solve problems.
- C. Estimate and compute areas and volume in increasingly complex problem situations.
- D. Solve problem situations involving derived measurements; e.g., density, acceleration.

**11-12 Geometry & Spatial Sense**

- A. Use trigonometric relationships to verify and determine solutions in problem situations.
- B. Represent transformations within a coordinate system using vectors and matrices.

**11-12 Patterns, Functions & Algebra**

- A. Analyze functions by investigating rates of change, intercepts, zeros, asymptotes, and local and global behavior.
- B. Use the quadratic formula to solve quadratic equations that have complex roots.
- C. Use recursive functions to model and solve problems; e.g., home mortgages, annuities.
- D. Apply algebraic methods to represent and generalize problem situations involving vectors and matrices.

**11-12 Data Analysis & Probability**

- A. Create and analyze tabular and graphical displays of data using appropriate tools, including spreadsheets and graphing calculators.
- B. Use descriptive statistics to analyze and summarize data, including measures of center, dispersion, correlation and variability.
- C. Design and perform a statistical experiment, simulation or study; collect and interpret data; and use descriptive statistics to communicate and support predictions and conclusions.
- D. Connect statistical techniques to applications in workplace and consumer situations.

**11-12 Mathematical Process**

- A. Construct algorithms for multi-step and non-routine problems.
- B. Construct logical verifications or counterexamples to test conjectures and to justify or refute algorithms and solutions to problems.
- C. Assess the adequacy and reliability of information available to solve a problem.
- D. Select and use various types of reasoning and methods of proof.
- E. Evaluate a mathematical argument and use reasoning and logic to judge its validity.
- F. Present complete and convincing arguments and justifications, using inductive and deductive reasoning, adapted to be effective for various audiences.
- G. Understand the difference between a statement that is verified by mathematical proof, such as a theorem, and one that is verified empirically using examples or data.
- H. Use formal mathematical language and notation to represent ideas, to demonstrate relationships within and among representation systems, and to formulate generalizations.
- I. Communicate mathematical ideas orally and in writing with a clear purpose and appropriate for a specific audience.
- J. Apply mathematical modeling to workplace and consumer situations, including problem formulation, identification of a mathematical model, interpretation of solution within the model, and validation to original problem situation.

**Science Performance Objectives****11-12 Earth and Space Science**

- A. Explain how technology can be used to gather evidence and increase our understanding of the universe.
- B. Describe how Earth is made up of a series of interconnected systems and how a change in one system affects other systems.
- C. Explain that humans are an integral part of the Earth's system and the choices humans make today impact natural systems in the future.
- D. Summarize the historical development of scientific theories and ideas and describe emerging issues in the study of Earth and space sciences.

**11-12 Life Sciences**

- A. Explain how processes at the cellular level affect the functions and characteristics of an organism.
- B. Explain how humans are connected to and impact natural systems.
- C. Explain how the molecular basis of life and the principles of genetics determine inheritance.
- D. Relate how biotic and abiotic global changes have occurred in the past and will continue to do so in the future.
- E. Explain the interconnectedness of the components of a natural system.
- F. Explain how human choices today will affect the quality and quantity of life on earth.
- G. Summarize the historical development of scientific theories and ideas within the study of life sciences.

**11-12 Physical Sciences**

- A. Explain how variations in the arrangement and motion of atoms and molecules form the basis of a variety of biological, chemical and physical phenomena.
- B. Recognize that some atomic nuclei are unstable and will spontaneously break down.
- C. Describe how atoms and molecules can gain or lose energy only in discrete amounts.
- D. Apply principles of forces and motion to mathematically analyze, describe and predict the net effects on objects or systems.
- E. Summarize the historical development of scientific theories and ideas within the study of physical sciences.

**11-12 Science and Technology**

- A. Predict how human choices today will determine the quality and quantity of life on Earth.

**11-12 Scientific Inquiry**

- A. Make appropriate choices when designing and participating in scientific investigations by using cognitive and manipulative skills when collecting data and formulating conclusions from the data.

**11-12 Scientific Ways of Knowing**

- A. Explain how scientific evidence is used to develop and revise scientific predictions, ideas or theories.
- B. Explain how ethical considerations shape scientific endeavors.
- C. Explain how societal issues and considerations affect the progress of science and technology.

**Language Arts Performance Objectives****11-12 Acquisition of Vocabulary**

- A. Verify meanings of words by the author's use of definition, restatement, example, comparison, contrast and cause and effect.
- B. Distinguish the relationship of word meanings between pairs of words encountered in analogical statements.
- C. Explain the influence of the English language on world literature, communications and popular culture.
- D. Apply knowledge of roots, affixes and phrases to aid understanding of content area vocabulary.
- E. Use multiple resources to enhance comprehension of vocabulary.

**11-12 Reading Process: Concepts of Print, Comprehension Strategies and Self-Monitoring Strategies**

- A. Apply reading comprehension strategies to understand grade- appropriate texts.
- B. Demonstrate comprehension of print and electronic text by responding to questions (e.g., literal, inferential, evaluative and synthesizing).
- C. Use appropriate self-monitoring strategies for comprehension.

**11-12 Reading Applications: Informational, Technical and Persuasive Text**

- A. Analyze the features and structures of documents and critique them for their effectiveness.
- B. Identify and analyze examples of rhetorical devices and valid and invalid inferences.
- C. Critique the effectiveness and validity of arguments in text and whether they achieve the author's purpose.
- D. Synthesize the content from several sources on a single issue or written by a single author, clarifying ideas and connecting them to other sources and related topics.
- E. Analyze an author's implicit and explicit philosophical assumptions and beliefs about a subject.

**11-12 Reading Applications: Literary Text**

- A. Analyze and evaluate the five elements (e.g., plot, character, setting, point of view and theme) in literary text.
- B. Explain ways characters confront similar situations and conflict
- C. Recognize and analyze characteristics of sub-genres and literary periods.
- D. Analyze how an author uses figurative language and literary techniques to shape plot and set meaning
- E. Critique an author's style.

**11-12 Writing Process**

- A. Formulate writing ideas, and identify a topic appropriate to the purpose and audience.
- B. Select and use an appropriate organizational structure to refine and develop ideas for writing.
- C. Use a variety of strategies to revise content, organization and style, and to improve word choice, sentence variety, clarity and consistency of writing.
- D. Apply editing strategies to eliminate slang and improve conventions.
- E. Apply tools to judge the quality of writing.
- F. Prepare writing for publication that follows an appropriate format and uses a variety of techniques to enhance the final product.

**11-12 Writing Applications**

- A. Compose reflective writings that balance reflections by using specific personal experiences to draw conclusions about life.
- B. Write responses to literature that provide an interpretation, recognize ambiguities, nuances and complexities and that understand the author's use of stylistic devices and effects created.
- C. Produce functional documents that report, organize and convey information and ideas accurately, foresee readers' problems or misunderstandings and that include formatting techniques that are user friendly.
- D. Produce informational essays or reports that establish a clear and distinctive perspective on the subject, include relevant perspectives, take into account the validity and reliability of sources and provide a clear sense of closure.

- E. Use a range of strategies to elaborate and persuade when appropriate, including appeal to logic, use of personal anecdotes, examples, beliefs, expert opinions or cause-effect reasoning.

### **11-12 Writing Conventions**

- A. Use correct spelling conventions.
- B. Use correct punctuation and capitalization.
- C. Demonstrate understanding of the grammatical conventions of the English language.

### **11-12 Research**

- A. Formulate open-ended research questions suitable for inquiry and investigation and adjust questions as necessary while research is conducted.
- B. Compile, organize and evaluate information, take notes and summarize findings.
- C. Evaluate the usefulness and credibility of data and sources and synthesize information from multiple sources.
- D. Use style guides to produce oral and written reports that give proper credit for sources (e.g., words, ideas, images and information) and include an acceptable format for source acknowledgement.
- E. Communicate findings, reporting on the substance and processes orally, visually and in writing or through multimedia.

### **11-12 Communications: Oral And Visual**

- A. Use a variety of strategies to enhance listening comprehension.
- B. Evaluate the clarity, quality, effectiveness and overall coherence of a speaker's key points, arguments, evidence, organization of ideas, delivery, diction and syntax.
- C. Select and use effective speaking strategies for a variety of audiences, situations and purposes.
- D. Give persuasive presentations that structure ideas and arguments in a logical fashion, clarify and defend positions with relevant evidence and anticipate and address the audience's concerns.
- E. Give informational presentations that contain a clear perspective, present ideas from multiple sources in logical sequence and include a consistent organizational structure.
- F. Give presentations using a variety of delivery methods, visual displays and technology.

## **Technology Performance Objectives**

### **Nature of Technology:**

#### **9-12**

- A. Synthesize information, evaluate and make decisions about technologies.
- B. Apply technological knowledge in decision-making.
- C. Examine the synergy between and among technologies and other fields of student when solving technological problems.

### **Technology and Society Interaction:**

#### **9-12**

- A. Interpret and practice responsible citizenship relative to technology.
- B. Demonstrate the relationship among people, technology and the environment.
- C. Interpret and evaluate the influence of technology throughout history, and predict its impact on the future.
- D. Analyze ethical and legal technology issues and formulate solutions and strategies that foster responsible technology usage.
- E. Forecast the impact of technological products and systems.

### **Technology for Productivity Applications:**

#### **9-12**

- A. Integrate conceptual knowledge of technology systems in determining practical applications for learning and technical problem-solving.



- B. Identify, select and apply appropriate technology tools and resources to produce creative works and to construct technology-enhanced models.

**Technology for Communication Applications:**

**9-12**

- A. Apply appropriate communication design principles in published and presented projects.
- B. Create, publish and present information, utilizing formats appropriate to the content and audience.
- C. Identify communication needs, select appropriate communication tools and design collaborative interactive projects and activities to communicate with others, incorporating emerging technologies.

**Technology and Information Literacy:**

**9-12**

- A. Determine and apply an evaluative process to all information sources chosen for a project.
- B. Apply a research process model to conduct research and meet information needs.
- C. Formulate advanced search strategies, demonstrating an understanding of the strengths and limitations of the Internet, and evaluate the quality and appropriate use of Internet resources.
- D. Evaluate choices of electronic resources and determine their strengths and limitations.

**Design:**

**9-12**

- A. Identify and produce a product or system using a design process, evaluate the final solution and communicate the findings.
- B. Recognize the role of teamwork in engineering design and of prototyping in the design process.
- C. Understand and apply research, development and experimentation to problem solving.

**Designed World:**

**9-12**

- A. Classify, demonstrate, examine, and appraise energy and power technologies.
- B. Classify, demonstrate, examine, and appraise transportation technologies.
- C. Classify, demonstrate, examine, and appraise manufacturing technologies.
- D. Classify, demonstrate, examine, and appraise construction technologies.
- E. Classify, demonstrate, examine, and appraise information and communication technologies.
- F. Classify, demonstrate, examine, and appraise medical technologies.
- G. Classify, demonstrate, examine, and appraise agricultural and related biotechnologies.

**Social Studies Performance Objectives**

**History: 11-12**

- A. Explain the patterns of historical continuity and change by challenging arguments of historical inevitability.
- B. Use historical interpretations to explain current issues.

**People in Societies:**

**11-12**

- A. Analyze how issues may be viewed differently by various cultural groups.
- B. Identify the causes of political, economic and social oppressions and analyze ways individuals, organizations and countries respond to resulting conflicts.
- C. Explain the role of diverse cultural institutions in shaping American society.

**Geography:**

**11-12**

- A. Explain how the character and meaning of a place reflect a society's economics, politics, social values, ideology and culture.

- B. Evaluate the consequences of geographic and environmental changes resulting from governmental policies and human modifications to the physical environment.
- C. Use appropriate data sources and geographic tools to analyze and evaluate public policies.

**Economics:**

**11-12**

- A. Analyze how scarcity of productive resources affects supply, demand, inflation and economic choices.
- B. Identify factors which inhibit or spur economic growth and cause expansions or recessions.
- C. Explain how voluntary worldwide trade, specialization and interdependence among countries affect standards of living and economic growth.
- D. Analyze the role of fiscal and regulatory policies in a mixed economy.
- E. Explain the use of a budget in making personal economic decisions and planning for the future.

**Government:**

**11-12**

- A. Evaluate, take and defend positions about issues concerning the alignment of the characteristics of American democracy with realities in the United States today.
- B. Explain how the U.S. Constitution has evolved including its philosophical foundations, amendments and court interpretations.
- C. Analyze how citizens participate in the election process in the United States.

**Citizenship Rights and Responsibilities:**

**11-12**

- A. Evaluate various means for citizens to take action on a particular issue.
- B. Explain how the exercise of a citizen's rights and responsibilities helps strengthen a democracy.

**Social Studies Skills and Methods:**

**11-12**

- A. Obtain and evaluate information from public records and other resources related to a public policy issue.
- B. Critique data and information to determine the adequacy of support for conclusions.
- C. Develop a research project that identifies the various perspectives on an issue and explain a resolution of that issue.
- D. Work in groups to analyze an issue and make decisions.

**Foreign Language Performance Objectives**

**Communication: Communicate in Languages other than English**

**9-12**

- A. Interact using extended spoken signed or written communication by providing and obtaining information
- B. Express a wide range of feelings and emotions, and discuss and support opinions
- C. Use a wide range of strategies to negotiate meaning
- D. Give and follow a series of complex directions
- E. Interact in a wide range of situations using culturally authentic language and gestures
- F. Follow complex oral, signed or written directions and requests
- G. Use a variety of reading and listening strategies to derive meaning from texts
- H. Analyze information from a variety of oral, written and visual sources by summarizing, critiquing and explaining texts
- I. Create presentations on a range of original or authentic expressive products
- J. Present information and ideas on a range of topics
- K. Apply age-appropriate writing process strategies to produce a variety of documents for publication

**Culture: Gain knowledge and understanding of other cultures**

**9-12**

- A. Analyze, discuss and report on a wide variety of practices and perspectives of the target culture
- B. Participate in and discuss a wide variety of cultural practices
- C. Analyze, discuss and report on a wide variety of products and perspectives of the target culture
- D. Analyze, discuss and report on significant contributions from the target culture

**Connections: Connect with other disciplines and culture information**

**9-12**

- A. Investigate, analyze and present concepts from across disciplines
- B. Investigate, analyze and present information and viewpoints from the target culture using authentic sources, and apply understanding across disciplines

**Comparisons: Develop insight into the nature of language and culture**

**9-12**

- A. Analyze and discuss linguistic structures and conventions of the target language and English
- B. Analyze and explain how the target language and English express meaning through variations in style
- C. Analyze and discuss how products, practices and perspectives of the student's own culture and the target culture overlap and differ
- D. Discuss the concept of culture through analysis of products, practices and perspectives of the target culture and students' own culture

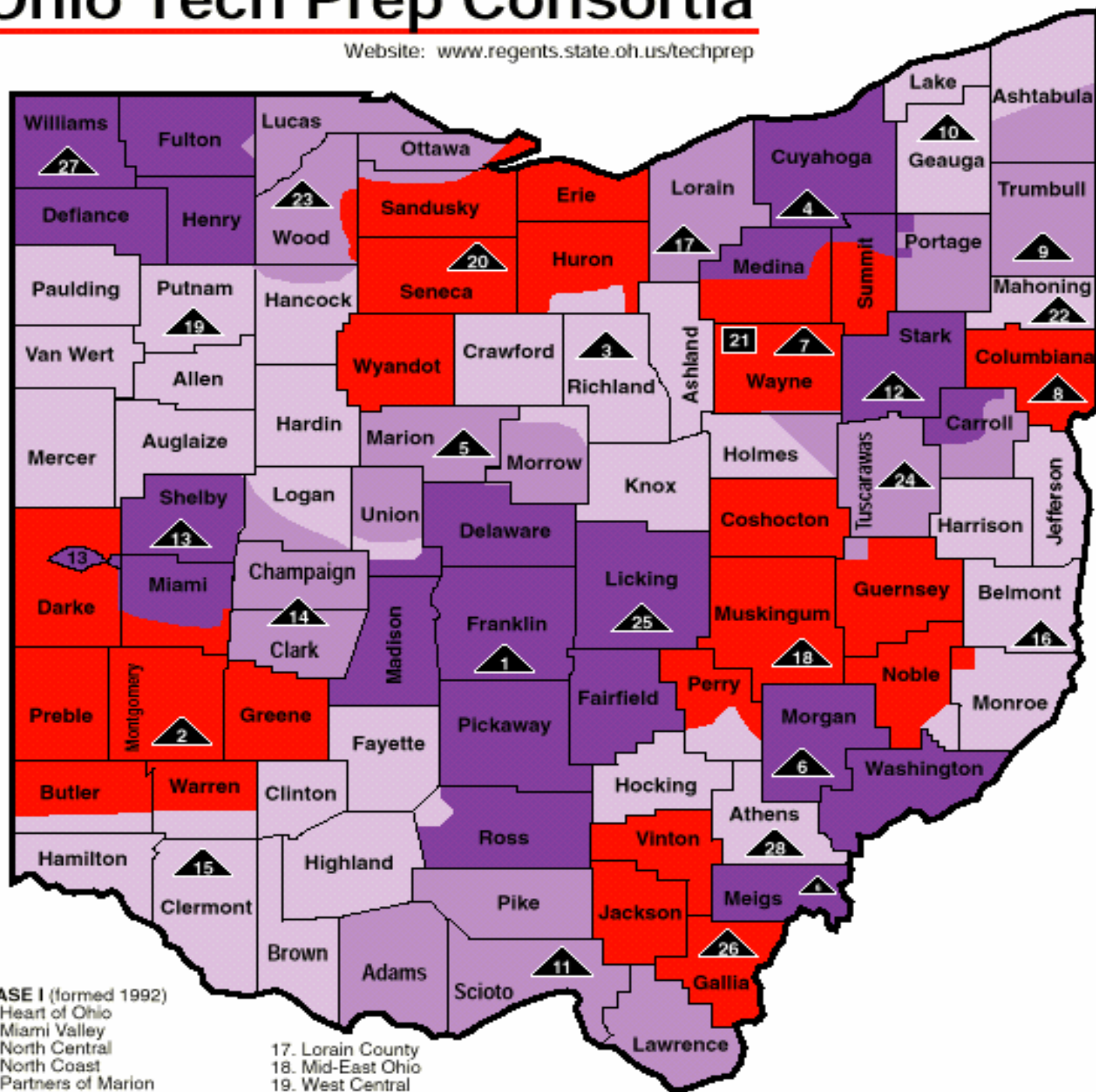
**Communities: Participate in multilingual communities and cultures at home and around the world**

**9-12**

- A. Provide information or services to individuals, the school or the community using knowledge of the target language and culture
- B. Perform original or authentic works for a school or community event
- C. Sustain communications with people locally and around the world
- D. Report information about and personal reactions to various products, media and services of the target culture
- E. Attend, participate in or view target culture events and describe to others
- F. Evaluate and discuss how understanding of another language and culture enhances job skills and career options
- G. Develop evaluative tools and implement group strategies to complete tasks and solve problems

# Ohio Tech Prep Consortia

Website: [www.regents.state.oh.us/techprep](http://www.regents.state.oh.us/techprep)



## PHASE I (formed 1992)

1. Heart of Ohio
2. Miami Valley
3. North Central
4. North Coast
5. Partners of Marion
6. Washington-Morgan-Meigs
17. Lorain County
18. Mid-East Ohio
19. West Central
20. Workforce Development Council

## PHASE II (formed 1993)

7. Akron Area
8. Columbus Area
9. Kent
10. Lakeland
11. Ohio South
12. Stark County
13. Upper Miami Valley

## PHASE III (formed 1994)

14. Clark State
15. Greater Cincinnati
16. Eastern Ohio Valley

## PHASE IV (formed 1995)

21. Union State Agricultural Education Institute (with programs at locations throughout Ohio)
22. Mahoning Area
23. Northwest Ohio
24. Tuscarawas Valley

## PHASE V (formed 1996)

25. East Central Ohio
26. Ohio Valley
27. Maumee Valley
28. Southeast

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**Note: Consortia 8, 9 and 24 merged with headquarters at #9**