


# Department of Education & Workforce

# Health Sciences and Allied Professions




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# Agenda and Outline

| Topic | Objective Outcome |
|---|---|
| **Introduction and Priorities** | A brief introduction along with providing updates and priorities for the Ohio Department of Education and Workforce, Office of Career Technical Education. |
| **Overview and Updated Statistics** | An overview and breakdown of health science career technical education pathways and courses along with recent educational statistics shall be shared to reinforce workforce demands. |
| **Standards Revision for Health Sciences** | Attendees will walk through a brief process with the health science standards revision starting in 2027. |
| **Industrial Shifts** | Workforce needs and growth areas will be highlighted to support planning and program-specific educational alignment. |
| **How Career Technical Education Enhances the Workforce** | Finding the correlation between career technical education and how it connects to the workforce. |
| **Middle School Progression** | An overview of middle school career technical education will be highlighted with current laws and recommendations shall be addressed. |
| **Professional Developments** | Instructors will be given information regarding professional development updates and opportunities to attend along with delivery of health science teaching strategies to implement. |
| **Q&A** | An open forum will allow participants to gain clarification on the topics listed above and answer final questions. |

# Ohio Department of Education and Workforce: Priorities

**The Office of Career Technical Education's goal is to aid in:**

| | |
|---|---|
| The preparation of secondary students for successful and immediate workforce readiness and | Provide a platform to elevate students to enter post-secondary institutions. |

**Health Science career technical education should strive to prepare students for real world experiences.**

This is achieved by combining both classroom knowledge and obtaining hands-on Work-Based Learning opportunities.

**Districts that deliver health science career technical education curriculum should ensure that their locality has the proper and industrial support to enhance learning and workforce readiness outcomes.**

# Overview: Pathways and Courses

- JM – Allied Health and Nursing
- JN – Therapeutic Services
- J6 – Exercise Science and Sports Medicine
- J7 – Health Information Management
- J0 – Medical Bioscience

| Allied Health and Nursing JM | Therapeutic Services JN | Exercise Science and Sports Medicine J6 | Health Information Management J7 | Medical Bioscience J0 |
|---|---|---|---|---|
| Science and Technology[1] | Science and Technology[1] | Health Science and Technology[1,4] | Health Science and Technology[1,4] | Science and Technology[1] |
| Nutrition and Wellness | Medical and Dental Office Technology | Exercise and Athletic Training[2,4] | Health Science Capstone[3] | Health Science Capstone[3] |
| Medical and Dental Office Technology | Principles of Allied Health[2] | Bio-Statistics in Exercise Science and Sports Medicine | Health Information Technology[2,4] | Principles and Practices of Biomedical Technology[2] |
| Principles of Allied Health[2] | Human Anatomy & Physiology | Exercise Physiology and Biochemistry | Health Information Management[4] | Biomedical Engineering |
| Human Anatomy & Physiology | Human Pathophysiology | Nutrition and Wellness | Billing and Coding | Biochemistry of Health |
| Human Pathophysiology | Lifespan Development & Medical Intervention | Fitness Evaluation and Assessment[4] | Medical Terminology[4] | Biotechnology for Health and Disease |
| Patient-Centered Care | Mental Health | Athletic Injuries and Prevention | Human Anatomy & Physiology | Genetics of Disease |
| Patient-Centered Care and Diagnostics | Integrated Behavioral Health | Sports Exercise Psychology | Medical and Dental Office Technology | Human Anatomy & Physiology |
| Lifespan Development & Medical Intervention | Dental Technology | Medical Terminology[4] | Data and Use | Human Pathophysiology |
| Surgical Support | Dental Radiography | Human Anatomy and Physiology | Transforming Data into Information | Medical Terminology[4] |
| Clinical Laboratory Techniques | Oral Diagnosis and Treatment Planning | Medical and Dental Office Technology | Transforming Information into Knowledge | |
| Health Science Capstone[3] | Pharmacology | Health Science Capstone[3] | Problems and Solutions | |
| Medical Terminology[4] | Respiratory Technology | | | |
| Health Information Technology | Opticianry & Vision Care | | | |
| Health Information Management | Clinical Laboratory Techniques | | | |
| Billing and Coding | Health Science Capstone[3] | | | |
| Emergency Medical Technician[4] | Medical Terminology[4] | | | |
| Mental Health | Health Information Technology | | | |
| Integrated Behavioral Health | | | | |
| Dental Technology | | | | |
| Dental Radiography | | | | |
| Oral Diagnosis and Treatment Planning | | | | |
| Pharmacology | | | | |
| Respiratory Technology | | | | |
| Opticianry & Vision Care | | | | |

# Course Structure: Strands, Outcomes, and Competencies



## Strands

Strands are large content area that encompasses multiple Outcomes.



## Outcomes

Outcomes are comprehensive statements of knowledge and skills. Must be achieved by 12th grade. There's an average of 5 – 15 Competencies per Outcome.



## Competencies

Competencies are specific statements of essential knowledge or skills to be learned in the pathway.

# Course Structure (Continued)

- Example of Course Outline:
  - JM: 072050 Patient Centered Care
    - ➡ Pathway, Course Code, and Course Name
  - Strand 1: Business Operations/21st Century Skills
    - ➡ Strands cover a broad content category that groups multiple outcomes.
  - Outcomes 1.1: Employability Skills
    - ➡ Outcomes summarize key knowledge and skills. Students should master this by the end of 12th grade. Typically, 5-15 Outcomes per Strand.
  - Competencies: 1.1.1 to 1.1.12
    - ➡ Competencies define specific, essential knowledge or skills under each outcome. Typically, 5-12 Competencies per Outcome.

**Health Science Career Field**
**Patient Centered Care**
Subject Code: 072050
Outcome & Competency Descriptions

**Course Description:**
Students will apply psychomotor nursing skills needed to assist individuals in meeting basic human needs. Students will implement interventions following a nursing assistant plan of care. Students will collect patient's vital signs including temperature, pulse rate, respiration rate, and blood pressure. Students will perform phlebotomy procedures with emphasis on infection prevention, universal precautions, proper patient identification, specimen acquisition, handling, and processing. Additionally, students will observe patients' physical, mental, and emotional conditions and document any change.

**Strand 1.** **Business Operations/21st Century Skills**
Learners apply principles of economics, business management, marketing and employability in an entrepreneur, manager and employee role to the leadership, planning, developing and analyzing of business enterprises related to the career field.

**Outcome: 1.1.** **Employability Skills**
Develop career awareness and employability skills (e.g., face-to-face, online) needed for gaining and maintaining employment in diverse business settings.

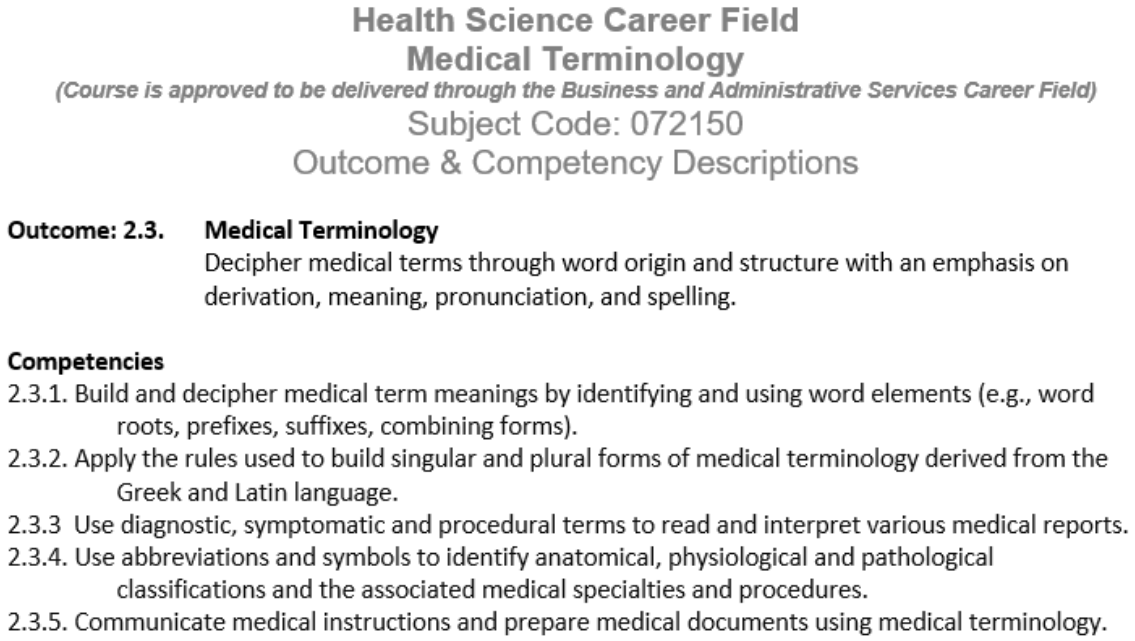
**Competencies**
1.1.1. Identify the knowledge, skills and abilities necessary to succeed in careers.
1.1.2. Identify the scope of career opportunities and the requirements for education, training, certification, licensure and experience.
1.1.3. Develop a career plan that reflects career interests, pathways and secondary and postsecondary options.
1.1.4. Describe the role and function of professional organizations, industry associations and organized labor and use networking techniques to develop and maintain professional relationships.
1.1.5. Develop strategies for self-promotion in the hiring process (e.g., filling out job applications, résumé writing, interviewing skills, portfolio development).
1.1.6. Explain the importance of work ethic, accountability and responsibility and demonstrate associated behaviors in fulfilling personal, community and workplace roles.
1.1.7. Apply problem-solving and critical-thinking skills to work-related issues when making decisions and formulating solutions.
1.1.8. Identify the correlation between emotions, behavior and appearance and manage those to establish and maintain professionalism.
1.1.9. Give and receive constructive feedback to improve work habits.
1.1.10. Adapt personal coping skills to adjust to taxing workplace demands.
1.1.11. Recognize different cultural beliefs and practices in the workplace and demonstrate respect for them.
1.1.12. Identify healthy lifestyles that reduce the risk of chronic disease, unsafe habits and abusive behavior.

# Course Structure (Continued)

Important for administrators and support staff to know that there are three duplicative course across all five pathways. These courses are:

- Medical Terminology
- Health Science and Technology
- Anatomy and Physiology

Please ensure that the correct course codes are entered for that specific pathway.



**Health Science Career Field**
**Medical Terminology**
*(Course is approved to be delivered through the Business and Administrative Services Career Field)*
Subject Code: 072150
Outcome & Competency Descriptions

**Outcome: 2.3.** **Medical Terminology**
Decipher medical terms through word origin and structure with an emphasis on derivation, meaning, pronunciation, and spelling.

**Competencies**
2.3.1. Build and decipher medical term meanings by identifying and using word elements (e.g., word roots, prefixes, suffixes, combining forms).
2.3.2. Apply the rules used to build singular and plural forms of medical terminology derived from the Greek and Latin language.
2.3.3 Use diagnostic, symptomatic and procedural terms to read and interpret various medical reports.
2.3.4. Use abbreviations and symbols to identify anatomical, physiological and pathological classifications and the associated medical specialties and procedures.
2.3.5. Communicate medical instructions and prepare medical documents using medical terminology.

# Career Technical Education – Health Science Statistics

Health Science is the secondary largest CTE career field in Ohio (2026).

The average Technical Skill Achievement (WebXam) Passage rate per pathway is:

| JM: 92.5% | JN: 91.7% | J7: 80.7% | J0: 86.2% | J6: 92.2% |
|---|---|---|---|---|

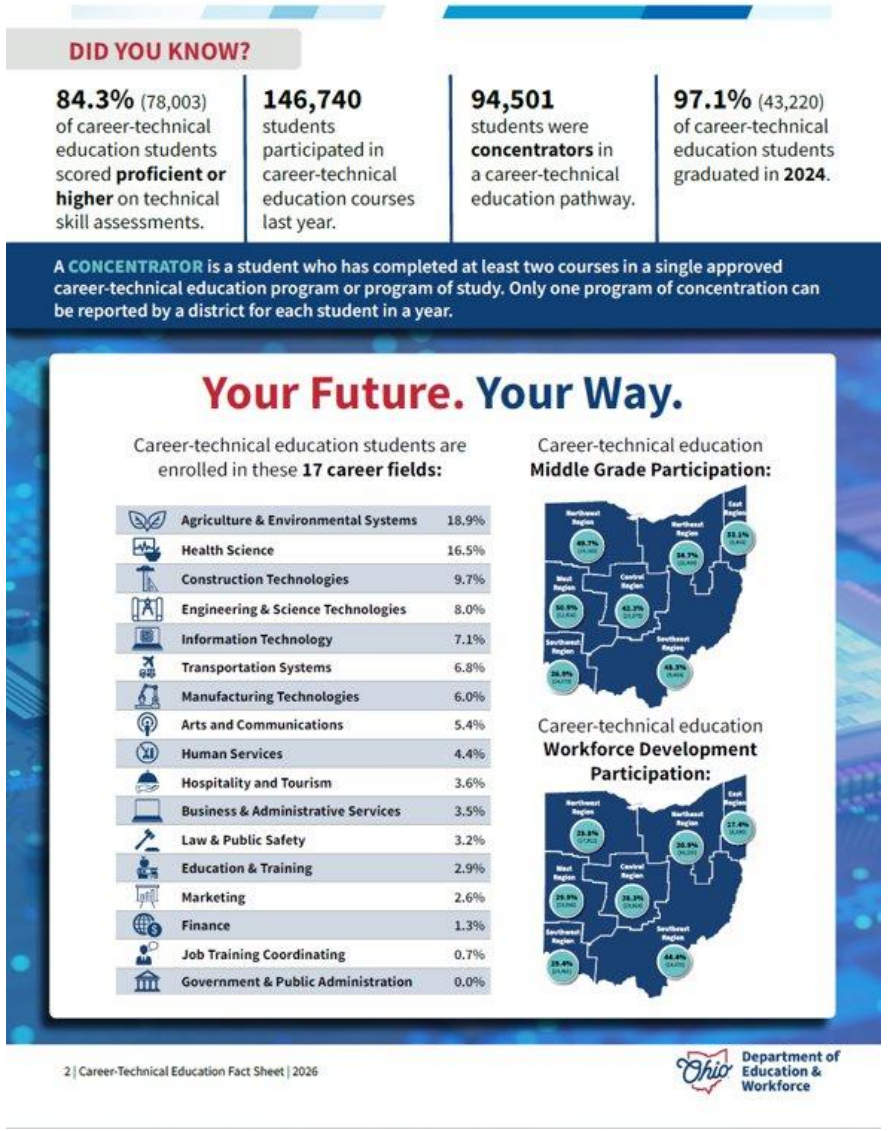
The average Work-Based Learning obtainment per pathway is:

| JM: 46.8% | JN: 67.3% | J7: 47.6% | J0: 16.4% | J6: 43.9% |
|---|---|---|---|---|

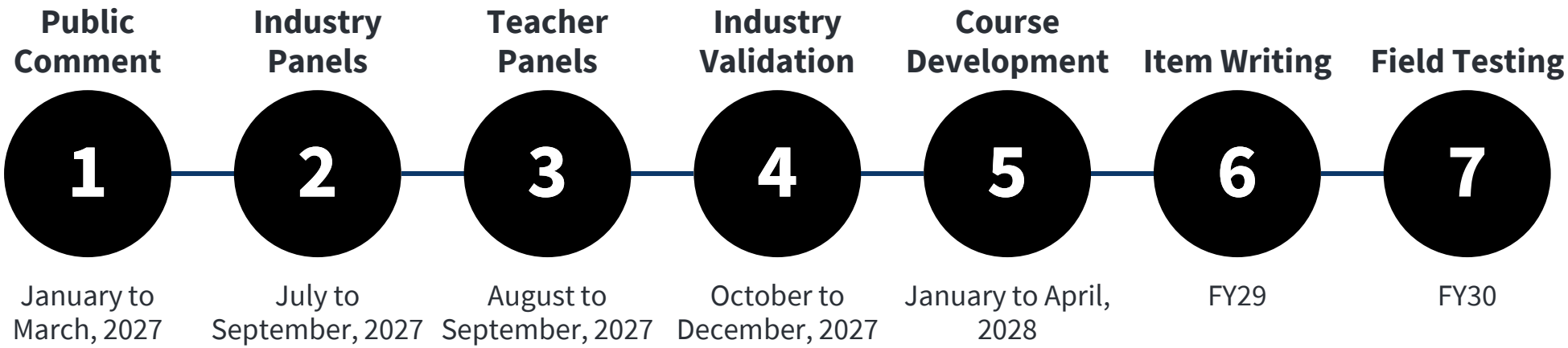
Data shows that health science students are entering the immediate workforce and/or using their experience to enhance skills and knowledge while attending a post-secondary institution.

# Career Technical Education – Health Science Statistics (Continued)

- Health Science is the secondary largest CTE career field in Ohio at 16.5%, only behind Agriculture (FY25).
- Participants are students that complete one or more courses in a single approved CTE program of study.
- Concentrators are students that complete two or more courses in a single approved CTE program of study.
- There are over 146,000 CTE participants in Ohio with positive grow continuing.
    - Recent data shows there's approximately a 17,000 concentrators in health sciences.



# Standards Revision: Approximate Timeline FY27 – FY30



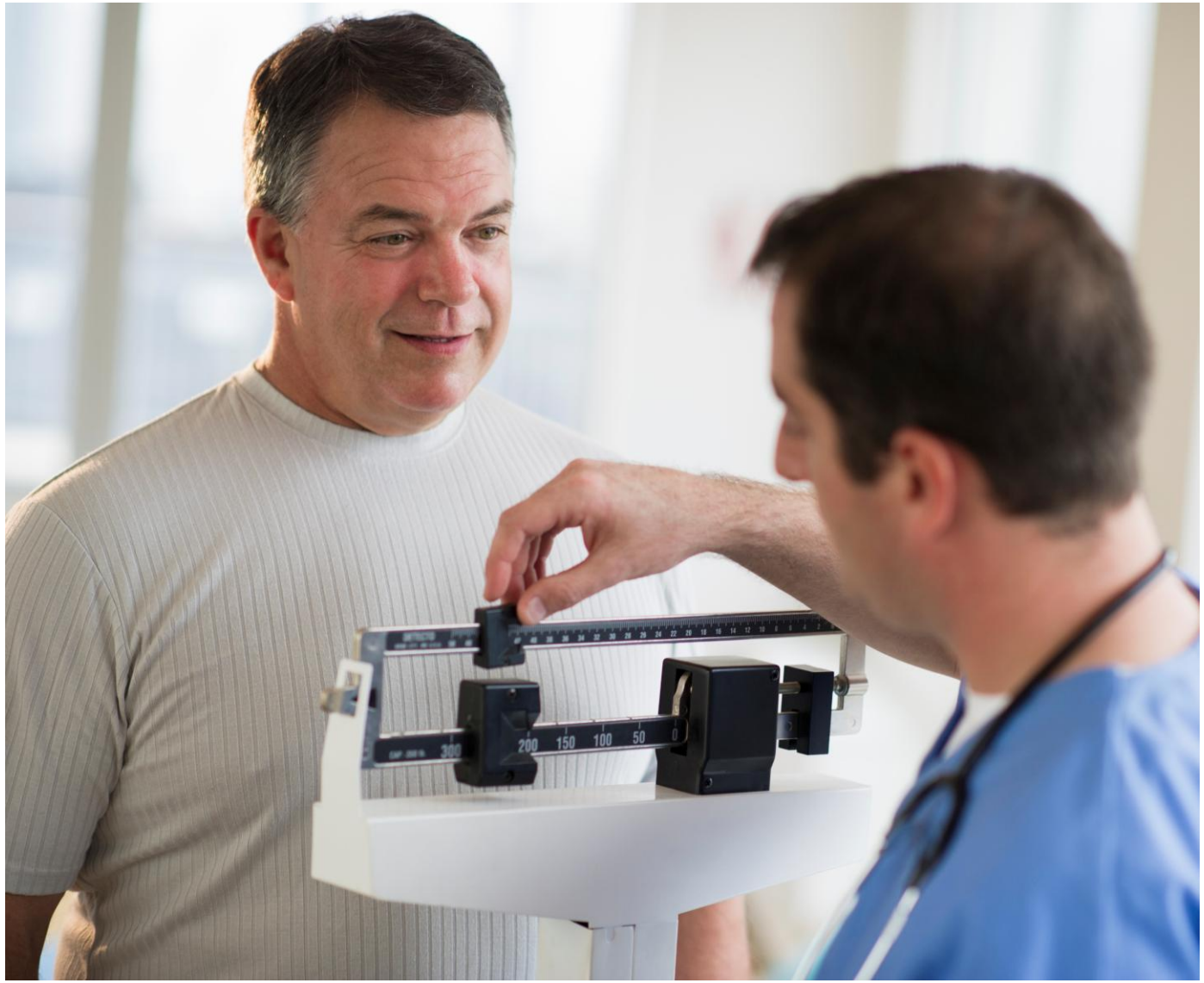
# Industry Demands in Health Sciences

- In-Demand Occupations needed:
  - Medical Managers and Clerks
  - HR and Training Specialties
  - Scientists (except Epidemiologists)
  - Biological Technicians
  - Social Workers – All types
  - Nursing – All types
  - Dental Occupations (except Dentist)
  - Pharmacy, Psychiatric, and Radiological Technicians
  - Phlebotomists
  - Occupational Therapists

- Critical Occupations needed:
  - All In-Demand Occupations
  - Rehab and SUD Councilors
  - Marriage & Family Therapists
  - Community Health Workers
  - PA's and Respiratory Therapists
  - SLP's
  - Surgical Technologists
    - Sterile Processing Technicians
  - Medical Assistants
  - Interpreters and Translators
  - Various MD/DO positions:
    - Family, Pediatrics, and Internal Medicine

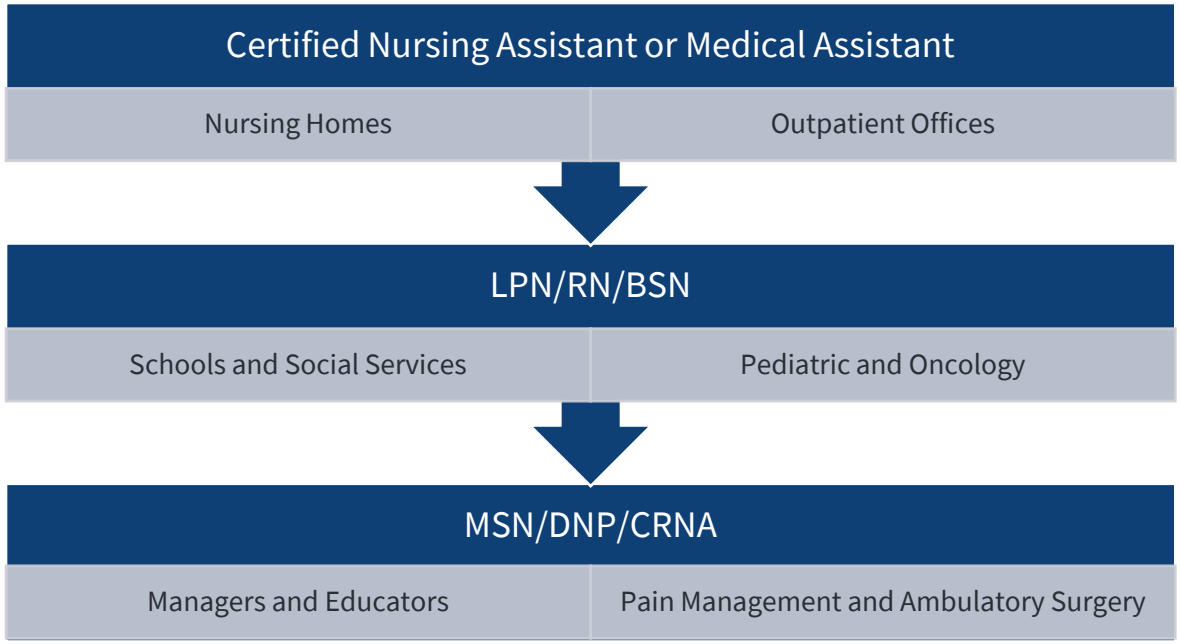
# Occupational Shifts: Expanding Beyond the Norm and Career Connections

- Are we considering what's beyond the "norm" for health science students in terms of occupations?
- If you are delivery credentials, what you offering students in your program?
- What do you first think when you hear:
  - Nursing?
  - Pharmacy?
  - Substance Use Disorder?

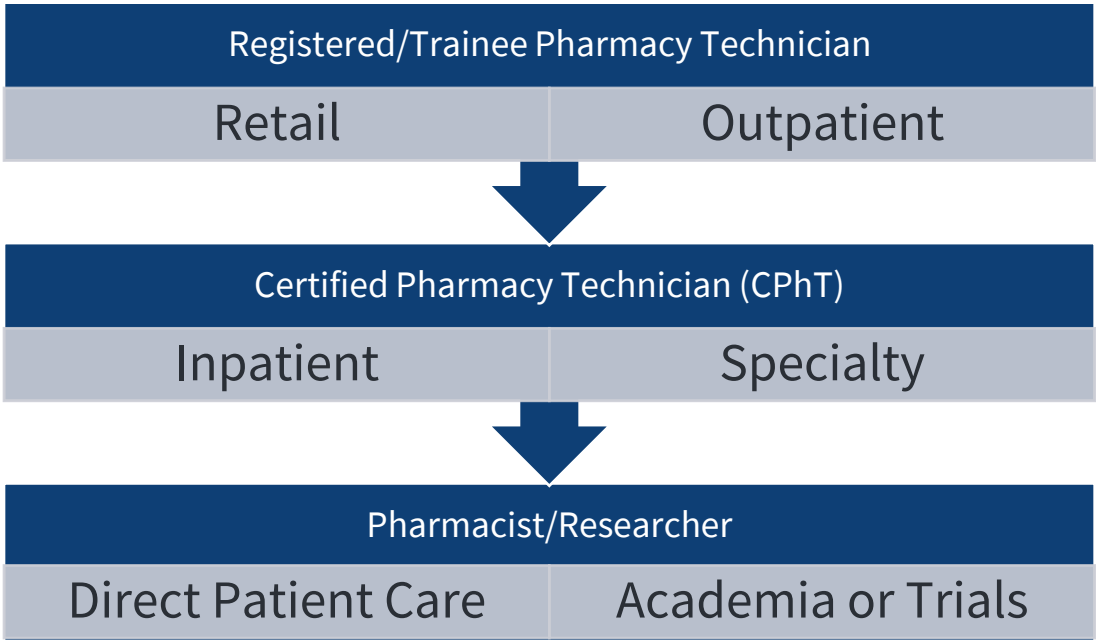


# Examples of Health Science Career Connection Options and Progression for CTE Students

CTE Students enrolled in Nursing:




CTE Students enrolled in Pharmacy:



# How Health Science Career Technical Education Enhances the Workforce

- Health Science CTE enhances the workforce by providing advanced secondary curriculum in the identified five pathways and supplements it with countless programs of study.
  - The option to pursue various credentials aids in propelling student workforce placement higher than a non-CTE student.
  - By predisposing advanced health science knowledge, it allows students an additional edge with pre-exposed work studies and understanding of the healthcare industry.
  - If students obtain credentials with a combined work-based learning experience, it may elevate their abilities for job-placements.
    - Students that successfully complete a health science CTE program may continue to post-secondary institutions where their knowledge and work background can give them a greater boost in the pathway towards their degree and field.

# Ohio Middle School CTE Requirement

As of July 1, 2026, a change in Ohio law eliminated the authority of the Ohio Department of Education and Workforce to waive the requirement that city, local, and exempted village school districts offer career-technical education to students enrolled in grades seven and eight.

All school districts must offer career-technical education courses to students in grades 7 and 8 beginning in school year 2026-2027. Courses offered to 7th and 8th grade students may be VM or VT courses.

# Middle School Programming: Health Sciences

| Professional Classification |
| --- |
| 40-hour STEM School Teaching |
| Advanced |
| Early College |
| Lead Professional Educator |
| Permanent |
| Provisional |
| Resident Educator |
| Senior Professional Educator |
| Supplemental |
| Temporary Military Duty |
| Out-of-State Educator |
| Interim Resident Educator |
| Reinstatement License |
| Alternative Military Resident Educator |
| Permanent Permanent Certificate |
| Pre-Service Permit |

- Teachers must have one of the licenses from the **Professional Classification** list. Teachers must also have the appropriate **Credential Type** which must include grade bands for middle grades to be eligible for middle school validation.

- Please contact Jasmine Stephenson and Jacob Hain regarding specific licensure questions in health sciences.

# Health to Principles of Allied Health

**CTE Compliance** (VM Course Requirement 30-90 instructional hours)

- Must be career awareness-focused
- Must align with an approved program of study
- No WebXam

| Topic | How It's Addressed in the CTE-Aligned Course |
|---|---|
| **Opioid and substance abuse prevention** | Integrated into units on public health and allied health roles in prevention |
| **Dating violence prevention** | Covered in communication and ethics modules, with emphasis on healthy relationships |
| **Suicide awareness, safety, and inclusion** | Embedded in mental health and wellness units, with career connections to behavioral health careers |
| **CPR and AED instruction** | Introduced conceptually (hands-on training may occur in high school) |
| **Organ donation awareness** | Tied to discussions on medical ethics and careers in transplant coordination |

## Career Exploration and Experiential Learning

**Health Career Mapping & Self-Discovery**

- Students complete a career interest inventory and map their results to allied health roles (e.g., EMT, radiology tech, physical therapist aide).

**Career Clusters Gallery Walk**

- Create stations around the room for different allied health careers. Students rotate, collect facts, and reflect on which roles interest them most.

**"Day in the Life" Career Journals**

- Research and write a journal entry from the perspective of an allied health professional.

**Health Science Simulation Stations**

- Handwashing and infection control
- Labeling body systems
- PPE donning/doffing

**CTSO-Inspired Mini Projects**

- Health career display boards
- Public health campaign posters
- Medical terminology scavenger hunts

**Community Connections**

- Invite a local EMT, nurse, or allied health worker to speak
- Partner with a high school CTE program for a lab tour
- Host a "Health Career Day" with rotating speakers or booths

# Professional Developments

- What are professional developments?
    - An opportunity to invite instructors from health science pathways to learn about innovations, network with attendees from education and industry, and receive ODEW updates.
- Why do I host professional developments?
    - 1. Inform instructors on technology, industry, and educational updates.
    - 2. Allow instructors to interact, network, and garnish knowledge and skills to utilize in their classrooms.
- Hosted four professional developments in FY26 with an average of <90% attendance rate in pharmacology, dental assisting, pre-nursing, and exercise science and sports medicine.
- Upcoming PD's:
    - Pharmacology – 10/16 at Eastland Career Center
    - Exercise and Sports – 10/20 at The Ohio State University
    - Dental Assisting - 10/23 at Eastland Career Center
    - Pre-Nursing, Medical Assisting, and Behavioral Health – 10/27 at The Ohio State University



# Additional Contacts

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industrycredentials@education.ohio.gov: Credential Questions

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# QUESTIONS?

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# THANK YOU

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