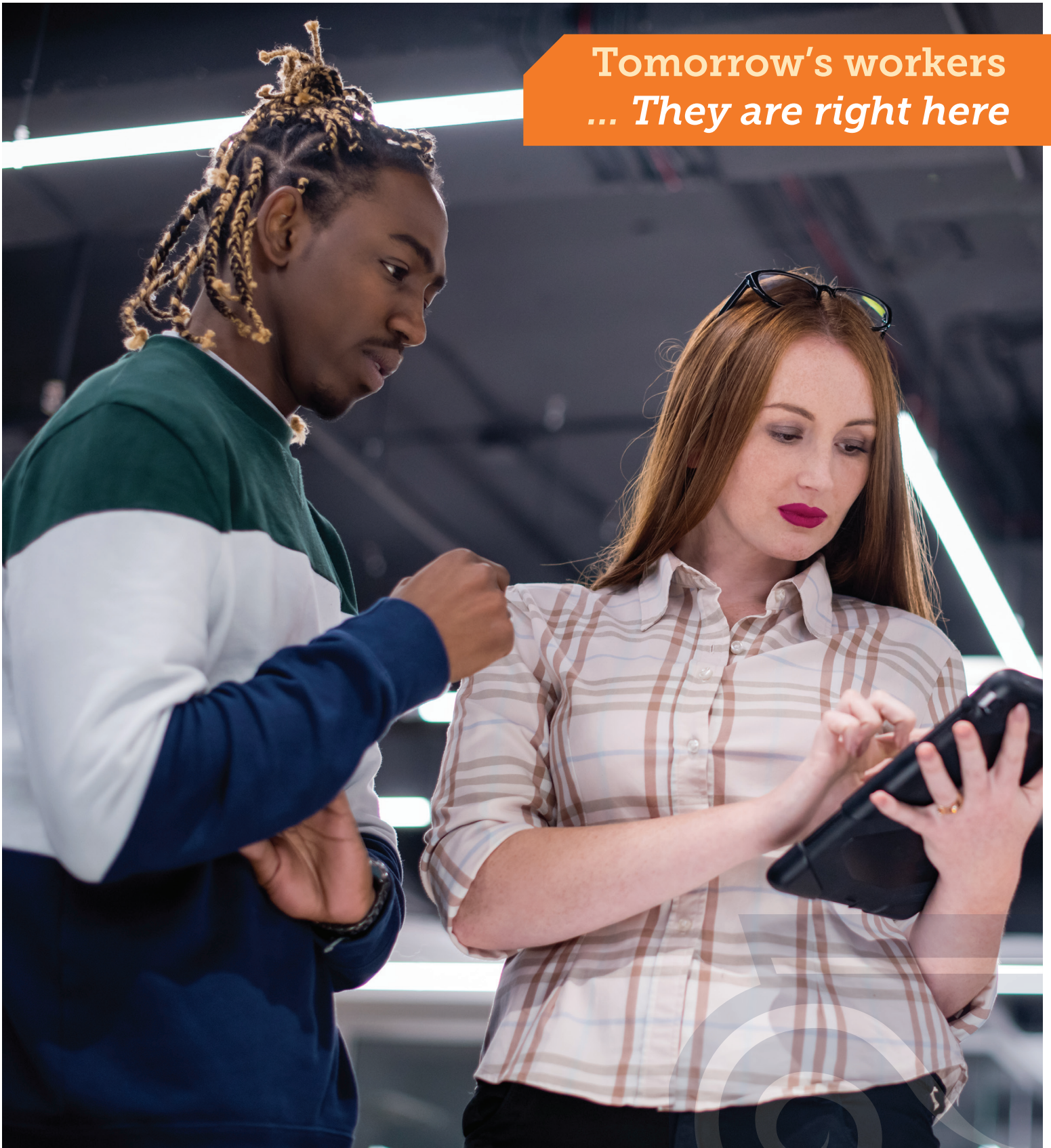


**Tomorrow's workers
... They are right here**

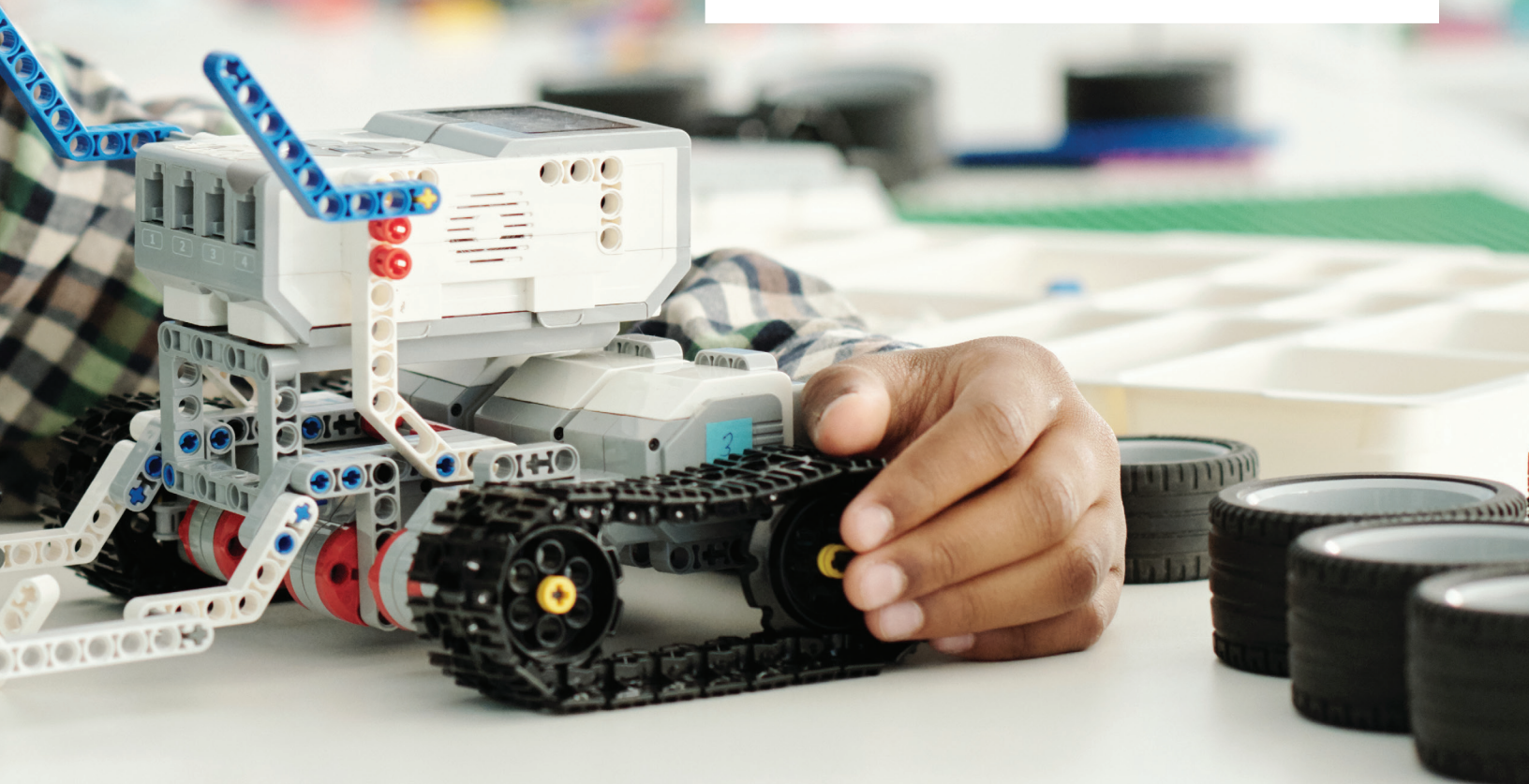


**Montgomery County ESC
Business Advisory Council
2023-2024 Joint Statement of Work**



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Montgomery County ESC Business Advisory Council

Ensuring 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

Since the beginning of this work, school and industry partners have worked hand-in-hand to expand our capacity to strengthen our region's Business Advisory Council. We're focused on serving our schools and our community in designing creative and innovative workforce development strategies. Again this year, we are proud to accept a four-star rating from the Ohio Department of Education. Not only did we receive the highest rating possible for our work, but we also received awards for Excellence in Developing Professional Skills for the Future and Excellence in Coordinating Career Development Experiences. Awards and recognition help legitimize our ambitious goals and raise awareness about our initiatives but we know recognition doesn't come without the continued involvement of all of the education and industry partners who make this possible! It's with continued partnerships that we are able to expand this work and we are confident that this is our best year yet! As we move forward we will focus on expanding work-based learning opportunities for students in our region and to better-connect students to industry-relevant exposure at all ages. This work is critical for the future success of our students and our local industry.

VISION

All MCEC 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.



Excellence in Coordinating Career Development Experiences

Excellence in Developing Professional Skills for the Future

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, Subcommittee Co-Chairs, and community stakeholders.

Co-Chairs host the Annual BAC Dinner and facilitate three other MCECSC 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 6 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 6 Goals. (See *Plan*, pages 12-17.)

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



CAREER READINESS PROGRESSION

K 1 2 3 4 5 6 7 8 9 10 11 12

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

K-8



• Career Exploration Course Offerings

- Industry Site Visits*
- Pathways Fair

6-8



• YouScience*

• Student Snapshot*

- ↳ Identifies Career Pathway
- Job Shadowing Experiences*
(aligned to YouScience results)

*Can and should be repeated

8-9



• Employability Skills Course

• Individualized College and Career Plan

- ↳ Identifies /confirms Career Pathway
- Job Shadowing Experiences

9



• Essential Career Pathways Course(s)

- ↳ Identifies /confirms Career Pathway
- Digital & Financial Literacy Courses
- Job Shadowing Experiences

10



• TechPrep/CCP Courses Digital & Financial Literacy Courses (Aligned Pathway)

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

11



SUMMER Industry experience/ Internship

5



• TechPrep/CCP Courses (Aligned Pathway)

- Sinclair and other higher ed partners will provide Industry-specific 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

12



Post-secondary Work/ Training

Internship, Course-aligned practicum, Apprenticeship, Job or Military

Employer Engagement Menu



CAREER AWARENESS	<p>Field Trip Location <input type="checkbox"/></p> <p>Grade 3+, 1.5 -2 hours/visit</p> <p>Host students and/or counselors and teachers to tour your workplace and discuss career options, required education, a typical day, and more.</p>	<p>Classroom Speaker <input type="checkbox"/></p> <p>Grades K-12, 30-90 minutes</p> <p>Visit a school and talk with a class about what it means to work in your industry.</p>
	<p>Job Shadow <input type="checkbox"/></p> <p>Grades 6-8, 4-8 hours</p> <p>Provide an opportunity for students to observe, discuss and participate in daily routines and activities for a particular job.</p>	<p>Power Lunches <input type="checkbox"/></p> <p>Grades 6-8, 1-2 hours</p> <p>Staff a table at a school during lunch hour to promote your industry and the current and next generation jobs in your career field.</p>
EXPLORATION	<p>Work-Based Learning <input type="checkbox"/></p> <p>Grades 9-12, 6-8 weeks</p> <p>Provide professional work experiences (an internship, pre-apprenticeship, or apprenticeship) that apply to classroom learning and builds skills.</p>	<p>Teacher Externship <input type="checkbox"/></p> <p>Grades 9-12, 15-60 hours</p> <p>Help teachers learn about careers for their students in your industry! Provide job shadowing, training, or similar experience that will help teachers bring workplace norms, tools and skills into the classroom.</p>
	<p>Informational Interview <input type="checkbox"/></p> <p>Grades 6-12, 30-90 minutes</p> <p>Answer student questions in person, by phone, email, or in a group about your profession or specific topic.</p>	<p>Resume Assistance/ Mock Interview <input type="checkbox"/></p> <p>Grades 6-12, 1-2 hours</p> <p>Provide feedback to students on their resumes and interview skills.</p>
PLANNING		
EXTRA CREDIT		

Name _____ Company _____ Title _____

Email _____ Phone _____ I'd like to participate in the BAC Yes No

2023-2024 Business Advisory Council Calendar

BAC Main Meetings 2023/2024

September 18 9:00 am-10:30 am

November 15 1:00 pm-2:30 pm

February 21 5:30 pm-8:00 pm (Annual Dinner)

April 30 9:00 am-10:30 am

Working Group Meetings

Educator Engagement

September 26 9:00 am-10:30 am

November 27 9:00 am-10:30 am

February 27 1:30 pm-3:00 pm

March 21 2:00 pm-3:30 pm

Industry Engagement

September 14 1:00 pm-2:30 pm

October 30 9:00 am-10:30 am

February 6 9:00 am-10:30 am

April 16 9:00 am-10:30 am

Parent & Community Engagement

September 14 9:00 am-10:30 am

October 16 1:00 pm-2:30 pm

January 11 9:00 am-10:30 am

April 11 9:00 am-10:30 am

Policy & Advocacy

October 18 1:00pm-2:30 pm

December 7 1:00pm-2:30 pm

February 7 1:00pm-2:30 pm

April 17 1:00pm-2:30 pm

Student Engagement

September 11 1:00 pm-2:30 pm

November 16 9:00 am-10:30 am

December 6 1:00 pm-2:30 pm

January 17 1:00 pm-2:30 pm

Warren County Working Group

October 6 9:00 am-10:30 am

December 1 9:00 am-10:30 am

April 5 9:00 am-10:30 am

Career Connections Weeks of Action

We continue to lean into a regional approach to this work and have built on the momentum of embracing national and state-sponsored Career Connections Weeks of Action. Utilizing available resources, we produce content recommendations and a calendar with a general timeline of when districts could participate in these initiatives. 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 include:

Construction Appreciation Week - September

Manufacturing Month - October

Health Professions Week - November

Computer Science Education Week - December

In-Demand Jobs Week - May

The Way Forward - Leveraging Student Voice

Building on our BAC plan each year, we're continuing to review who else needs to be at the table. We're finding new ways to gather and implement student feedback and exploring how we can activate our students in creative ways. Our region's young people are often misunderstood. This year we focused on leveraging partners to identify and highlight local success stories so we can continue to showcase young people going into our region's in-demand sectors. We firmly believe exposing students to potential careers where they can find both meaning and purpose will strengthen their interest in school and anchor them to long-term success later in their lives.

2023 Inside Dayton Summer Internship Program:

Over the summer of 2023, we convened our third cohort of students in a five-week, paid summer leadership program. Throughout the program, the students met with elected leaders, industry professionals, community members, and more to learn about the future of our region and the jobs of tomorrow. We're grateful to the four Inside Dayton Fellows representing Sinclair College, Central State University, and Wright State University who helped serve as program coordinators and mentors for our high school interns. These students hailed from eight local schools and provided an important lens for this year's plan.

2023-2024 Montgomery County Student Advisory Delegation:

The Montgomery County Student Advisory Delegation, which includes 40 juniors and seniors from 20 high schools, meets four times throughout the year to learn about the education system in Ohio and develop the knowledge and skills to utilize their experience to be a voice in education. The delegates provide direct feedback to educational and political leaders on how they can improve the education system to ensure Ohio students are future-ready.



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.



Accomplishments

- 23 partnering schools hosted **1,860 career exploration experiences** for our region's students.
- **95% of our partner school districts administered aptitude and interest assessments** to their students to help them make better informed education and career choices.
- **78% of districts participated in the Career Connections Weeks of Action**, helping to spread the word about in-demand careers in our region.
- **3 days of Career Adventure Days** were held in Nov. 2023, at the Dayton Metro Library reaching over 750 students from 7 school buildings and 2 member districts.

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.



Accomplishments

- 61% of districts utilize career connections content for parent and community outreach to **help build understanding of educational and career opportunities** for students.
- A majority of districts are highlighting alumni and recent graduates' stories to **encourage students as they explore career options**.

STUDENT ENGAGEMENT | PARENT AND COMMUNITY ENGAGEMENT | II



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.



Accomplishments

- 39 industry, non-profit, and education partners participated in the Aerospace and Aviation Implementation Lab to **strengthen the worker pipeline** of our local K-12 and higher education ecosystem.

- **625 industry partners** providing direct support to district career connections activities.
- **1,904 students** engaged in work-based learning opportunities.

4) 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.



Accomplishments

- **40+ Career Champions and Counselors participated in three site visits** to local employers including Heapy Engineering, Yaskawa Motoman, and Quality Quartz Engineering to learn about career opportunities in our region.
- **The 5th pathway framework** was completed highlighting ways students can advance their education in the Aerospace and Aviation industry.
- 8 districts participated in the Aerospace and Aviation Design Lab to **support the utilization and augmentation of existing resources** to create opportunities for students in this in-demand industry.

INDUSTRY ENGAGEMENT

EDUCATOR ENGAGEMENT

POLICY & ADVOCACY



5) 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.



Accomplishments & Update

- **10 partners from education, industry, and the community** attended the Pathways to Prosperity Fall Institute in October 2023.
- 3-pronged policy focus developed **in support of an aligned workforce agenda** that meets the needs of the current regional workforce demands.

6) Warren County Working Group

This special committee serves as a resource for Warren County member districts to apply the larger efforts of our BAC to their localized framework.



Accomplishments

- 2 informational meetings regarding **local workforce opportunities** were held.
- 6 employers from 4 in-demand sectors participated in a panel sharing insights into their profession and **ideas for future workforce development.**



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.

Strategy		Actions	Responsibility	Timeframe	Metric
1. Utilize social media to expand awareness of careers & educational opportunities	Schools	<ul style="list-style-type: none"> Develop & deploy social media engagement plan in conjunction with County Communications Collaborative and Think TV as well as their aggregate College & Career Readiness Data Plan to better leverage students in outreach efforts Identify opportunities to partner with local interactive media study programs 	<ul style="list-style-type: none"> Student Engagement Parent & Community Engagement Educator Engagement County Communications Collaborative All Districts 	Regularly present at County Communications Collaborative monthly meetings	<ul style="list-style-type: none"> 94% of districts utilizing social media for career awareness
	Industry	<ul style="list-style-type: none"> 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. 2024	<ul style="list-style-type: none"> 11 social media posts were created for the Career Connections content calendar
2. Increase the use of student aptitude and interest data	Schools	<ul style="list-style-type: none"> Utilize YouScience/Naviance results in programmatic decision making and marketing opportunities Support member districts in understanding their aggregate and individual student assessment results 	MCESC/All Districts	Q2 2024	<ul style="list-style-type: none"> 95% of districts utilize an interest and/or aptitude tool YouScience is fully funded for member districts in the 2023-2024 school year 95% of districts making informed attendance recommendations for career exploration activities
	Industry	<ul style="list-style-type: none"> Explore additional funding opportunities for long-term use of software like YouScience 	DDC/Chamber/Trade Orgs		
3. Promote a student-facing information campaign with content that addresses in-demand industry sectors, college affordability, and post-secondary education	Schools	<ul style="list-style-type: none"> Provide career exploration 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 five Career Connections Weeks of Action 	MCESC/All Districts	Q2 2024	<ul style="list-style-type: none"> 1,860 career activities were hosted across partner districts 78% of districts currently participating in Career Connections Weeks of Action 625 unique partnerships with companies 60% of engaged businesses represent our region's in-demand sectors
	Industry	<ul style="list-style-type: none"> Resource career activities (provide speakers, open for tours, etc.) 	Trade Orgs/Businesses/MVHRA		
4. Create more career content for each of the local in-demand industry sectors	Schools	<ul style="list-style-type: none"> Implement a Socratic seminar activity where the student outcomes are industry-directed questions and then work with industry to produce videos responding to those questions Deploy content through classes and other communications channels 	MCESC/All Districts	Q2 2024	<ul style="list-style-type: none"> Create 10 locally produced career-related videos - In Progress 81% of member districts share career videos and content - In Progress Promote videos with 25 different careers - In Progress 2 in-demand sectors represented in produced videos with a goal of 9 videos produced before the end of the year
	Industry	<ul style="list-style-type: none"> Identify companies and employers for student question response videos 	Trade Orgs/Businesses/MVHRA/Think TV/Higher Ed institutions		
5. Focus on K-5 career connections outreach	Schools	<ul style="list-style-type: none"> Develop K-5 student outreach strategies on a school by school basis utilizing our A to Z videos plus other partner resources Each district will partner with industry to deploy an elementary school in-demand career awareness activity Explore new funding opportunities for additional career exploration curriculum and resources for K-5 outreach 	All Districts/MCESC/L2ED	Q2 2024	<ul style="list-style-type: none"> 94% of partner school districts utilize K-5 career connections activities 303 Bitly website visits of shared career connections content
	Industry	<ul style="list-style-type: none"> Provide necessary information for outreach communications 	Trade Orgs/Businesses		

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 schedules 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 in school.

Strategy	Actions	Responsibility	Time-frame	Metric
1. Spread the word on resources available to employers with the goal of assisting them in engaging with schools across the region	Schools	<ul style="list-style-type: none"> Develop instructions on a district-by-district basis for opportunities for employers to engage with students 	Q4 2024	<ul style="list-style-type: none"> 14% of districts have published employer engagement instructions on their website
	Industry	<ul style="list-style-type: none"> Utilize resources that house information on K-12 workforce pathways and how to connect with schools for career engagement Track companies engaging through outreach application form and notify relevant partners Continue to provide feedback on the resources available 		
2. Develop partnerships which will provide opportunities for career connections opportunities	Schools	<ul style="list-style-type: none"> Develop and prepare career connection opportunities in order to connect with employers who are ready to engage 	Q4 2024	<ul style="list-style-type: none"> 625 industry partners supported 1,860 career activities across our partner districts
	Industry	<ul style="list-style-type: none"> Build workforce development sub-committees in each in-demand industry group to discuss and participate in career connection opportunities and participate in other MCECSC BAC subcommittees Host work-based learning information sessions with companies that have well-established programs and companies that are interested in developing student-facing opportunities Utilize the career engagement form to partner with schools in the region Work with Trade Associations to engage with Schools and utilize a sustainable process to build workforce 		
3. Increase industry participation in career connection opportunities	Schools	<ul style="list-style-type: none"> BAC districts will complete BAC Mid-Year Review survey and share elementary, middle, and high school career readiness efforts Each BAC district will share with Industry Engagement Subcommittee how they leverage OMJ Readiness Seal or other practices they employ to prepare students for WBL opportunities 	Q2 2024	<ul style="list-style-type: none"> 83% of BAC districts have created a plan for how their students will engage in career connection opportunities
	Industry	<ul style="list-style-type: none"> Analyze internal operations to determine areas within their organizations that can benefit from an intern Develop and deploy a promotional campaign plan to engage students in work-based learning opportunities 		

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.



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 the careers available locally.

Strategy	Actions	Responsibility	Timeframe	Metric
1. Leverage all available career connections content to ensure BAC districts have access to the full portfolio of resources	<ul style="list-style-type: none"> Develop a plan for storing, organizing, and ensuring access to career connections content Design a content calendar to align with local and state career connections initiatives and events Provide career connections content 	<p>All Districts, County Communications Collaborative</p> <p>Think TV, Chamber, Industry Orgs, DDC</p>	<p>Q1 2024</p> <p>Q4 2024</p>	<ul style="list-style-type: none"> Plan In Progress Content Calendar In Progress Resource Portfolio In Progress
	2. Utilize career connections content to expand awareness of careers & educational opportunities	<ul style="list-style-type: none"> Develop & deploy a career connections engagement plan for parents/guardians and community organizations Provide industry data, success stories, and photos, to support communications teams with parent and community outreach Develop a plan to capture and organize industry success stories Leverage traditional media partners to share career connections successes and messaging 	<ul style="list-style-type: none"> Student Engagement Parent & Community Engagement Educator Engagement County Communications Collaborative All Districts <p>Chamber/Industry Orgs/ BBB/DDC</p>	<p>Regularly present at County Communications Collaborative monthly meetings</p> <p>Present a mid-school year review to the BAC via email in January 2024</p>
3. Promote an information campaign that addresses the importance of work-based learning and how to leverage career assessment data from a parent and community perspective	<ul style="list-style-type: none"> Deploy content through official school communications channels, other media campaigns, and community groups Create a shareable Google Sheet career connections content calendar Provide videos, events, and other resources Develop two positive stories to highlight how career assessments led to work-based learning that informed decision plans after graduation Develop a positive story that shows how industry is using career assessment tools to inform their hiring and recruitment strategies 	<p>MCESC/All Districts</p> <p>Trade Orgs/Businesses/MVHRA/Think TV/ Higher Ed institutions</p>	<p>Q2 2024</p>	<ul style="list-style-type: none"> 61% of districts utilizing career connections content for parent outreach Success stories in development

Parent & Community Engagement continued

4. Focus on K-5 career connections outreach	Schools	<ul style="list-style-type: none"> Develop K-5 parent outreach strategies on a school by school basis using events like “Dress for Success” utilizing age-appropriate career exploration curriculum Create parent-facing communications highlighting next steps for after outreach activities provided by BAC member districts 	L2ED/MCESC	Q2 2024	<ul style="list-style-type: none"> 94% of partner school districts are conducting K-5 career connections outreach
	Industry	<ul style="list-style-type: none"> Provide necessary information for outreach communications Provide examples of hands-on, age appropriate K-5 career exploration activities provided by BAC member districts Explore strategies to include diverse industry partners and caregivers present in career connection events 	Trade Orgs/Businesses/MVHRA/Think TV/Higher Ed institutions		
5. Organize outreach to alumni and recently graduated seniors	Schools	<ul style="list-style-type: none"> 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 Explore strategies to include young professional alumni and recent grads to present in career connection events 	MCESC/All Districts	Q2 2024	<ul style="list-style-type: none"> A majority of districts are highlighting alumni and recent graduates
	Industry	<ul style="list-style-type: none"> Provide necessary information for outreach material 	Trade Orgs/Businesses/MVHRA/Think TV/ Higher Ed institutions		

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.

Schools must inform policymakers on the needs and challenges of



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

Strategy	Actions	Responsibility	Timeframe	Metric
1. Create a policy agenda to guide our efforts for the 2023-2024 school year	Schools	All districts	Create an initial agenda with key policy priorities for Q2 2024	<ul style="list-style-type: none"> Completed a 2023-2024 policy agenda
	Industry	Chamber/Industry Orgs/ BBB/DDC		
2. Support policies that address our state's digital divide and online access issues	Schools	All districts	Q2 2024	<ul style="list-style-type: none"> Ensure the coordination of regional partners around digital equity - Ongoing
	Industry	Chamber/Industry Orgs/DDC		
3. Provide real-world and school-based examples or success stories for future policies and/or renewals	Schools	All districts	Q2 2024	<ul style="list-style-type: none"> Document and share WBL opportunities in our region via qualitative and/or quantitative methods - Ongoing
	Industry	Chamber/Industry Orgs/DDC		
4. Ensure stakeholder access to community workforce data	Schools	All districts	Q2 2024	<ul style="list-style-type: none"> Implement and highlight strategies that enhance access to workforce data - Ongoing
	Industry	Chamber/Industry Orgs/DDC		

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.

Strategy	Actions	Responsibility	Timeframe	Metric
1. Provide guidance and support for work-based learning	Schools Determine and promote MCECSC BAC operational definitions of Work-Based Learning	Educator Engagement and Industry Engagement Subcommittee	May 2024 focus on our established career pathways	<ul style="list-style-type: none"> 100% of BAC districts receiving support
	Industry Provide and support the implementation of Work-Based Learning Resources (Guidance documents, OMJ readiness seal, pre-apprenticeships, job shadowing, etc.) Partner with schools to help plug identified gaps with industry-relevant opportunities (speakers, tours, lunches, projects, etc)	Educator Engagement Team, with ODE Representative TBD as gaps are identified	May 2024 focus on established career pathways May 2024 focus on established career pathways	<ul style="list-style-type: none"> 8 districts with established healthcare work-based learning opportunities Partner with 100% of districts in a one on one meeting to discuss industry-relevant opportunities - In Progress
2. Utilize data to drive decision and increase career readiness across the educational continuum	Schools Share Learn to Earn Indicators, Career Readiness Survey Data, and Snapshot Data with Career Champions, Counselors, Building Admin, MVRCD, Teachers Meet with ten districts to review their career connections related data and brainstorm potential areas of collaboration	MCECSC/L2ED Staff & Educator Engagement Team	Annually	<ul style="list-style-type: none"> Meet with 10 districts - In Progress
	Schools Leverage and promote career activities and tasks that align with content standards (technical and employability skills) Promote careers within each Industry Cluster, by generating resources and activities for one week's worth of programming for each cluster Host quarterly Career Champions/Counselors Meetings with Industry Tours Host Teacher Industry Experience	All districts, MCECSC staff	2023-2024 Academic Year	<ul style="list-style-type: none"> 100% of schools implementing K-12 Career Connections experiences Creation of (1) week of programming for each cluster - In Progress 3 Quarterly Meetings hosted, One Scheduled for March 11, 2024 Host 4 teacher industry experiences - In Progress
3. Expand authentic experiences and activities connected to careers	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	2023-2024 Academic Year	<ul style="list-style-type: none"> Track # of focus groups - In Progress
	Schools Host Career Pathway Design Labs	MCECSC & L2ED in coordination with the Educator Engagement Team	2023-2024 Academic Year	<ul style="list-style-type: none"> Aviation and Aerospace Implementation Lab hosted on Nov. 17th, 2023
4. Create plug and play structural course alignment options for workforce sectors	Industry Partner with schools in the Career Pathway Design Lab process	Chamber, Trade Orgs & Key business leads in identified pathways	2023-2024 Academic Year	<ul style="list-style-type: none"> 39 industry, non-profit, and education partners participated in the Aerospace and Aviation Implementation Lab

Pathways to Prosperity Network Update

Since 2018 our BAC has been a member of the Pathways to Prosperity Network, an initiative of Jobs for the Future at the Harvard Graduate School of Education. Pathways to Prosperity's data-driven work is in alignment with our BAC work, focused on creating meaningful career pathways for students who are eager to complete high school and earn a high-value credential or degree.

In October 2023, a working group attended the annual Fall Pathways to Prosperity Institute. Our group consisted of superintendents and staff from Learn to Earn Dayton, as well as economic development professionals from the Dayton Area Chamber of Commerce and the Dayton Development Coalition, and a Montgomery County Commissioner. After the Fall Institute, we convened a series of follow-up meetings with BAC leaders and our Pathways to Prosperity support staff to continue mapping our in-demand industry pathways. These meetings served as an opportunity to better connect our BAC's committee co-chairs and update our partners on our regional pathway models.

Industry Pathway Models

Stemming from our Pathways to Prosperity work, we partnered with Sinclair College, industry partners, and various stakeholders in the region to develop pathway models in health science, computer science, advanced manufacturing, elementary education, and most recently, aerospace and aviation.

The regional pathway models (found on the following pages) are intended to support more seamless transitions from high school to college to career. Pathway models demonstrate the full vision of pathways, beginning with identifying high-demand jobs, and then backward mapping to educational opportunities that will prepare young people for these jobs, including potential postsecondary programs, high school coursework, and college and career preparation activities. These in-demand pathways demonstrate the different positions available in these industries and the varying income levels associated with each position.

Building on last year's success, MCEC hosted an Aerospace and Aviation Design Lab this fall bringing together teams from 8 BAC districts to design how to incorporate the pathway into their schools. Each district team audited its course offerings, work-based learning options, advising practices, and competency development opportunities to identify gaps in their offerings that needed to be addressed to fully implement the pathways.

Following the Design Labs, we hosted an Implementation Lab that layered in industry partners, higher education, and K-12 partners to work together to identify resources and solutions to fill the gaps identified in the Design Labs. These sessions were a reminder of the power of collaboration across sectors as the groups tackled how to address the identified barriers from lack of certified teachers to the need for specialized equipment.

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 8th grade to career including high school coursework, college and career preparation activities, potential postsecondary programs, and in-demand jobs in the regional labor market. This is a living document that will need to be updated regularly to reflect 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	<p>⊕ Note: College Credit Plus courses apply to both high school and postsecondary requirements, saving students time and money. Students who complete the following six courses can earn the IT Fundamentals Certificate at Sinclair Community College: BIS 1120, CIS 1107, CIS 1111, CIS 1130, CIS 1140, CIS 2165</p>
English	Grade 8 English	English I English II	English III	English IV ⊕ ENG 1101–English Composition I	
Math	Algebra I	Geometry ⊕ MAT 1470–College Algebra	Algebra II	Trigonometry/Calculus	
History	Social Studies	World History	US History	US Government	
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

The selected postsecondary credentials in IT/computer science are based on program options and transfer agreements at Sinclair Community College. 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	<ul style="list-style-type: none"> • CompTIA A+ • CompTIA IT Fundamentals+ 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Computer Information Systems Bachelor of Science • Computer Network Support Specialist • Computer User Support Specialist
	<ul style="list-style-type: none"> • CompTIA IT Fundamentals+ • CompTIA A+ • CCENT • Network+ • MTA 	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Network Administrator • Network Security Analyst • Network Engineer
	<ul style="list-style-type: none"> • CompTIA IT Fundamentals+ • MTA • CompTIA A+ • OCAJ 	<ul style="list-style-type: none"> • Computer Information Systems—Software Development Associate of Applied Science Students eligible to take the Network+ certification exam 	<ul style="list-style-type: none"> • Software Developer • Web Developer • Help Desk Analyst • Network Administrator • User Support Specialist • Network Security Analyst • Network Engineer
Cybersecurity: Prevention and Investigation Technology	<ul style="list-style-type: none"> • CompTIA IT Fundamentals+ • CompTIA A+ • MTA 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Information Technology and Cybersecurity Bachelor of Science • Cybersecurity Analyst/Technician • Cyber Crime Analyst/Investigator • Incident Analyst/Responder • IT Auditor
	<ul style="list-style-type: none"> • CompTIA IT Fundamentals+ 	<ul style="list-style-type: none"> • Cyber Investigation Technology Associate of Applied Science Students eligible to take the following certification exams: Network+, Linux+, Security+, MCSA Exam TestOut Server Pro 2016: Install and Storage, Securing Windows Network Environment 2016 Exam 	<ul style="list-style-type: none"> • Intelligence Analyst • IT Specialist • Systems Administrator • Network Engineer • Information System Security Manager • Cyber Security Incident Response Specialist • Private Investigator
Guided Transfer	<ul style="list-style-type: none"> • CompTIA IT Fundamentals+ • CompTIA A+ • CompTIA Security+ 	<ul style="list-style-type: none"> • Computer Science Associate of Science 	<ul style="list-style-type: none"> • Computer Science Bachelor of Science • Software Developer • Software Engineer • Data 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 (\$23.16/hour) is from the MIT Living Wage Calculator for one adult and one child in Montgomery County in 2021. 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.

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

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 8th grade to career including high school coursework, college and career preparation activities, potential postsecondary programs, and in-demand jobs in the regional labor market. This is a living document that will need to be updated regularly to reflect 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 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 + ENG 1101–English Composition	English III + COM 2206–Interpersonal Communication	English IV + COM 2206–Interpersonal Communication	
Math	Grade 8 Math or Algebra I	Algebra I, Geometry + MAT 1470–College Algebra	Algebra II	Trigonometry/Calculus + MAT 1470–College Algebra	
History	Social Studies	World History	US History	US Government	
Science	Physical Science	Biology + BIO 1107–Human Biology	Chemistry	Physics + 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 Exploration: • Career Adventures Course—Healthcare • 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
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 are based on program options and transfer agreements at Sinclair Community College. 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 (\$23.16/hour) is from the MIT Living Wage Calculator for one adult and one child in Montgomery County in 2021. 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	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.

Montgomery County Advanced Manufacturing 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 8th grade to career including high school coursework, college and career preparation activities, potential postsecondary programs, and in-demand jobs in the regional labor market. This is a living document that will need to be updated regularly to reflect current education programs and workforce needs.

Academic Coursework

This general coursework is recommended for all students in the advanced manufacturing pathway.

	Grade 8	Grades 9 and 10	Grade 11	Grade 12	
Career Focused Courses		Foundational Advanced Manufacturing or CCP Course such as: + MET 1131–Personal Computer Applications for Engineering Technology + CAM 1109–Fundamentals of Tooling and Machining	Strategic CCP Course such as: + EET 1120–Introduction to DC and AC Circuits + EGR 1106–Basic Mechanical and Technical Skills	Strategic CCP Course such as: + COM 2211–Effective Public Speaking	+ College Credit Plus (CCP) courses apply to a broad range of postsecondary programs in advanced manufacturing. The credits apply to both high school and postsecondary requirements, saving students time and money.
English	Grade 8 English	English I English II	English III	English IV + ENG 1101–English Composition I	
Math	Grade 8 Math or Algebra I	Algebra I Geometry	Algebra II	Trigonometry/Calculus + MAT 1470–College Algebra	
History	Social Studies	World History	US History	US Government	
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 advanced manufacturing.

	Grade 8	Grades 9 and 10	Grade 11	Grade 12
Work-Based Learning	Career Exploration: • Workforce Sector Course—Advanced Manufacturing • 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
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	• Equipment Safety • Manufacturing Environment • Personal Health and Safety • Spatial Reasoning • Process, Design, and Development • Installation	• Customer Focus • Quality Assurance and Continuous Improvement • Digital Manufacturing • Supply Chain Logistics	• Individualized Specialization

Manufacturing Competencies

Equipment Safety

Students can use their understanding of equipment usage, practices, and procedure to maintain a healthy, safe, and secure work environment.

Manufacturing Environment

Students can use their understanding of workstations, tools, and equipment operations to safely navigate a manufacturing environment.

Personal Health and Safety

Students can use their understanding of personal safety and environmental regulations to comply with local, federal, and company health/safety demands.

Spatial Reasoning

Students can use their understanding of objects in relation to one another to understand three-dimensional imaging.

Process, Design, and Development

Students can use their understanding of technical drawings and schematics to complete the design and development process.

Installation

Students can use their understanding of tools to assemble and disassemble simple tools.

Customer Focus

Students can use their understanding of communication and project management to understand client needs and complete projects accordingly.

Quality Assurance and Continuous Improvement

Students can use their understanding of product and process to meet quality systems requirements as defined by customer specifications.

Digital Manufacturing

Students can use their understanding of digital manufacturing tools and computer-based programs to complete the development and design for implementation processes.

Supply Chain Logistics

Students can use their understanding of materials, suppliers, and internal systems to plan and monitor movement and storage of materials and products.

Selected Postsecondary Options

The selected postsecondary credentials in advanced manufacturing are based on program options and transfer agreements at Sinclair Community College, except for the welding program, offered through Hobart Institute. 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 Credentials	 Stackable Credentials	 Potential Occupational Outcome
Engineering Technology	<ul style="list-style-type: none"> Industrial Engineering Technology Associate of Applied Science Students eligible to take the following certification exam: Six Sigma Green Belt Certification 	<ul style="list-style-type: none"> Bachelor of Science in Industrial Engineering Technology (with additional transfer courses) 	<ul style="list-style-type: none"> Engineering Technicians Quality Control Technicians Production Supervisors Continuous Improvement Specialists
	<ul style="list-style-type: none"> Mechanical Engineering Technology Associate of Applied Science Students eligible to take the following certification exam: Certified SolidWorks Associate (CSWA) IRC 	<ul style="list-style-type: none"> Bachelor of Science in Mechatronics Engineering Bachelor of Science in Mechanical and Manufacturing Engineering Technology 	<ul style="list-style-type: none"> Mechanical Engineering Technicians
	<ul style="list-style-type: none"> Automation and Control Technology with Robotics Students eligible to take the following certification exam: FANUC Handling Tool 		<ul style="list-style-type: none"> Control System Technician and Designer Systems Engineering Technician Industrial Equipment Professional
Welding (Hobart Institute)	<ul style="list-style-type: none"> Pathway Welding Program Students eligible to take four nationally recognized certifications: AWS® D1.1 Shielded Metal Arc Welding AWS® D1.1 Flux Cored Arc Welding AWS® D1.6 Gas Tungsten Arc AWS® D1.1 Gas Metal Arc Welding Pulsed Spray Transfer 	<ul style="list-style-type: none"> Welder-Fabricator Pathway Students eligible to take two additional nationally recognized certifications: AWS® D1.1 Gas Metal Arc Welding Pulsed Spray 3G AWS® D1.1 Flux Cored Arc Welding Self-shielded 	<ul style="list-style-type: none"> Welder
Computer Aided Manufacturing	<ul style="list-style-type: none"> Computer Aided Manufacturing/CNC Technology Associate of Applied Science 		<ul style="list-style-type: none"> Machinist/CNC Machinist Process Improvement Specialist
Guided Transfer	<ul style="list-style-type: none"> Engineering and Engineering Technology University Transfer Associate of Science 	Several options including, but not limited to: <ul style="list-style-type: none"> Bachelor of Science in Civil Engineering Bachelor of Science in Electrical Engineering Bachelor of Science in Mechanical Engineering Bachelor of Science in Industrial Engineering 	<ul style="list-style-type: none"> Engineer

Selected Occupations, Wages, and Job Growth

The advanced manufacturing careers listed below are projected to have job openings over the next five years in the region. The living wage (\$28.66/hour) is from the MIT Living Wage Calculator for one adult and one child in Montgomery County in 2022. Like all industries, many high-wage jobs in advanced manufacturing require a bachelor's degree or beyond. However, there are a few jobs below that don't require a four-year degree and pay over \$20/hour. In manufacturing, there are few defined career advancement opportunities, but one such opportunity is moving into a managerial/supervisory role. The last column in the table shows the occupation's risk of being affected by automation, a factor to consider as individuals plan for their careers.

Typical Job	Pays Living Wage (\$28.66)	Median Hourly Earnings	Entry Level Wages	Positions (2021)	Average Annual Openings	Expected Growth (2021-2026)	Typical Education Required	Higher-than-Average Risk of Automation
Electronics Engineers	Yes	\$53.67	\$42.73	1,388	87	-2%	Bachelor's degree	No
Software Developers and Software Quality Assurance Analysts and Testers	Yes	\$44.13	\$26.68	5,640	482	11%	Bachelor's degree	No
Mechanical Engineers	Yes	\$43.37	\$34.38	1,213	79	4%	Bachelor's degree	No
Industrial Engineers	Yes	\$38.47	\$31.96	1,114	85	8%	Bachelor's degree	No
Electrical and Electronics Repairers	Yes	\$31.38	\$28.24	78	7	6%	Postsecondary certificate	No
Supervisors/Managers	Yes	\$30.77	\$24.53	2,052	190	2%	High school diploma or equivalent	No
Machinist/CNC Machinist	No	\$23.20	\$17.88	2,050	206	4%	High school diploma or equivalent	Yes
Welders, Cutters, Solderers, and Brazers	No	\$20.89	\$17.72	663	82	8%	High school diploma or equivalent	Yes
Maintenance Repair Workers	No	\$19.80	\$16.09	3,277	320	0%	High school diploma or equivalent	Yes
Inspector/Quality Assurance Auditor	No	\$18.93	\$16.21	1,855	196	-6%	High school diploma or equivalent	Yes

This document was developed by JFF, Learn to Earn Dayton, and the Montgomery County ESC. Special thanks to Sinclair Community College, Hobart Institute of Welding Technology, and the Dayton Region Manufacturers Association for their feedback and contributions.

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 pipeline for employers. Pathway models demonstrate a vision from 8th grade to career including high school coursework, college and career preparation activities, potential postsecondary programs, and in-demand jobs in the regional labor market. This is a living document that will need to be updated regularly to reflect current education programs and workforce needs.

Academic Coursework

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

	Grade 8	Grades 9 and 10	Grade 11	Grade 12	
Career Focused Courses		+ Foundational Education or CCP Course such as: ECE 1101 - Introductory to Child Development	+ ECE 2200 - Families, Communities, & Schools	+ EDU 1100 - Introduction to Education	+ College Credit Plus (CCP) courses apply to a broad range of postsecondary programs in education. The credits apply to both high school and postsecondary requirements, saving students time and money.
English	Grade 8 English	English II English III	+ ENG 1101 - English Composition I	+ ENG 1201 - English Composition II	
Math	Grade 8 Math/Algebra	Algebra I/Geometry	Algebra II	Trigonometry/Calculus	
History	Social Studies	+ World History American History HIS 1101* - US History	World History Social Studies Elective**	US Government	
Science	Physical Science	Biology	Chemistry	Physics	

*Miami University students replace with HIS 1112: Western Civilization **Optional

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 skills and knowledge students need for a successful career in education career fields.

	Grade 8	Grades 9 and 10	Grade 11	Grade 12
Work-Based Learning	<ul style="list-style-type: none"> Job Shadow Peer Tutoring 	<ul style="list-style-type: none"> Job Shadow Join Educator Rising/Participate in a Grow Your Own Program at your HS Summer work with childcare, tutoring, student programs, etc. 	<ul style="list-style-type: none"> Job Shadow Job Fair Mock Interview Participate in Educator Rising/Participate in a Grow Your Own Program at your HS Summer work with childcare, tutoring, student programs, coaching, etc. 	<ul style="list-style-type: none"> Job Shadow Job Fair Mock Interview Educator Rising Participate in a Grow Your Own Program at your HS Summer work with childcare, tutoring, student programs, coaching etc.
Advising	<ul style="list-style-type: none"> YouScience 	<ul style="list-style-type: none"> Identification of Credential and College Options Financial Literacy Course Begin Ohio Means Jobs Readiness Seal College Application Prep Work 	<ul style="list-style-type: none"> Financial Literacy Course Ohio Means Jobs Readiness Seal Identify content area and grade level of interest for teaching license 	<ul style="list-style-type: none"> Complete FAFSA Complete College Application Complete Ohio Means Jobs Readiness Seal College and Career Signing Day
Competencies	<ul style="list-style-type: none"> Employability Skills CPR & First Aid Certification 	<ul style="list-style-type: none"> Written Communication Verbal Communication Organization Responsible Decision Making Social Awareness Relationship Skills Child Development 	<ul style="list-style-type: none"> Ethics in Education Technology Competencies 	<ul style="list-style-type: none"> Individual specialization in grades and subjects of interest

Educational Competencies

Written Communications:

The ability to identify, clearly state, and convey a goal to the reader.

Verbal Communication:

The ability to deliver and understand verbally transmitted information quickly and accurately.

Organization:

The ability to manage many tasks: planning lessons, delivering instruction, scheduling, maintaining records, prioritization, and collaboration.

Social Awareness:

The ability to understand and empathize with the perspectives of others, including those from diverse backgrounds, cultures, and contexts.

Relationship Skills:

The ability to establish and maintain healthy and supportive relationships and to navigate settings with a broad spectrum of individuals and groups.

Responsible Decision Making:

The ability to make caring and constructive choices about personal behavior and social interactions across various situations.

Child Development:

Understand the sequence of physical, intellectual, language, and emotional changes that occur in a child from birth to young adulthood.

Technology Competencies:

The ability to perform and adapt core technology functions necessary for the classroom and functions within an educational setting.

Educational Professional Licensure:

Use understanding of appropriate education requirements, licensure, and certification to obtain appropriate credentials.

Ethics in Education:

Understand the value of educational integrity and the responsibility inherent in the profession of teaching.

Selected Postsecondary Options

The selected postsecondary credentials in the education pathway are based on transfer agreements at Sinclair Community College. Some education paths have credentials that easily stack or build from the previous credential, while others are not easily stackable. Credentials can help individuals document their progress in defined career pathways and help them measure their move up the career ladder into different or higher paying jobs.

Professional Role	 Initial Credential	 Stackable Credentials	 Typical Occupational Outcome
Educational Aide	Educational Aide Permit	<ul style="list-style-type: none"> • Associates degree or 48 semester hours at an accredited college or university • ParaPro Exam 	Educational Aide with ESEA endorsement
Early Childhood Education	Child Development Associate Credential (CDA), Ohio Administrator Credential (OCCRA)	<ul style="list-style-type: none"> • Associates degree, Associate of Arts (AA) or Bachelor of Arts (BA) in Early Childhood Education (Non-Licensure) • Pre-Kindergarten License, Pre-Kindergarten Special Needs, Teaching English to Speakers of Other Languages (TESOL), Adapted Physical Education, Bilingual, Computer/Technology, Computer Science, Drama/Theater 	<ul style="list-style-type: none"> • Pre-kindergarten Teacher • Lead Teacher at Childcare Center or Early Learning Center • Childcare Center Administrator
Elementary Teacher	Teaching License	<ul style="list-style-type: none"> • Bachelors Degree, Early Childhood Generalist License, • Primary (PK-5) License, Teaching English to Speakers of Other Languages (TESOL), Gifted Intervention Specialist, Drama/Theater, Computer Science, Computer/Technology, Bilingual, Adapted Physical Education 	Elementary Teacher
Middle Childhood Education	Teaching License	<ul style="list-style-type: none"> • Bachelors Degree • Middle Childhood License, Middle Childhood Generalist Endorsements (LA, Math, Science, Social Studies), Teaching English to Speakers of Other Languages (TESOL), Gifted Intervention Specialist, Drama/Theater, Computer Science, Computer/Technology, Bilingual, Adapted Physical Education 	Grades 4-9 Teacher
Adolescent Young Adult Education (AYA)	Teaching License	<ul style="list-style-type: none"> • Bachelors Degree • Adolescent Young Adult (AYA) License, AYA Subject Endorsements, Teaching English to Speakers of Other Languages (TESOL), Gifted Intervention Specialist, Drama/Theater, Computer Science, Computer/Technology, Career Based Intervention, Bilingual, Adapted Physical Education 	Grades 7-12 Teacher
Educational Leadership	Two years of successful teaching experience under a standard teaching license, Master's Degree, Approved Preparation Program, or Alternative pathway	<ul style="list-style-type: none"> • Principal License • Administrative Specialist License • Superintendent License 	<ul style="list-style-type: none"> • Assistant Principal • Principal • Dean of Students • Superintendent • Instructional Coordinator

Additional information about supplemental licensures can be found at the Ohio Department of Education website:
<https://education.ohio.gov/Topics/Teaching/Licensure/Supplemental-License/Supplemental-Teaching-License-for-Endorsement-Area>

Selected Occupations, Wages, and Job Growth

The education careers listed below are projected to grow in the region. The living wage (\$32.08 per hour) is from the MIT Living Wage Calculator for one adult and one child in Montgomery County in 2022. Those pursuing a career in public sector education may choose to explore the additional career benefits unique to the field such as retirement, healthcare, and leave. Note that some jobs in the table do not pay a living wage; however, degree and credential pathways exist in all professions and the following information documents the earning potential for different roles within education.

Occupation	Job Summary	Entry-Level Education	2021 Median Pay	Median Hourly Earnings	Pays Living Wage (\$32.08)	Expected Growth 2020-2030
Teacher Assistants	Teacher assistants work with a licensed teacher to give students additional attention and instruction.	Some college, no degree	\$24,360	\$16	No	9%
Preschool Teachers	Preschool teachers educate and care for children younger than age 5 who have not yet entered kindergarten.	Associate's degree	\$30,210	\$20	No	18%
Elementary School Teachers	Kindergarten and elementary school teachers instruct young students in basic subjects in order to prepare them for future schooling.	Bachelor's degree	\$61,350	\$41	Yes	7%
Middle School Teachers	Middle school teachers educate students typically in sixth through eighth grades.	Bachelor's degree	\$61,320	\$41	Yes	7%
High School Teachers	High school teachers teach academic lessons and various skills that students will need to attend college and to enter the job market.	Bachelor's degree	\$61,280	\$41	Yes	8%
Career & Technical Education Teachers	Career and technical education teachers instruct students in various technical and vocational subjects, such as auto repair, healthcare, and culinary arts.	Bachelor's degree	\$61,160	\$41	Yes	5%
Special Education Teachers	Special education teachers work with students who have a wide range of learning, mental, emotional, and physical disabilities.	Bachelor's degree	\$61,820	\$42	Yes	8%
Elementary, Middle, & High School Principals	Elementary, middle, and high school principals oversee all school operations, including daily school activities.	Master's degree	\$98,490	\$56	Yes	8%
Instructional Coordinators	Instructional coordinators oversee school curricula and teaching standards. They develop instructional material, implement it, and assess its effectiveness.	Master's degree	\$63,740	\$43	Yes	10%
Librarians & Library Media Specialists	Librarians and library media specialists help people find information and conduct research for personal and professional use.	Master's degree	\$61,190	\$41	Yes	9%
School & Career Counselors and Advisors	School counselors help students develop academic and social skills. Career counselors and advisors help people choose a path to employment.	Master's degree	\$60,510	\$41	Yes	11%

Source: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Career and Technical Education Teachers, at <https://www.bls.gov/ooh/education-training-and-library/career-and-technical-education-teachers.htm> (visited August 18, 2022).

*living wage calculation based on one adult and one child in Montgomery county in August of 2022 from the MIT Living Wage Calculator (<https://livingwage.mit.edu/counties/39113>)

Montgomery County Aerospace and Aviation 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 eighth grade to career, including high school coursework, college and career preparation activities, potential postsecondary programs, and in-demand jobs in the regional labor market. This regional pathway model is a living document that will need to be updated regularly to reflect current education programs and workforce needs.

Academic Coursework

This general coursework is recommended for all students in the aerospace and aviation pathway.

	Middle School/ Grade 8	Grades 9 and 10	Grades 11	Grade 12	
Career Focused Courses		Foundational Aerospace and Aviation or CCP Course such as: + MET 1131–Personal Computer Applications for Engineering Technology + AVT 1105–Orientation to Aviation	Strategic Aerospace and Aviation or CCP Course such as: + AVT 1101–Introduction to Unmanned Aerial Systems + AVT2125–Developments in Aviation I	Strategic Aerospace and Aviation or CCP Course such as: + ECO 2160–Principles of Macroeconomics + MAN 1107–Foundations of Business	+ College Credit Plus (CCP) courses apply to a broad range of postsecondary programs in aerospace/aviation. The credits apply to both high school and postsecondary requirements, saving students time and money.
English	Grade 8 English	English I English II + ENG 1101–English Composition	English III	English IV + COM 2211–Effective Public Speaking	
Math	Grade 8 Math or Algebra 1	Algebra I Geometry	Algebra II + MAT 1470–College Algebra	+ MAT 1470–College Algebra + MAT 1570–Analytic Geometry and Trigonometry	
History	Social Studies	World History	U.S. History	U.S. Government	
Science	Physical Science	Biology	Chemistry	Physics + PHY 1141–College Physics I	

College-level English courses can be taken at any grade level in a student's high school career.

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 aerospace and aviation.

	Grade 8	Grades 9 and 10	Grade 11	Grade 12
Work-Based Learning	Career Exploration: • Career Adventures Course–Aviation • Work-site tours • Power lunches • Pathways 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
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	• Complete Free Application for Federal Student Aid (FAFSA) • Complete Ohio Means Jobs (OMJ) Readiness Seal • College and career signing day
Competencies (defined below)	Employability skills	• Project Management and Process • Troubleshooting • Technical Writing and Editing • Fundamentals of Physics and Industry Math • Fundamentals of Systems Engineering	• Cybersecurity • Risk Management and Compliance • Quality Assurance and Control • Financial and Resource Management • Fundamentals of Computer Programming and Software Development	Individualized Specialization

Aerospace/ Aviation Technical Competencies

Project and Process Management
Students can use their ability to interpret project needs, set deadlines, and sequence activities to effectively complete a project in a timely manner.

Troubleshooting
Students can use their ability to apply a systematic approach to identifying, isolating, designing/redesigning, and testing solutions in order to implement a solution or solve a problem.

Technical Writing and Editing
Students can use their understanding of clear, grammatically correct, and concisely written communications to convey accurate messages in professional work plans, emails, and informative documents, including technical and proposal writing.

Fundamentals of Physics, Math, and Chemistry
Students can use their understanding of the basic laws of physics, chemistry, and algebraic logic to apply concepts to projects and solve relevant problems.

Fundamentals of Engineering and Systems
Students can use their understanding of relationships across complex and diverse systems in order to manage and monitor programming to obtain system optimization.

Cybersecurity
Students can use their understanding of operating systems, networks, telecommunications, ethics, and cryptography in order to maintain secure systems.

Risk Management
Students can use their understanding of the standards, applications, and regulatory requirements necessary to protect confidentiality, integrity, and availability of information.




Quality Assurance and Control
Students can use their understanding of digital design, testing, writing, and maintaining source code in order to manage and edit software across its life cycle.

Financial and Resource Management
Students can use their understanding of the principles of managing, monitoring, and controlling resources, including assets, money, and products in order to achieve project expectations.

Fundamentals of Digital Design, Computer Programming, and Software Development
Students can use their understanding of designing, writing, testing, and maintaining source code to manage and edit software.

Postsecondary Options

These selected postsecondary credentials in aerospace and aviation, based on program options and transfer agreements at Sinclair Community College, lead to careers with wages that are over \$25/hour. Stackable credentials can help individuals progress in their career pathway or move up a career ladder to different or higher-paying jobs. In aerospace and aviation, there are a wide variety of subfields, including engineering, manufacturing, computer science, etc. The diversity of subfields is represented in the variety of postsecondary programs included. One common pathway to the aerospace and aviation industry not included below is through the military, but the pathways vary—some students enlist immediately after completing high school and some complete a relevant bachelor's degree before beginning their service.

	 Potential Initial Credential	 Stackable Credentials		 Typical Occupational Outcome
Maintenance	Short-Term Certificates: <ul style="list-style-type: none"> • General Aviation Maintenance • Powerplant Aviation Maintenance • Airframe Aviation Maintenance 	<ul style="list-style-type: none"> • Aviation Airframe and Powerplant Maintenance Technology Associate of Applied Science 	<ul style="list-style-type: none"> • Aviation Maintenance Bachelor of Science 	<ul style="list-style-type: none"> • Aviation Maintenance Technician • Aircraft Mechanic
Operations/Pilot	<ul style="list-style-type: none"> • Aircraft Dispatcher Short-Term Certificate 	<ul style="list-style-type: none"> • Aviation Technology/ Professional Pilot Associate of Applied Science 	<ul style="list-style-type: none"> • Aviation Technology/ Professional Pilot Bachelor of Applied Science 	<ul style="list-style-type: none"> • Airline Pilot • Professional Pilot
Unmanned Aerial Systems	<ul style="list-style-type: none"> • Unmanned Aerial Systems Short-Term Certificate 	<ul style="list-style-type: none"> • Unmanned Aerial Systems Associate of Science 	<ul style="list-style-type: none"> • Unmanned Aerial Systems Bachelor of Science 	<ul style="list-style-type: none"> • Systems Operator • Drone Pilot
Business Operations	<ul style="list-style-type: none"> • Business Information Certificate 	<ul style="list-style-type: none"> • Business Administration Associate of Science 	<ul style="list-style-type: none"> • Business Bachelor of Science 	<ul style="list-style-type: none"> • Buyers and Purchasing Agents
Guided Transfer-Engineering	<ul style="list-style-type: none"> • Engineering and Engineering Technology University Transfer Associate of Science 	<ul style="list-style-type: none"> • Engineering Science • Engineering Technology Bachelor of Science 	<ul style="list-style-type: none"> • Engineering Master of Science 	<ul style="list-style-type: none"> • Engineer

Selected Occupations, Wages, and Job Growth

The table below includes labor market information about selected aerospace and aviation careers, including median wages and typical education required. The living wage is derived from the MIT Living Wage Calculator and is intended to be sufficient wage to support one adult and one child living in the Dayton metropolitan statistical area. Note that while all of these jobs are expected to have openings in the next 5–10 years, we were not able to include data about specific predicted growth because so many of these jobs are in the military and that data is separate from civilian jobs.

Typical Job	Pays Living Wage (\$34.16)	Median Hourly Earnings	Typical Education Level	What % of workers are age 55+?
Logisticians	Yes	\$43.24	Bachelor's degree	21%
Aircraft Mechanics and Service Technicians	No	\$28.83	Postsecondary nondegree award	13%
Industrial Engineers	Yes	\$38.33	Bachelor's degree	31%
Flight Attendants	Yes	\$34.47	High school diploma	Insufficient data
Airline Pilots, Copilots, and Flight Engineers	Yes	\$97.84	Bachelor's degree	Insufficient data
Aerospace Engineers	Yes	\$53.80	Bachelor's degree	29%
Avionics Technicians	No	\$28.07	Associate's degree	Insufficient data
First-Line Supervisors of Mechanics, Installers, and Repairers	No	\$31.35	High school diploma	31%
Aerospace Engineering and Operations Technicians	No	\$30.18	Associate's degree	31%
Buyers and Purchasing Agents	Yes	\$38.67	Bachelor's Degree	32%
Software Developers	Yes	\$47.26	Bachelor's degree	17%

Montgomery County Business Advisory Council Participants

Thank you to the members of the Business Advisory Council. The group includes representatives from 23+ school districts, 7 in-demand industries, higher education, local government, military, 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.

Associated Builders and Contractors, Ohio Valley	Miamisburg City Schools
Better Business Bureau	Miami Valley Apprenticeship Coordinators Group
Brookville Local Schools	Miami Valley Career Technology Center
CareSource	Miami Valley HR Association
Carlisle Local Schools	Montgomery County
Centerville City Schools	Montgomery County Educational Service Center
Construction Builders Association	New Lebanon Local Schools
CRG, Inc.	Northmont City Schools
Dayton Area Chamber of Commerce	Northridge Local Schools
Dayton Area Logistics Association	NuVasive
Dayton Business Committee	Oakwood City Schools
Dayton Children's Hospital	Ohio Regular Army and Army Reserve
Dayton Development Coalition	PSA Airlines
Dayton Metro Library	Quality Quartz Engineering
Dayton Region Manufacturers Association	Shook Construction
Dayton Public Schools	Sinclair College
Expedient Technology Solutions	Southwestern Ohio Council for Higher Education
Franklin City Schools	Springboro Community City School District
GE Aerospace	Technology First
Greater Dayton Area Hospital Association	The Entrepreneurs' Center
Hobart Institution of Welding Technology	Trotwood-Madison City Schools
Huber Heights City Schools	U.S. Army
Jefferson Township Local Schools	Valley View Local Schools
Junior Achievement of OKI Partners	Vandalia-Butler City Schools
Kettering City Schools	Warren County Career Center
Kettering Health Network	Warren County Educational Service Center
Kings Local Schools	Wayne Local Schools
Learn to Earn Dayton	West Carrollton City Schools
Lebanon City Schools	Wright-Patterson Air Force Base
Little Miami Local School District	Yaskawa Motoman
Mad River Local Schools	
Mercy Health	