

Montgomery County ESC Business Advisory CouncilEnsuring our workforce can compete by enhancing partnerships between schools, higher education and employers

THE BUSINESS ADVISORY COUNCIL IS:

- Ensuring student success and career-readiness
- · Helping existing and new businesses thrive
- · Keeping talent in our region
- · Making Montgomery County a great place to live and work

Our region's Business Advisory Council will continue to work with local schools and employers to push our work forward this upcoming school year. COVID introduced us to new technologies and we will continue to adapt with new ways to expose students to future career paths and opportunities. Over the next 12 months, we will strive to create both in-person and online experiences for students to gain the skills and perspectives they'll need to compete in a post-COVID economy. As you review this plan, you'll notice we are beginning to implement the work we've been planning over the last couple of years, while taking extra consideration to more strategically connect with statewide and national initiatives to better leverage existing opportunities.

VISION

All MCESC BAC member districts' students are career-focused and have the preparation they need to succeed on the job and in life.

MISSION

We will promote substantive and effective collaboration between educators and industry to prepare students to compete in a global economy.

VALUES

We believe in:

- **1. Integrity** Our workforce must embrace personal and civic responsibility and hold strong ethical standards.
- **2. Equity** All students' educational needs and aspirations must be respected. Every career choice has value.
- **3. Innovation** The job market and employers' needs are ever-changing. Innovation is a constant and requires life-long skill development.
- **4. Diversification** Montgomery County's economy is diverse by design, and every industry sector is counting on access to talented employees. Young people need to have access to diverse educational options that prepare them to succeed in our local economy.
- **5. Collaboration** Industry leaders and educators must work together to create a cohesive and sustainable system that builds a highly skilled and adaptable workforce.
- **6. Communication** Clear and proactive feedback is a prerequisite for successful partnerships.

How we work together

The Plan was established at this level, and continues to be reviewed and updated based on feedback, and then re-submitted to the Ohio Department of Education and the Governor's office as per ORC mandate.

Members of the Steering Committee are comprised of P2P Institute Attendees, Co-Chairs and 5 Sub-Committee Leaders.

Co-Chairs host the Annual BAC Dinner and facilitate three other MCESC BAC At-Large Quarterly Meetings. Additionally, the Steering Committee convenes at least two times per year.

Each of the BAC member organizations is expected to have representation on at least one BAC subcommittee.

Each of the 5 subcommittees is responsible for carrying out the specific BAC Goals. The "Plan" established includes the strategies, actions and those responsible associated with each of the 5 Goals. (See Plan, pages 10-14.)

Each subcommittee meets regularly. Updates are documented for use at MCESC BAC quarterly meetings.

MCESC
BAC Steering
Committee

Members of each Goal Sub-Committee

Industry Partners,
Higher Education
Institutions, School
Districts, Business/
Government
Networks

Communication feeds to industries and school districts from the subcommittee members to aide in the implementation.

Industry, Higher Ed, School Districts, Business/ Government Network members will implement the BAC strategies and actions within their own institutions based on their level of capacity, need and responsibility. (See Menu document and Structure and Support document.)

Feedback should be given to the reps on the BAC subcommittee(s) to inform the on-going plan.

CAREER READINESS PROGRESSION

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CAREER AWARENESS

Elementary Grades (K-5)

CAREER EXPLORATION

Middle Grades (6-8)

CAREER PLANNING

High School (9-12)





- Career Awareness **Programming**
 - A-Z Curriculum
 - Career Speakers
 - Aligned Events



- Career **Exploration Course Offerings**
- Industry Site Visits*
- Pathways Fair

*Can and should be repeated





- YouScience*
- Student SNAP Shots*



Identifies Career Pathway

- Job Shadowing **Experiences*** (aligned to YouScience results)
 - *Can and should be repeated



- Employability Skills Course
- Individualized College and Career Plan



Identifies /confirms Career Pathway

 Job Shadowing **Experiences**

K-8

6-8

8-9



- Essential Career Pathways Course(s)
- Identifies /confirms Career Pathway
 - Digital & Financial **Literacy Courses**
 - Job Shadowing **Experiences**



- TechPrep/CCP Courses **Digital & Financial Literacy Courses** (Aligned Pathway)
- Industrial Credential Curriculum

Sinclair, Graduation Alliance and other identified partners will provide Industryspecific Pathway sheet and Industry Credential Curriculum

- Hiring Fairs
- Assessment for Industry-recognized Credential

Take at completion of Industry Credential Curriculum

 Continued College and Career Advising



SUMMER Industry experience/ Internship



- TechPrep/CCP Courses (Aligned Pathway) Sinclair and other higher ed partners will provide Industryspecific Pathway sheet
- Industrial Credential Courses

Sinclair, Graduation Alliance and other identified partners will provide Industry Credential Curriculum

- College & Career **Signing Day**
- Industry-recognized **Credential Assessment**

Take at completion of Industry Credential Curriculum



Postsecondary Work/ **Training**

Internship, Coursealigned practicum, College, **Apprentice**ship, Job or Military

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12

Choose your district's level of involvence



BAC Engaged



BAC Mobilized



BAC Invested

BENEFITS:

- Plan and Joint Statement of Work will be completed on your behalf
- Access to opportunities aligned or resulting from BAC Plan
- District leadership and staff connected to work-based learning opportunities
- Students and families connected to jobs, internships, camps, clubs and other important employment resources

DISTRICT COMMITS TO:

- Take formal action to join MCESC BAC
- Career Champion attends the BAC quarterly meetings
- Career Champion/Industry Rep actively participates in one of the 5 subgroups
- Attendance at the Annual BAC Dinner

BENEFITS:

- All from Engaged
- Support in implementing career readiness progression, identification of high impact CCP courses
- Provide opportunities to train your staff to help students understand their findings
- Priority to grant opportunities with MCESC and Learn to Earn Dayton
- Introduction to industry labor market trends and information for educators and counselors
- First consideration for new work-based learning opportunities

DISTRICT COMMITS TO:

- All commitments from Engaged
- Will have one cohort of high school students take the YouScience Assessment
- Will offer MCESC Curriculum resources in some capacity
- Will offer at least two of the formalized In-Demand Career Pathways to high school students

BENEFITS:

- All from Engaged & Mobilized
- Priority for pilot opportunities with MCESC and Learn to Earn Dayton
- Priority to Workforce
 Director
- Access to Seamless WBL data infrastructure
- Receive priority access to limited special events and opportunities

DISTRICT COMMITS TO:

- All commitments from Engaged & Mobilized
- Will have two cohorts of high school students take the YouScience Assessment
- Will implement K-5, 6-8, and 9-12 MCESC Career Curriculum in an aligned manner to the Career Readiness Progression
- Will offer at least three of the formalized In-Demand Career Pathways to high school students







PATHWAYS TO PROSPERITY NETWORK UPDATE

On behalf of the Business Advisory Council, in the fall of 2018, the Montgomery County ESC joined the Pathways to Prosperity Network in support of implementing the Council's goals. Pathways to Prosperity is an initiative of Jobs for the Future at the Harvard Graduate School of Education. Many young people want to become career-ready and move into local jobs. Pathways to Prosperity's data-driven work is focused on creating meaningful career pathways for students who are eager to complete high school and earn a high-value credential or degree.

Pathways to Prosperity is an initiative of Jobs for the Future at the Harvard Graduate School of Education

In April 2021, a working group virtually attended the 2021 Spring Pathways to Prosperity Institute. Our group consisted of superintendents and staff from Sinclair College and Learn to Earn Dayton, as well as industry leaders and economic development professionals from the Dayton Development Coalition. Despite COVID-19's challenges, we have continued to leverage that convening and are now working with the Network to strengthen our local industry partner organizations. Our Pathways team has assisted us in forming a monthly Greater Dayton Area Hospital Association Education Subcommittee. This year we will continue to focus on strengthening the college and career pipeline using the frameworks we designed to connect students to careers in information technology and healthcare/bioscience. We will specifically focus on the implementation stage of these efforts. We will also continue to focus on framework design for the region's students interested in having a career in advanced manufacturing.

NEW FRAMEWORKS

Our Business Advisory Council spent the last 12 months working with industry and education partners to create frameworks intended to outline a common set of experiences for students in two of our region's indemand sectors (IT and healthcare). These pathways include coursework, potential postsecondary programs, and potential career outcomes. These frameworks will support the alignment of regional stakeholders, including employers, higher

education, K-12, and workforce. Most notably, these frameworks
were reverse mapped from labor market data - we were particularly
interested in jobs that paid a living wage (\$23.16+) that could be
obtained with an associate's degree. Much of the data we pulled for our framework,
highlighted a preference for bachelor's degrees in IT/CS fields. After we determined high-wage, highgrowth jobs, we looked at programs at Sinclair Community College to prepare people for these jobs. We
also determined high school coursework and activities (advising, work-based learning, and competency
development) that would set students up for success in college and career. We will continue to draft a
similar framework for students interested in going into careers in advanced manufacturing as well. This
work was supported by our friends at Jobs For Our Future's Pathways To Prosperity initiative. For a closer
examination of these frameworks, we included both in the index of this plan.

CREATING A REGIONAL CAREER CONNECTIONS CALENDAR

This school year we built on last year's momentum around embracing national and statewide sponsored Career Connections Weeks of Action by producing a calendar with a general timeline of when we recommend districts participate in these initiatives. This is a living document so it will change as the year progresses but we are excited to leverage a regional strategy linked to proven annual efforts like MFG Month and National Health Professions Week.

Some of our region's coordinated Career Connections Weeks of Action will include:

Construction Appreciation Week September

Manufacturing Month October

Health Professions Week November

Computer Science Education Week December

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BUSINESS ADVISORY COUNCIL DATES

BAC Main Meetings 2021/2022

September 1 8:30 am - 10:00 am

November 10 8:30 am-10:00 am

February 23 5:00 pm-8:00 pm (Annual Dinner)

May 3 8:30 am-10:00 am

WORKING GROUP MEETINGS

Educator Engagement

September 13 10:30 am-12:00 pm

October 21 10:30 am-12:00 pm

February 10 10:30 am-12:00 pm

May 24 10:30 am-12:00 pm

Industry Engagement

September 9 10:00 am-12:00 pm

November 11 10:00 am-12:00 pm

February 3 10:00 am-12:00 pm

May 9 10:00 am-12:00 pm

Parent & Community Engagement

September 28 8:30 am-10:00 am

November 8 8:30 am-10:00 am

January 31 8:30 am-10:00 am

April 12 8:30 am-10:00 am

Policy & Advocacy

September 14 8:30 am-10:00 am

November 16 8:30 am-10:00 am

March 7 8:30 am-10:00 am

April 14 8:30 am-10:00 am

Student Engagement

October 5 9:00 am-10:30 am

December 1 9:00 am-10:30 am

March 10 9:00 am-10:30 am

April 5 9:00 am-10:30 am

Warren County Working Group

August 31 9:00 am-10:30 am

October 4 9:00 am-10:30 am

December 2 9:00 am-10:30 am

April 7 9:00 am-10:30 am

THE WAY FORWARD

Each spring our Business Advisory Council sends approximately 7,000 high school graduates to the next step in their college and career journeys. We need no reminder to highlight just how daunting last school year actually was. Admittedly, it is still somewhat difficult to forecast what this upcoming school year will hold. As a region, our BAC consists of 23 different school districts and we are committed to pioneering new ways to connect students to their next round of opportunities. Over this school year, we will continue to examine information management tools like Nepris and Transeo to see how we can leverage the lessons and technology of last school year and build off them as in-person events and opportunities resume. This school year will be a year of implementation and an expansion of the truly innovative work we have set out in this plan.

A note on our new Warren County Working Group:

This Working Group has been formed to better connect Warren County districts with opportunities and resources. They will not have their own separately defined strategies in our annual plan but will instead explore each working group's efforts with intentionality to support Warren County students.



OBJECTIVES

1) Student Engagement

For students to be well-equipped to make a career plan, they must be aware of the diverse career opportunities that exist locally and beyond and understand what it takes to prepare for these careers.

Schools must offer opportunities for career experiences for students both inside and outside of school and assist students in making appropriate plans for after high school.

Industry must provide career experiences that help students explore their career opportunities and help advise schools and students on how to move effectively toward careers.

2) Parent and Community Engagement

Our region is rich in career and educational opportunities, but our parents and community need to better understand how they can be advocates for students' success.

Schools must share with parents and the community what is already occurring to help prepare students for their futures. They must highlight the diversity of industries that can lead to successful careers.

Industry must collaborate with schools to create opportunities for industry exposure that elevates the community's understanding of locally available careers.

3) Industry Engagement

For efficient and productive career experiences (i.e. internships, job shadowing, apprenticeships) to be feasible, we need a one-stop shop for industry and schools to connect.

Schools must provide flexibility in scheduling to allow students to participate in career experiences.

Industry must engage in meaningful partnerships and invest in opportunities for students to have career experiences while they are still in school.



4) Policy and Advocacy

A statewide approach is critical in addressing the needs of an ever changing workforce landscape.



Schools must inform policymakers on the needs and challenges of K-12 partners.



Industry must Inform policymakers on the specific needs of our future workforce.

5) Educator Engagement

Educators are well-positioned to guide our students on a path toward career success if they have the training, curriculum tools and support from industry to increase their own awareness, knowledge and skills to support students' career planning

Schools must provide opportunities for educators to connect to careers and curriculum designed to give students experiences to help them design plans after high school.



Industry must invest time and resources in our region's career connections work while acknowledging the challenges educators face.

6) Warren County Working Group

As our BAC enters a new year of work, we have added a 6th working group. This INDUSTRY ENGAGEMENT subcommittee will specifically focus on how we can better leverage our BAC's momentum, successes, and initiatives within Warren County's member districts.

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Student Engagement For students to be well-equipped to make a career plan, they must be aware of the diverse career opportunities that exist locally and beyond and understand what it takes to prepare for these careers.



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Strategy		Actions	Responsibility	Timeframe	Metric
1. Utilize social media to expand awareness of careers & educational opportunities	Schools	• Develop & deploy social media engagement plan in conjunction with County Communications Collaborative and Think TV	Student Engagement Parent & Community Engagement Educator Engagement County Communications Collaborative All Districts	Regularly present at County Communications Collaborative monthly meetings	73% of districts utilizing social media for career awareness
	Industry	 Provide info/photos/etc. for social media engagement 	Chamber/Industry Orgs/ BBB/DDC	Present a midschool year review to the BAC via email in Jan. 2022	Produce social media content for schools to share about career opportunities
2. Increase understanding of students' aptitude in	Schools	• Implement Career Aptitude tool (ex. YouScience)	MCESC/All Districts		• 100% of all districts using YouScience, Naviance, OMJ, or
relation to in-demand careers	Industry	• Fund YouScience implementation	DDC/Chamber/Trade Orgs	770707	some other assessment tool • Fully funded for member districts
3. Promote a student-facing information campaign with videos that address in-demand industry sectors, college affordability, and options	Schools	 Provide career activity time (Power Lunch, Career Fair, guest speakers, etc) Leverage Inside Dayton Internship Program recommendations and work with the Montgomery County Student Advisory Delegation for future feedback and input Organize Career Exploration Weeks of Action 	MCESC/All Districts	2Q 2022	 Host 350+ different activities across partner districts 90% of districts participating in career connections weeks of action Facilitate more than 175 partnerships with companies Maintain a majority of businesses
for education beyond HS	Industry	• Resource career activities (provide speakers, open for tours, etc.)	Trade Orgs/Businesses/ MVHRA		involved in the BAC to represent our region's in-demand sectors
	Schools	Deploy videos through classes and other communications channels	MCESC/All Districts		• Share more than 35 locally produced career related videos
4. Create more career videos for each of the local indemand industry sectors	Industry	• Identify companies and employees for career videos	Trade Orgs/Businesses/ MVHRA/Think TV/Higher Ed institutions	10 2022	• 70% of member districts share career videos • Share videos that highlight at least 75 different careers • Content will highlight at least 9 different in-demand sectors
5. Focus on K-5 career	Schools	Develop K-5 student outreach strategies on a school by school basis utilizing our A to Z videos plus other partner resources	L2ED/MCESC	20 2022	20% of partner school districts utilize
connections outleach	Industry	Provide necessary information for outreach communications	Trade Orgs/Businesses		

Parent & Community Engagement Our region is rich in career and educational opportunities, but our parents and community need to better understand how

they can be advocates for students' success.



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industry exposure that elevates the community's understanding of the Industry must collaborate with schools to create opportunities for careers available locally.

Strategy		Actions	Responsibility	Timeframe	Metric
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	Industry	 Provide info/photos/etc. for social media engagement 	Chamber/Industry Orgs/ BBB/DDC	Present a mid-school year review to the BAC via email in Jan. 2022	
2. Promote parent-facing information campaign videos that address indemand industry sectors,	Schools	Deploy content through official school communications channels and other social media campaigns and community specific groups	MCESC/All Districts	10 2022	90% of districts utilizing
college affordability, and options for education beyond HSS	Industry	 Provide videos, events, and other resources 	Trade Orgs/Businesses/ MVHRA/Think TV/Higher Ed institutions		
3. Focus on K-5 career connections outreach	Schools	• Develop K-5 parent outreach strategies on a school by school basis using events like "Dress for Success" utilizing age appropriate career exploration curriculum	L2ED/MCESC	20 2022	20% of districts are conducting K-5 career
	Industry	 Provide necessary information for outreach communications 	Trade Orgs/Businesses/ MVHRA/Think TV/Higher Ed institutions		
4. Organize outreach to alumni and recently graduated seniors	Schools	Conduct outreach and highlight alumni via digital and physical marketing like posters and social media Focus on outreach to grandparents during career connections weeks of action	MCESC/All Districts	2O 2022	10% of districts are actively highlighting alumni and recent graduates
	Industry	Provide necessary information for outreach material	Trade Orgs/Businesses/ MVHRA/Think TV/ Higher Ed institutions) j

Industry Engagement For efficient and productive career experiences (i.e. internships, job shadowing, apprenticeships) to be feasible, we need

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one-stop shop for industry and schools to connect.

Schools must provide flexibility in schedules to allow students to



• 50% of schools link to Engage • 50% of schools utilize Engage High Schools develop list of companies for engagement • 5 school districts to sign up on their websites by May 30 deployment plan; Sign up Develop/deploy promotion • Engage with 600 students 50 businesses on Engage Develop/Publish Engage • 50% engage with industry and Career Connections Framework by May 30 Develop/Publish Engage • Establish committees in • Sign up 50 businesses opportunities for students to have career experiences while they for career engagement Industry must engage in meaningful partnerships and invest in on Transeo by May 30 5 Trade Associations Metric deployment plan campaign plan • In progress on Engage • In progress **Timeframe** 4Q - 2022 4Q - 2022 20 2022 2Q 2022 Trade Organizations Trade Organizations SOCHE/ Business/ Trade Organizations Trade Organizations MCESC/All Districts MCESC/All Districts MCESC/All Districts MCESC/All Districts SOCHE/ Business/ SOCHE/ Business/ Responsibility SOCHE/ Business/ are in school. Work with Trade Associations to engage with Schools • Utilize Engage platform which houses information on Every school develops a list of students prepared for Deploy the Engage platform through links on school • Identify companies in close proximity to your school K-12 workforce pathways as well as how to connect Advertise job descriptions and Career Connections and utilize a sustainable process to build workforce websites including materials and important links to standardize messaging for both students, parents • Utilize the career engagement form on Engage to Students complete resume in order to prepare for Give feedback and suggest new job descriptions Ensure job descriptions and Career Connections Build workforce development sub-committees in your Industry group to discuss and participate in • Partner with SOCHE for assistance with student • Continue to provide feedback on the Engage • Utilize job descriptions in career engagement Framework to students participating in career organization that can benefit from an intern Utilize Transeo to track career engagement Analyze operations to determine areas in • Engage students in career engagement Framework are reflected in coursework for partnership in career engagement with schools for career engagement career engagement opportunities partner with schools in the region career engagement with industry Actions career engagement career engagement and employers opportunities engagement opportunities of students platform Industry Industry Schools Industry Schools Schools Schools Industry participate in career experiences. parents, and industry and promote student qualifications and desired participate in career engagement additional job descriptions with Promote and continue to build platform to educate students, will provide opportunities for 3. Establish partnerships which and industry members who occupational opportunities deployment of the Engage 4. Increase the # of students 1. Continue adoption and learning outcomes in engaging students opportunitiess key industries Strategy

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Policy and Advocacy A statewide approach is critical in addressing the needs of an ever changing workforce landscape.



Schools must Inform policymakers on the needs and challenges of K-12 partners.



Industry must Inform policymakers on the specific needs of our future Industry mu workforce.

Strategy		Actions	Responsibility	Timeframe	Metric
1. Create a policy agenda to guide our efforts for the	Schools	To provide on the ground observations as it pertains to workforce development policy for schools	All districts	Create an initial agenda with key bolicy briorities	• Creation of a policy agenda
2021/2022 school year	Industry	 To provide feedback on workforce needs and possible policy and legislative language changes 	Chamber/Industry Orgs/ BBB/DDC	for O2 2022	 Identification of 2 to 3 key policy priorities
2. Specifically examine policies to address our	Schools	 Remediate those barriers with local, state, and federal resources available 	All districts	2002 00	 Successfully map online learning
state's digital divide and online access issues	Industry	• Highlight possible public/private partnerships	Chamber/Industry Orgs/ BBB/DDC	7707	access and barriers in our region
3. Explore policies specifically aimed at	Schools	 Partner with employers to create high quality work-based learning experiences 	All districts		• Successfully define
offering more work-based learning opportunities for K-12 students	Industry	 Identify pragmatic incentives and policies to increase employer participation in work-based learning opportunities 	Chamber/Industry Orgs/ BBB/DDC	20 2022	draft incentives/ policies
4. Improve tracking and access to community workforce data	Schools	Define what datasets would help build capacity for schools to understand if equity or opportunity gaps exist If equity gaps exists, define strategies to close those identified gaps	All districts	20 2022	 Define strategies to identify important workforce data
	Industry	• Explore, measure and disaggregate college credit attainment, industry recognized credential attainment, Ohio means jobs readiness seal attainment	Chamber/Industry Orgs/ BBB/DDC		• Provide access to relevant data

Educator Engagement Educators are well-positioned to guide our students on a path toward career success if they have the training, curriculum tools and support from industry to increase their own awareness, knowledge and skills to support students' career planning.



careers and curriculum designed to give students experiences to help Schools must provide opportunities for educators to connect to them design plans after high school.



connections work while acknowledging the challenges educators face. Industry must invest time and resources in our region's career

Strategy		Actions	Responsibility	Timeframe	Metric
		Determine and Promote MCESC BAC Operational Definitions of Work-Based Learning	Educator Engagement Team, with ODE Representative	May 2022 focus on IT, Healthcare, and Adv Manufacturing	Measured by awareness of School Career Connections Survey
1. Align existing	1	Provide Work-Based Learning Resources (Guidance documents, OMJ readiness seal, pre-apprenticeships, job shadowing, etc.)	Educator Engagement Team, with ODE Representative	May 2022 focus on IT, Healthcare, and Adv Manufacturing	75% of BAC districts participate in Career
programs and resources to meaningfully meet the ODE	schools	Share examples of Career Connections at Career Champions meetings	MCESC Staff	Ongoing Ortly Meetings	Champions meetings this year
career connections requirements		Create an adaptable career connections planning tool for districts that identifies requirements by band, aligns available resources, and identifies gaps	Educator Engagement Team	2021-2022 focus on IT, Healthcare, and Adv Manufacturing	Hold information session for management tools to foster career connections planning
	Industry	Partner with schools to help plug identified gaps with industry-relevant opportunities (speakers, tours, lunches, projects, etc)	TBD as gaps are identified	2021-2022 focus on IT, Healthcare, and Adv Manufacturing	Partner with 100% of districts in a one on one meeting to discuss industryrelevant opportunities
2. Utilize data to drive decision and increase career	Schools	Share Learn to Earn Indicators, Career Readiness Survey Data, and SnapShot Data with Career Champions, Counselors, Building Admin, MVRCD, Teachers	MCESC/L2ED Staff & Educator Engagement Team	Annually	Host professional learning around state's new data portal
readiness across the educational continuum		Share protocols to use for data walks in districts Explore new ways to leverage statewide data portal			75% of districts reporting use of data walks

Educator Engagement continued

Strategy		Actions	Responsibility	Timeframe	Metric
		Leverage and promote career activities and tasks that align with content standards (technical and employability skills)	All districts, MCESC staff	2021-2022 academic year	Track # of career connection experiences Track # of schools implementing K-5 career connections Usage of Employability Skills & Career Sector Courses
3. Expand authentic experiences and activities connected to careers	Schools	Promote careers within each Industry Cluster, by generating resources and activities for one week's worth of programming for each cluster (using Manufacturing Week as a model)	All districts, MCESC staff	2021-2022 academic year	Creation of (1) week of programming for each cluster
		Host quarterly Career Champions/Counselors Meetings with Industry Tours	All districts, MCESC staff	2021-2022 academic year	• 4 quarterly meetings
		Host Teacher Industry Experience	All districts, MCESC staff	2021-2022 academic year	• 4 teacher industry experiences
	Industry	Attend focus groups to develop career activity ideas and identify career alignment with content standards Host Industry Tours and Experiences	Chamber & Trade Orgs to identify key employers to participate	2021-2022 academic year	• Track # of focus groups
4. Create plug and play structural course	Schools	Work with P2P to identify career pathways structures - research existing options within and beyond the local districts and draft local pathway option	MCESC & L2ED in coordination with the Educator Engagement Team	2021-2022 academic year	 Finalize 3rd pathway Track # of pre-apprenticeships/ apprenticeships
workforce sectors	Industry	Work with schools (K-12 & HE) to identify targeted pathways, coursework, and credentials	Chamber, Trade Orgs & Key business leads in identified pathways	2021-2022 academic year	• Track # of credential opportunities



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Advanced Manufacturing Framework coming in Nov. 2021



Montgomery County Information Technology/Computer Science Pathway

This framework outlines a common set of experiences for students in an information technology (IT)/computer 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. This is a living document that will need to be updated frequently to be up-to-date with current education programs and workforce needs.

Academic Coursework

This general coursework is recommended for all students in the IT/computer science pathway.

	Grade 8	Grades 9 and 10	Grade 11	Grade 12	
Career Focused Courses	Information Technology Networking Programming	Foundational IT/Comp Sci or CCP Course such as: CIS 1107–Introduction to Operating Systems BIS 1120–Introduction to Software Applications BIS 1105–IT Fundamentals	Strategic CCP Course such as: CIS 1130-Network Fundamentals CIS 1111-Introduction to Problem Solving and Computer Programming	Strategic CCP Course such as: CIS 1140–Information Systems Analysis and Design CIS 2165–Database Management	Note: College Credit Plus courses apply to both high school and postsecondary requirements, saving students time and money. Students who complete the
English	Grade 8 English	English I English II	English III	English IV ENG 1101–English Composition I	following six courses can earn the IT Fundamentals Certificate at Sinclair
Math	Algebra I	Geometry MAT 1470-College Algebra	Algebra II	Trigonometry/Calculus	Community College: BIS 1120, CIS 1107, CIS 1111, CIS 1130.
History	Social Studies	World History	US History	US Government	CIS 1140, CIS 2165
Science	Physical Science	Biology	Chemistry	Physics	

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 information technology and computer science.

	Grade 8	Grades 9 and 10	Grade 11	Grade 12
Work-Based Learning	Career Exploration: Career Adventures Course—IT Work-Site Tours Power Lunches Pathway Fairs	Career Planning: Job Shadow HR Interview Virtual Pathway Mentor Resume Prep	Career Planning: • Internship • Career Fair • Mock Interview	Career Planning: Internship Career Fair Mock Interview Exposure to Related Software Languages
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 Course	User and Customer Support Principles of IT Systems and Concepts Principles of Data and Documentation Logic and Fundamentals of Computer Languages Principles of Software Word Processing, Spreadsheet, and Presentation Software	Security, Compliance, and Risk Management Routing and Network Configurations Servers and Storage Fundamentals of Cloud Computing and Virtualization	• Individualized Specialization

IT/Computer Science Technical Competencies

User and Customer Support

Use understanding of the range of services and customer-focused approaches used to provide assistance and technical support in order to help users solve problems and implement solutions related to IT.

Principles of IT Systems and Concepts

Use understanding of fundamental IT concepts, systems, platforms, and tools to understand the common roles and career trajectories of IT professionals.

Principles of Data and Documentation

Use understanding of numerical sequencing, information flow, data, and record keeping in order to understand the role of technology in converting data into organized content and maintaining accurate records.

Logic and Fundamentals of Computer Languages

Use understanding of how computer languages communicate to build basic mobile and web applications.

Principles of Software

Use understanding of designing, writing, testing, and maintaining source code of computer program to manage, maintain, and edit software.

Word Processing, Spreadsheet, and Presentation Software

Use understanding of Microsoft Office and Google Suite to create written documents, organize data, and develop visual presentations.

Security, Compliance, and Risk Management

Use understanding of malware, firewall, IDS, and legal or regulatory requirements to recognize basic threats to networked computers and ensure procedures are in place for compliance.

Routing and Network Configurations

Use understanding of common networking protocols to explain the purpose of routing, monitoring, and network configurations.

Servers and Storage

Use understanding of data backup systems to store and recover information.

Fundamentals of Cloud Computing and Virtualization

Use understanding of the features, benefits, and concepts of virtualization to differentiate among types of cloud services.

Selected Postsecondary Options

These selected postsecondary credentials in IT/computer 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. Within the fields of IT and computer science, a particular education credential can prepare students for a variety of occupations.

	Potential Initial Credential	Stackable Credentials		Typical Occupational Outcome
Computer Information Technology	• CompTIA A+ • CompTIA IT Fundamentals+	Computer Information Systems—User Support Associate of Applied Science Students eligible to take the following certification exams: A+, Network+, Security+, MCSA Exam TestOut Client Pro	• Computer Information Systems Bachelor of Science	Computer Network Support Specialist Computer User Support Specialist
	CompTIA IT Fundamentals+ CompTIA A+ CCENT Network+ MTA	Computer Information Systems—Network Engineering Associate of Applied Science Students eligible to take the following certification exams: CCNA, Security+, A+*, MCSA Exam TestOut Server Pro 2016: Install and Storage* *This credential is connected to an optional elective course, students need to take that specific elective in order to take the certification exam.		Network Administrator Network Security Analyst Network Engineer
	CompTIA IT Fundamentals+ MTA CompTIA A+ OCAJ	Computer Information Systems—Software Development Associate of Applied Science Students eligible to take the Network+ certification exam		Software Developer Web Developer Help Desk Analyst Network Administrator User Support Specialist Network Security Analyst Network Engineer
Cybersecurity: Prevention and Investigation Technology	CompTIA IT Fundamentals+ CompTIA A+ MTA	Computer Information Systems—Secure System Administration Associate of Applied Science Students eligible to take the following certification exams: Network+, Linux+, Security+, MCSA Exam TestOut Server Pro 2016: Install and Storage, MCSA Exam TestOut Server Pro 2016: Networking, MCSA Exam TestOut Server Pro: Identify, Securing Windows Network Environment 2016 Exam	Information Technology and Cybersecurity Bachelor of Science	Cybersecurity Analyst/Technician Cyber Crime Analyst/Investigator Incident Analyst/Responder IT Auditor
	CompTIA IT Fundamentals+	Cyber Investigation Technology Associate of Applied Science Students eligible to take the following certification exams: A+, Network+, Linux+, Security+, MCSA Exam TestOut Server Pro 2016: Install and Storage, Securing Windows Network Environment 2016 Exam		 Intelligence Analyst IT Specialist Systems Administrator Network Engineer Information System Security Manager Cyber Security Incident Response Specialist Private Investigator
Guided Transfer	• CompTIA IT Fundamentals+ • CompTIA A+ • CompTIA Security+	Computer Science Associate of Science	• Computer Science Bachelor of Science	Software DeveloperSoftware EngineerData Engineer

Selected Occupations, Wages, and Job Growth

The IT and computer 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 all occupations included have median hourly earnings above a living wage, but that some jobs have a large pay range; this means that employees who have less experience, credentials, and skills can be paid significantly less than the median wage, which can be seen in the "entry level wages" column. The last column shows national data on how many workers in these positions have a bachelor's degree or higher, indicating that for some positions, a four-year degree is an important credential.

		Pays Living Wag (\$23.16)	e		Expected G (2020–2025			*National data
Typical Job	Alternate Job Titles	Median Hourly Earnings	Entry Level Wages	Positions (2020)	Positions	Percent	Typical Work Experience Required	Workers with a Bachelor's or Higher*
Software Developers	• Application Developers • Systems Engineer	\$44.13	\$26.68	5,561	646	12%	None	85%
Computer Systems Analysts	• Information Technology Analyst	\$42.09	\$26.36	1,740	127	7%	None	73%
Computer and Information Systems Managers	• Application Development • Director IT Director	\$63.86	\$41.01	943	92	10%	5+ Years	73%
Computer User Support Specialists	• Desktop Support Technician • Help Desk Analyst	\$25.39	\$15.82	2,129	71	3%	None	48%
Information Security Analysts	• Information Security Officer • Network Security Analyst	\$47.61	\$27.32	373	65	17%	Less Than 5 Years	67%
Network and Computer Systems Administrators	• Network Administrator • Systems Administrator	\$37.41	\$23.56	955	27	3%	None	54%
Computer Network Architects	Network Analyst Network and Security Engineer	\$43.36	\$28.72	293	23	8%	5+ Years	57%
Web Developers	Web Designer Webmaster	\$38.45	\$21.03	750	6	1%	None	68%

This document was developed by JFF, Learn to Earn Dayton, and the Montgomery County ESC. Special thanks to Sinclair Community College and the Technology First

Workforce Committee for your feedback and contributions.

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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. This is a living document that will need to be updated frequently to be up-to-date with current education programs and workforce needs.

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
English	Grade 8 English	English I, English II ENG 1101–English Composition	English III COM 2206-Interpersonal Communication	English IV COM 2206-Interpersonal Communication	a broad range of postsecondary programs in
Math	Grade 8 Math or Algebra I	Algebra I, Geometry MAT 1470-College Algebra	Algebra II	Trigonometry/Calculus MAT 1470-College Algebra	health science. The credits apply to both
History	Social Studies	World History	US History	US Government	high school and postsecondary
Science	Physical Science	Biology BIO 1107-Human Biology	Chemistry	Physics BIO 1141-Principles of Anatomy & Physiology I	requirements, saving students time and money.

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 Exploration:	Career Planning: • Job Shadow • HR Interview • Virtual Pathway Mentor • Resume Prep	Career Planning: • Internship • Career Fair • Mock Interview	Career Planning: • 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

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	Resonance Imaging Bachelor of Radiati	Certifications nography (CT), Magnetic g (MRI), and Mammography on Science Technology in Healthcare Administration	Radiologic Technician
		State Tested Nurse Aide (STNA)	Associate of Applied Science in Respiratory Care	Bachelor of Health	in Respiratory Care Sciences 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	Continuing Educati	Dental Auxiliary (EFDA) on Programs sia and Nitrous Oxide for	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.

						(2020–2030)	
Typical Job	Pays Living Wage (\$23.16)	Median Hourly Earnings	Preferred Education	Stackable Credential	Positions (2020)	Positions	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		\$16.53	Medical Assistant Technology (AAS)		1,701	432	25%
Emergency Medical Technicians and Paramedics		\$16.53	Emergency Medical Services (AAS)		502	159	32%
Phlebotomists		\$16.85	Short-Term Phlebotomy Certificate		742	144	19%
Medical and Health Services Managers	Yes	\$47.22	Health Information Management/ Administration (BS)	Health Administration (MS)	808	116	14%
Respiratory Therapists		\$28.60	Respiratory Care (AAS)	Respiratory Care (BS)	584	71	12%
Radiologic Technicians		\$28.24	Radiographic Technology (AAS)	Radiation Science Technology (BS)	626	43	7%
Diagnostics Medical Sonographers		\$35.77	Diagnostic Medical Sonography (AAS)	Diagnostic Medical Sonography (BS)	284	39	14%
Dental Hygienists		\$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		\$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%

This document was developed by JFF, Learn to Earn Dayton, and the Montgomery County ESC. Special thanks to the Greater Dayton Area Hospital Association (GDAHA) Education Subcommittee and Sinclair Community College for your feedback and contributions.

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MONTGOMERY COUNTY BUSINESS ADVISORY COUNCIL PARTICIPANTS

Thank you to the members of the Business Advisory Council. The group includes representatives from 25+ school districts, 7 in-demand industries, higher education, local government, local economic development organizations and other community partners.

To join the Council or to learn more about how your school or business can participate, contact Bryan Stewart, Workforce Director at Bryan.Stewart@MCESC.org.

Abbot Nutrition

All Service Plastic Molding Better Business Bureau Brookville Local Schools

CareSource

Carlisle Local Schools
Centerville City Schools

Construction Builders Association

CRG, Inc.

Dayton Area Chamber of Commerce

Dayton Area Logistics Association

Dayton Business Committee Dayton Children's Hospital

Dayton Development Coalition

Dayton Metro Library

Dayton Region Manufacturers

Association

Dayton Public Schools

Expedient Technology Solutions

Franklin City Schools

Greater Dayton Area Hospital Association

Hobart Institution of Welding Technology

Huber Heights City Schools

Jefferson Township Local Schools

Kettering City Schools
Kettering Health Network

Kings Local Schools Learn to Earn Dayton Lebanon City Schools

Libra Industries

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Little Miami Local School District

Loveland City Schools

Mad River Local Schools

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Miami Valley Apprenticeship Coordinators Group

Miami Valley Career Technology Center

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Montgomery County

Montgomery County Educational

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New Lebanon Local Schools

Northmont City Schools Northridge Local Schools Oakwood City Schools

PSA Airlines

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Sinclair College

Southwestern Ohio Council for

Higher Education

Springboro Community City School District

Technology First

Trotwood-Madison City Schools

Valley View Local Schools
Vandalia-Butler City Schools
Warren County Career Center

Warren County Educational Service Center

Wayne Local Schools

West Carrollton City Schools Wright-Patterson Air Force Base



