MCESC MONTGOMERY COUNTY EDUCATIONAL SERVICE CENTER BUSINESS ADVISORY COUNCIL

Montgomery County Health Science Pathway

Regional pathway models support the alignment of stakeholders, including employers, higher education, K-12, and workforce, to ensure pathways prepare young people for careers with family-supporting wages and build a robust talent pipeline for employers. Pathway models demonstrate a vision from middle school to career, including high school coursework, career-connected learning activities, potential postsecondary programs, and in-demand jobs in the regional labor market. This is a living document that will be updated regularly to reflect current education programs and workforce needs.

Selected Postsecondary Options

The selected postsecondary credentials in health science are based on program options and transfer agreements at Sinclair College. Bachelor's degree programs are offered at several institutions in the region. Some education paths have credentials that easily stack or build from the previous credential, while others are not as easily stackable. Stackable credentials can help an individual progress in their career pathway or move up a career ladder to different or higher-paying jobs.

	Initial Credential	Stackable Credentials			Typical Occupational Outcome
Health Professionals	N/A	Associate of Applied Science in Radiologic Technology—students eligible to take the American Registry of Radiologic Technologists (ARRT) exam	Advanced Imaging Certifications e.g., Computed Tomography (CT), Magnetic Resonance Imaging (MRI), and Mammography Bachelor of Radiation Science Technology Bachelor of Science in Health Care Administration	N/A	Radiologic Technician
	State Tested Nurse Aide (STNA)	Associate of Applied Science in Respiratory Care	Bachelor of Science in Respiratory Care Bachelor of Science in Health Sciences* Bachelor of Science in Health Care Administration	N/A	Respiratory Therapist
	N/A	N/A	Bachelor of Science in Diagnostic Medical Sonography	N/A	Diagnostic Medical Sonographer
	Certified Dental Assistant	Associate of Applied Science in Dental Hygiene—students eligible to take state board exams and apply for state licensing	Expanded Function Dental Auxiliary (EFDA) Continuing Education Programs (e.g., Local Anesthesia and Nitrous Oxide for Dental Hygiene)	N/A	Dental Hygienist
Nursing	State Tested Nurse Aide (STNA) Licensed Practical Nurse (LPN)	Associate of Applied Science in Nursing—students eligible to take Registered Nurse (RN) exam	Bachelor of Science in Nursing	Master of Science in Nursing	Licensed Practical Nurse (LPN) Nurse Nurse Practitioner (NP)
Health Information Management	Health Information Technician Certificate Medical Billing and Coding Specialist Certificate	Associate of Applied Science in Health Information Management	Bachelor of Science in Health Information Management/ Administration	N/A	Medical and Health Services Managers
Mental and Behavioral Health	Community Health Worker Certificate Chemical Dependency Counselor Assistant Preliminary Certificate	Associate of Applied Science in Mental Health Services Associate of Applied Science in Addiction Services	Bachelor of Arts in Mental Health Counseling Bachelor of Science in Health Sciences*	Master of Arts in Mental Health Counseling	Substance Abuse, Behavioral Disorder, and Mental Health Counselor
Rehabilitation Services	N/A	Associate of Applied Science in Occupational Therapy	Bachelor of Science in Health Sciences*	N/A	Occupational Therapy Assistants
	N/A	Associate of Applied Science in Physical Therapy	Associate of Applied Science in Physical Therapy	N/A	Physical Therapy Assistants

*Bachelor's available at Sinclair

Postsecondary Preparation

These activities support students in preparing for careers and serve as the foundation for students' exploration, decision-making, and preparation for health science careers. Work-based learning (marked with an asterisk:*) enables students to apply their academic learning in a real workplace setting.Advising supports students in making decisions that align best with their strengths and future goals. Employability skills are developed and strengthened across grade levels to prepare students with the key durable skills to succeed in education, training, and the workplace.

	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12
Career-Connected Learning	Career Exploration: • Industry Speaker • Career Interest Inventories • Classroom Career Challenges • Intro to Career Clusters	Career Exploration: • Industry Project • Power Lunch • Career Fair • Career Research Mini-Projects • Skills & Strengths Reflection • Intro to Goal Setting	Career Exploration: • Worksite Tour • Informational Interview • Career Adventures • Career and Technology Center (CTC) Visits • Middle School Career Presentation or Portfolio • Basic Workplace Etiquette • High School Pathway Exploration	Career Exploration: • Job Shadow • Service Learning • CTC Visits • Career Cluster Deep Dives • Intro to Professional Networking • Resume Writing	Career Exploration: • Mock Interview • School-Based Enterprise* • Career Mentorship (short-term) • Career Portfolio Development	Career Exploration: • Internship* • Clinical Experience* • College Visits • Advanced Resume Writing & Cover Letter Development • Workplace Communication Workshops • Postsecondary Options Workshops • Financial Literacy Course • College Application Prep Work • Industry Recognized Credential Examination	Career Exploration: • Practicum* • Youth Apprenticeship* • Capstone Project (career or pathway aligned) • Final Resume & Professional Portfolio • Free Application for Federal Student Aid (FAFSA) • Complete Ohio Means Jobs Readiness Seal • College and Career Signing Day
Career Navigation and Advising			• YouScience • Student Success Plan	• Confirmation of Pathway • Four-Year High School Plan Review	• YouScience • Revisit Student Success Plan		• Senior Exit Interview • Transition Planning
Employability Skills	Reliability - Work Ethic - Punctuality - Discipline - Teamwork and Collaboration - Professionalism - Learning Agility - Critical Thinking/Problem-Solving - Leadership - Creativity/Innovation - Oral and Written Communication - Digital Technology Proficiency - Global/Intercultural Fluency - Career Management						



Montgomery County Health Science Pathway

Health Science Technical Competencies

Competencies describe the technical skills students need for a successful career in the health sciences. Technical competencies should be embedded into both academic coursework and work-based learning experiences.

Customer service and patient focus
Apply patient-centered approaches, cultural competence, communication, active listening, and problem-solving to identify and respond to the needs of patients from diverse backgrounds with respect and empathy.

Health professional licensure
Use understanding of appropriate industry education requirements, licensure, and certification to ensure adherence to regulations that guide service delivery.

Health care industry ethics
Use understanding of confidentiality, morality, and legal concepts to evaluate and apply the merits, risks, and social concerns to workplace decisions.

Health care safety systems and environment
Use an understanding of health and safety procedures and protocols to ensure a safe, secure, and healthy work environment.

Medical terminology
Use understanding of basic medical terminology, including abbreviations, acronyms, and diagnostic terms to communicate effectively with health care personnel and patients.

Computer applications, records, and data recording
Use understanding of data entry, computer applications, and evolving technology platforms and features to accurately record, manage, and communicate information within health technology systems.

Health care sanitation
Use understanding of health cleanliness regulations and sanitation procedures to ensure that health care facilities and tools meet standards for cleanliness.

Health care rules and regulations
Use understanding of basic laws and regulations (Patient Bill of Rights, Clinical Laboratory Improvement Amendments, Emergency Medical Treatment and Labor Act, etc.) to meet accreditation standards and obey the law.

Health care confidentiality
Use understanding of the Health Insurance Portability and Accountability Act (HIPAA) to adhere to legal requirements and maintain confidentiality.

Professional working environments
Use understanding of professional communication, collaboration, adaptability, and how to sequence tasks to successfully work as part of a team in a cross-functional working environment.

Academic Coursework

This general coursework is recommended for all students in the health science pathway. College Credit Plus (CCP) courses apply to a broad range of postsecondary programs in health science. The credits apply to both high school and postsecondary requirements, saving students both time and money.

	Grade 8	Grades 9 and 10	Grade 11	Grade 12
Career Focused Courses	Health Science and Technology	Foundational Health Science or CCP Course such as: ⊕ ALH 1101-Introduction to Health Care Delivery	Strategic CCP Course such as: ⊕ HIM 1101-Medical Terminology	Strategic CCP Course such as: ⊕ PSY 1100-General Psychology
English	Grade 8 English	English I, English II ⊕ ENG 1101-English Composition I	English III ⊕ COM 2206–Interpersonal Communication	English IV ⊕ COM 2206–Interpersonal Communication
Math	Algebra I	Geometry ⊕ MAT 1470–College Algebra	Algebra II	Trigonometry/Calculus ⊕ MAT 1450-Introductory Statistics
History	Social Studies	World History	US History	U.S. Government ⊕ PLS 1121-U.S. Federal Government and Civics
Science	Physical Science	Biology ⊕ BIO 1107-Human Biology	Chemistry	Physics ⊕ BIO 1141-Human Anatomy & Physiology

⊕ Indicates CCP course

Selected Occupations, Wages, and Job Growth

The table below includes labor market information about select health science careers, including median wages and typical education level required. The living wage ($38.68/hour) is derived from the MIT Living Wage calculator and is intended to be a sufficient wage for one adult and one child living in Montgomery County, OH in 2026. The occupations in light blue do not pay a living wage; however, they are promising occupations because of their growth in the region or stackability to advanced credentials. The occupations listed in the gray portion of the table do not pay a living wage and do not easily stack to further credentials. But these occupations can be a helpful entry point for students to explore the health sciences and gain foundational skills and experience in the industry before pursuing stackable credentials.

Typical Job	Pays Living Wage ($38.68)	Median Hourly Earnings	Preferred Education	Stackable Credential	# of Positions (2025)	Expected Growth # (2025-2030)	Expected Growth % (2025-2030)
Radiologic Technicians	No	$37.54	Associate of Applied Science in Radiographic Technology	Bachelor of Science in Radiation Science Technology	709	0	0%
Respiratory Therapists	Yes	$39.94	Associate of Applied Science in Respiratory Care	Bachelor of Science in Respiratory Care	510	10	2%
Diagnostics Medical Sonographers	Yes	$40.55	Associate of Applied Science in Diagnostic Medical Sonography	Not typically stackable	287	13	4%
Dental Hygienists	Yes	$39.78	Associate of Applied Science in Dental Hygiene	Not typically stackable	654	11	2%
Registered Nurses	Yes	$39.12	Bachelor of Science in Nursing	Master of Science in Nursing	9,229	-78	-1%
Nurse Practitioners	Yes	$60.32	Master of Science in Nursing	Terminal degree for this occupation	930	177	19%
Licensed Practical and Licensed Vocational Nurses	No	$28.99	Licensed Practical Nurse Certificate	Associate of Applied Science in Nursing	2,451	-13	-1%
Medical and Health Services Managers	Yes	$50.46	Bachelor of Science in Health Information Management/ Administration	Master of Science in Health Administration	1,376	146	11%
Substance Abuse, Behavioral Disorder, and Mental Health Counselors	No	$29.03	Bachelor of Arts in Mental Health Services	Master of Arts in Mental Health Counseling	845	68	8%
Physical Therapy Assistants	No	$31.43	Associate of Applied Science in Physical Therapy	Not typically stackable	540	36	7%
Occupational Therapy Assistants	No	$32.02	Associate of Applied Science in Occupational Therapy	Not typically stackable	209	13	6%
Emergency Medical Technicians	No	$18.37	Associate of Applied Science in Emergency Medical Services/ Fire Science	Not typically stackable	284	6	2%
Medical Assistants	No	$19.46	Associate of Applied Science in Medical Assistant Technology	Not typically stackable	1,520	96	6%
Home Health and Personal Care Aides	No	$15.45	Short-Term Home Health Aide Certificate	Not typically stackable	3,191	166	5%
Phlebotomists	No	$19.26	Short-Term Clinical Phlebotomy Certificate	Not typically stackable	551	37	7%
Paramedics	No	$23.57	Paramedic Certificate	Not typically stackable	161	2	2%

Strongly Recommended Pathway Recommended Pathway

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