MCESC Montgomery County Educational Service Center
BUSINESS ADVISORY COUNCIL

Montgomery County Health Science Pathway Framework

This framework outlines a common set of experiences for students in a health science pathway from 8th grade through their future careers. It supports the alignment of regional business, higher education, K–12, and workforce outcomes to ensure that pathways prepare young people for careers with family-supporting wages and build a robust talent pipeline for employers.

Academic Coursework

This general coursework is recommended for all students in the health science pathway.

	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 Healthcare Delivery	Strategic CCP Course such as: ⊕ HIM 1101–Medical Terminology	Strategic CCP Course such as: ⊕ PSY 1100–General Psychology	⊕ 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 time and money.
English	Grade 8 English	English I, English II, or ⊕ ENG 1101–English Composition	English III or ⊕ COM 2206–Interpersonal Communication	English IV or ⊕ COM 2206–Interpersonal Communication	
Math	Grade 8 Math or Algebra I	Algebra I, Geometry or ⊕ MAT 1470–College Algebra	Algebra II	Trigonometry/Calculus or ⊕ MAT 1470–College Algebra	
History	Social Studies	World History	US History	US Government	
Science	Physical Science	Biology or ⊕ BIO 1107–Human Biology	Chemistry	Physics or ⊕ BIO 1141–Principles of Anatomy & Physiology I	

College and Career Preparation

These additional activities support students in preparing for both college and career. Work-based learning enables students to apply their academic learning in a real-world setting. Advising supports students in making decisions that align best with their strengths and future goals. Competencies describe the technical skills students need for a successful career in the health sciences.

	Grade 8	Grades 9 and 10	Grade 11	Grade 12
Work-Based Learning	• Career Adventures Course—Healthcare • Work-Site Tours • Power Lunches • Pathway Fairs	• Job Shadow • HR Interview • Virtual Pathway Mentor • Resume Prep	• Internship • Career Fair • Mock Interview	• Internship • Career Fair • Mock Interview
Advising	• YouScience	• Individualized College and Career Plan (ICCP) • Confirmation of Pathway • Identification of Credentials and College Options • Revisit ICCP	• Financial Literacy Course • College Application Prep Work • Industry Recognized Credential Examination	• Free Application for Federal Student Aid (FAFSA) • Complete Ohio Means Jobs (OMJ) Readiness Seal • College and Career Signing Day
Competencies	• Employability Skills	• Computer Applications, Records, and Data Recording • Professional Working Environments • Healthcare Rules and Regulations • Healthcare Industry Ethics • Healthcare Confidentiality	• Medical Terminology • Customer Service and Patient Focus • Healthcare Safety Systems and Environment • Healthcare Professional Licensure • Healthcare Sanitation	• Individualized Specialization

Health Science Technical Competencies

Computer Applications, Records, and Data Recording
Use understanding of keyboarding, data entry, and word processing to accurately record information on health technology systems.

Professional Working Environments
Use understanding of the importance of a sequence of tasks, cross-functional working environments, and professional communication to successfully work as part of a team.

Healthcare Rules and Regulations
Use understanding of basic laws and regulations (Patient Bill of Rights, CLIA, EMTALA, OSHA, etc.) to meet accreditation standards and obey the law.

Healthcare Industry Ethics
Use understanding of confidentiality, morality, and legal concepts to evaluate and apply the merits, risks, and social concerns to workplace decisions.

Healthcare Confidentiality
Use understanding of HIPAA in order to adhere to legal requirements and maintain confidentiality.

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

Customer Service and Patient Focus
Use understanding of communication, active listening, and conflict resolution to identify and meet the needs of a patient or customer.

Healthcare Safety Systems and Environment
Use understanding of health and safety procedures and protocols to ensure a safe, secure, and healthy work environment.

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

Healthcare Sanitation
Use understanding of health cleanliness regulations and sanitation procedures to ensure that healthcare facilities and tools meet standards for cleanliness.

Selected Postsecondary Options

The selected postsecondary credentials in health science, based on program options and transfer agreements at Sinclair Community College, lead to careers with family supporting wages. 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.

	⊕ Potential Initial Credential	Stackable Credentials		Typical Occupational Outcome
Allied Health	Radiographer	Associate of Applied Science in Radiologic Technology—students eligible to take the 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 Healthcare Administration	Radiologic Technician
	State Tested Nurse Aide (STNA)	Associate of Applied Science in Respiratory Care	Bachelor of Science in Respiratory Care Bachelor of Health Sciences Bachelor of Science in Healthcare Administration	Respiratory Therapist
	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	Dental Hygienist
Nursing	State Tested Nurse Aide (STNA) Licensed Practical Nurse (LPN)	Associate of Applied Science (AAS) in Nursing—students eligible to take RN exam	Bachelor of Science in Nursing (BSN) / Master of Science in Nursing (MSN)	Nurse
Guided Transfer (pre-med, pre-dentistry, or other advanced degree track)	State Tested Nurse Aide (STNA)	Associate of Science in Pre-Professional Studies	Bachelor of Science / Doctoral Degree	Physician (Doctor or Dentist)

Selected Occupations, Wages, and Job Growth

The health science careers listed below are projected to grow in the region. The living wage is from the MIT Living Wage Calculator for one adult and one child in Montgomery County. Note that some jobs in the table do not pay a living wage and do not easily stack to further credentials, making economic advancement difficult.

Typical Job	Pays Living Wage ($23.16)	Median Hourly Earnings	Preferred Education	Stackable Credential	Positions (2020)	Expected Growth (2020–2030) Positions	Expected Growth (2020–2030) Percent
Home Health and Personal Care Aides	No	$11.33	Short-Term Home Health Aide Certificate	Not typically stackable	3,458	860	25%
Medical Assistants	No	$16.53	Medical Assistant Technology (AAS)	Not typically stackable	1,701	432	25%
Emergency Medical Technicians and Paramedics	No	$16.53	Emergency Medical Services (AAS)	Not typically stackable	502	159	32%
Phlebotomists	No	$16.85	Short-Term Phlebotomy Certificate	Not typically stackable	742	144	19%
Medical and Health Services Managers	Yes	$47.22	Health Information Management/Administration (BS)	Health Administration (MS)	808	116	14%
Respiratory Therapists	Yes	$28.60	Respiratory Care (AAS)	Respiratory Care (BS)	584	71	12%
Radiologic Technicians	Yes	$28.24	Radiographic Technology (AAS)	Radiation Science Technology (BS)	626	43	7%
Diagnostics Medical Sonographers	Yes	$35.77	Diagnostic Medical Sonography (AAS)	Diagnostic Medical Sonography (BS)	284	39	14%
Dental Hygienists	Yes	$34.00	Dental Hygiene (AAS)	Expanded Function Dental Auxiliary (EFDA) License	644	20	3%
Registered Nurses	Yes	$32.61	Nursing (BS)	Nursing (MS)	10,190	611	6%
Nurse Practitioners	Yes	$51.02	Nursing (MS)	Terminal degree for this occupation	672	174	26%
Physicians	Yes	$101.08	Doctor of Medicine (MD)	Terminal degree for this occupation	1,220	141	12%