#### OFFICE OF CHIEF ACADEMIC OFFICER Summary of State Board of Education Agenda Items May 21, 2020

#### OFFICE OF SECONDARY EDUCATION

04. <u>Information: Overview of the Hanover Research (Hanover) Regional Labor Market</u> <u>Analysis</u> [Goals1, 2, and 6 – MBE Strategic Plan]

<u>Background Information</u>: To support the Mississippi Department of Education's (MDE) effort to ensure alignment of CTE programs across the state, the MDE has partnered with Hanover to conduct a labor market analysis across four local workforce development areas:

- Mississippi Twin Districts
- Mississippi Partnership
- Mississippi Delta
- Southcentral Mississippi Works

The labor market analysis identifies high-demand and high-growth industries and occupations across the state offering livable wages with various entry-level education requirements. The report supports MDE's efforts to ensure that CTE programs across the state effectively prepare students for postsecondary success across in-demand industries and occupations that will provide a livable wage.

This item references Goals 1, 2, and 6 of the *Mississippi Board of Education 2018-2022 Strategic Plan*.

Information Only

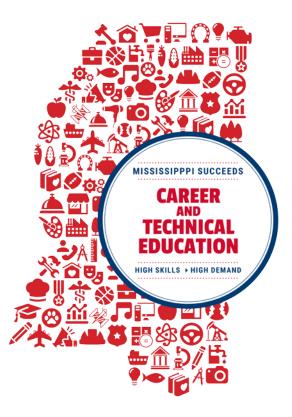
Back-up material attached



### Hanover Research Labor Market Analysis And Course Trends

#### May 2020





#### VISION

To create a world-class educational system that gives students the knowledge and skills to be successful in college and the workforce, and to flourish as parents and citizens

#### **MISSION-**

To provide leadership through the development of policy and accountability systems so that all students are prepared to compete in the global community



#### MISSISSIPPI STATE BOARD OF EDUCATION STRATEGIC PLAN GOALS

All Students Proficient and Showing Growth in All Assessed Areas

1

Every Student Graduates from High School and is Ready for College and Career

2

Every Child Has Access to a High-Quality Early Childhood Program

3

Every School Has Effective Teachers and Leaders

4

Every Community Effectively Uses a World-Class Data System to Improve Student Outcomes

5

6

Every School and District is Rated "C" or Higher



### Background

- In the fall of 2019, MDE partnered with Hanover Research to conduct a labor market analysis for Mississippi
- Hanover staff contacted leadership from several agencies and organizations to garner collaborative support



MISSISSIPPI DEPARTMENT of EMPLOYMENT SECURITY









MISSISSIPPI STATE UNIVERSITY NATIONAL STRATEGIC PLANNING & ANALYSIS RESEARCH CENTER



The Hanover research for Mississippi was conducted to:

- assist MDE in determining current and future priorities for career and technical education (CTE)
- analyze statewide labor market data
- analyze labor market data for the four workforce development areas
- compare labor market data to current CTE course offerings





- Hanover analyzed long-term employment projections from 2019 to 2029, using data from Chmura Economics' JobsEQ, the Bureau of Labor and Statistics, and the Massachusetts Institute of Technology (MIT)
- Hanover determined livable wage rates for various family structures and correlated this information with the salaries of specific occupations





### **Research Questions**

- What are high-demand and high-growth industries across the four Mississippi local workforce development areas?
- What are high-demand and high-growth occupations in these areas?
- Which of these industries and occupations support a livable wage for common family configurations in these regions?
- Which CTE courses align to high-growth occupations?



- Highest growth occupations in Mississippi are in the health care, social services, hospitality, and construction industries
- The four regions of Mississippi have varying thresholds of highgrowth industries and occupations. The threshold used for "high-growth" in the Delta was much lower than for other regions.
- The Mississippi Delta is projected to continue experiencing economic downturn, as 91% of occupations are in decline.



- The four CTE courses that are ONLY aligned with highgrowth industries (not mid- or low-growth industries) statewide are:
  - athletic training (sports medicine)
  - health informatics
  - medical lab tech
  - practical nurse (LPN training)



#### LIVABLE WAGE THRESHOLDS

According to the United States Census Bureau, the estimated average household size in the state of Mississippi is 2.62 people. Hanover classified occupations as paying a living wage for one-person and three-person households if the median annual salaries exceed the state-level livable salaries displayed below.

2018 LIVING WAGE CONFIGURATIONS	MISSISSIPPI
1-Person Household	\$22,973
3-Person Household 2 adults (1 working)/1 child	\$45,125

In the following slides, Hanover has color-coded the data points based on the livable wages as follows:

- Salaries displayed in **GREEN** correlate to occupations that pay at or above the livable wage for a three-person household.
- Salaries displayed in **BLUE** correlate to occupations that pay at or above the livable wage for a single-person household.
- Salaries displayed in **RED** correlate to occupations that pay less than the livable wage for a singleperson household.



## STATE OF MISSISSIPPI SUMMARY



#### COURSES

in Mississippi high schools are aligned **only** with industries of high projected growth statewide.

- Cooking & Related Culinary Arts
- . Health Informatics
- Hospitality Admin. & Management .
- Medical Lab Technology
- Practical Nurse (LPN Training)





Construction Laborers Construction Trades, General



# **PROJECTED GROWTH THRESHOLDS**

Hanover used the following definitions to determine industries and occupations of high, mid, and low projected growth/demand in the **state of Mississippi**.

	INDUSTRY GROWTH THRESHOLDS					
Industries of High Growth	High growth/demand industries in Mississippi and all workforce development areas are those with greater than or equal to 0.5% projected growth/demand from 2019 to 2029.					
Industries of <mark>Mid</mark> Growth	Mid growth/demand industries in Mississippi and all workforce development areas are those with projected growth/demand rates between 0.2% and 0.5%.					
Industries of <mark>Low</mark> Growth	Low growth/demand industries in Mississippi and all workforce development areas are those with less than 0.2% projected growth/demand from 2019 to 2029.					

	OCCUPATION GROWTH THRESHOLDS					
Occupations of High Growth	High growth/demand occupations in the state of Mississippi are those with greater than or equal to 0.5% projected growth/demand and 100 projected annual job openings from 2019 to 2029.					
Occupations of Mid Growth	Mid growth/demand occupations in the state of Mississippi are those that fulfill one of the two requirements for high growth/demand.					
Occupations of Low Growth	Low growth/demand occupations in the state of Mississippi are those that do not fulfill either of the requirements for high growth/demand.					



# **INDUSTRIES OF HIGH GROWTH**

Three industries are projected to experience high growth in the state of Mississippi:



	Total Employment 2019	Average Annual Wages	Total Demand 2029	Projected Employment Growth 2019-2029	Projected Annual % Growth 2019-2029
Human Services	60,761	\$38,324	83,610	5,524	0.9%
Health Science	118,535	\$79,715	95,994	7,707	0.7%
Hospitality & Tourism	160,422	\$28,167	262,647	8,477	0.5%



# CTE COURSE ALIGNMENT - INDUSTRIES

#### Courses aligned to industries of HIGH projected growth in the state of Mississippi:



- Child Care Provider/Assistant
- Cosmetology/Cosmetologist, General
- Family & Consumer Sciences



- Athletic Training (Sports Medicine)
- Health Informatics
- Health Services, Allied Health, General
- Medical Lab Tech.
- Practical Nurse (LPN Training)
- HOSPITALITY & TOURISM
- Cooking & Related Culinary Arts
- Custodian/Groundskeeper
- Family & Consumer Sciences
- Hospitality Administration/Mgmt., General



# **OCCUPATIONS OF HIGH GROWTH & DEMAND**

#### The Top 10 occupations of high growth & demand in the state of Mississippi are:

		Total Employment 2019	Average Annual Wages	Total Demand 2029	Projected Employment Growth 2019- 2029	Projected Annual % Growth 2019- 2029
0	First-Line Supervisors of Food Prep. & Serving Workers	9,356	\$30,200	14,620	942	1.0%
	Construction Laborers	12,468	\$30,400	13,624	736	0.6%
	First-line Supervisors of Construction Trades and Extraction Workers	5,288	\$58,100	5,392	269	0.5%
$\bigcirc$	Medical Assistants	3,722	\$30,500	4,803	625	1.6%
	Plumbers, Pipefitters, and Steamfitters	4,019	\$45,300	4,496	255	0.6%
$\bigcirc$	Medical Secretaries	3,405	\$30,800	4,095	342	1.0%
	Food Service Managers	3,477	\$48,600	4,068	263	0.7%
	Billing and Posting Clerks	3,875	\$32,700	4,066	197	0.5%
	Operating Engineers and Other Construction Equipment Operators	3,260	\$38,300	3,756	166	0.5%
8	Social and Human Service Assistants	2,736	\$28,700	3,653	303	1.1%

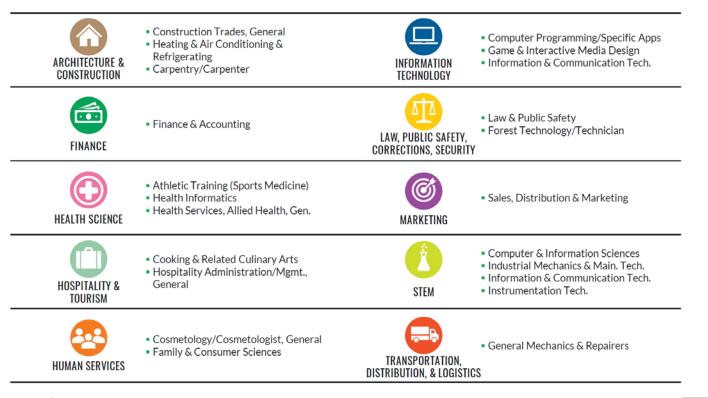


K-12 EDUCATION

\*Notes: [1] These occupations are ranked in order of the projected annual percent growth from 2019 to 2029. [2] Hanover only included occupations that pay a living wage and require an Associate's degree and below.

# CTE COURSE ALIGNMENT - OCCUPATIONS

#### Courses aligned to <u>occupations</u> of HIGH projected growth & demand in the state of Mississippi:





## MISSISSIPPI TWIN DISTRICTS SUMMARY



**9** in Mississippi high schools are aligned with occupations of high projected growth/demand in the Mississippi Twin Districts.

- Athletic Training (Sports Medicine)
- Computer Programming/ Specific Apps
- Family & Consumer Sciences
- Finance & Accounting
- Game & Interactive Media Design
- Health Services, Allied Health, General
- Information & Communication Tech.
- Law & Public Safety
- Sales, Distribution & Marketing





# **INDUSTRIES OF HIGH GROWTH**

Four industries are projected to experience high growth in the Mississippi Twin Districts:



	Total Employment 2019	Average Annual Wages	Total Demand 2029	Projected Employment Growth 2019-2029	Projected Annual % Growth 2019-2029
Human Services	18,294	\$38,198	25,506	1,886	1.0%
Health Science	39,273	\$79,737	32,513	3,316	0.8%
Information Technology	4,094	\$73,117	2,925	198	0.5%
Architecture & Construction	31,513	\$41,911	33,336	1,463	0.5%



### MISSISSIPPI PARTNERSHIP SUMMARY



8 in Mississippi high schools are aligned with occupations of high projected growth/demand in the Mississippi Partnership.

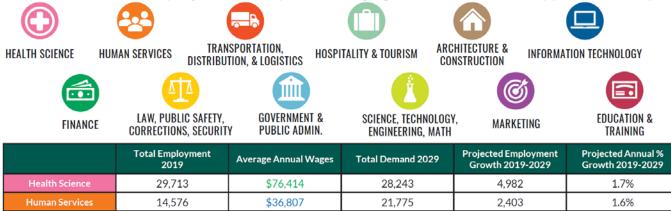
- Ag. & Food Products Processing
- Construction Trades, General
- Cosmetology/Cosmetologist, General
- Custodian/Groundskeeper
- Hospitality Administration/ Management, General
- Information & Communication Tech.
- Machine Shop Technology/Assistant
- Practical Nurse (LPN Training)



Construction Laborers Construction Trades, General

## **INDUSTRIES OF HIGH GROWTH**

Twelve industries are projected to experience high growth in the Mississippi Partnership:



	Total Employment 2019	Average Annual Wages	Total Demand 2029	Projected Employment Growth 2019-2029	Projected Annual % Growth 2019-2029
Health Science	29,713	\$76,414	28,243	4,982	1.7%
Human Services	14,576	\$36,807	21,775	2,403	1.6%
Transportation	40,047	\$43,642	53,244	4,390	1.1%
Hospitality & Tourism	41,987	\$27,502	73,028	4,361	1.0%
Architect. & Construct.	22,315	\$38,749	25,260	2,154	1.0%
Info Technology	3,481	\$67,642	2,654	293	0.8%
Finance	7,948	\$56,636	8,020	603	0.8%
Law, Public Safety	8,897	\$41,897	8,547	571	0.6%
Government	1,902	\$51,371	1,660	119	0.6%
STEM	3,397	\$75,864	2,647	190	0.6%
Marketing	38,895	\$48,236	57,332	2,088	0.5%
Education & Training	25,570	\$62,272	23,294	1,216	0.5%



### **MISSISSIPPI DELTA SUMMARY**



**7** in Mississippi high schools are aligned with occupations of high projected growth/demand in the Mississippi Delta.

- Athletic Training (Sports Medicine)
- Computer Programming/ Specific Apps
- Energy Technology
- Family & Consumer Sciences
- Forest Technology/Technician
- Game & Interactive Media Design
- Sales, Distribution & Marketing





Child, Family, and School Social Workers Family & Consumer Sciences

## **INDUSTRIES OF GROWTH**

Notably, all industries in the **Mississippi Delta** region are in decline (aside from the Health Care and Social Assistance industry, which is projected to remain stagnant), leading Hanover to apply significantly lower growth thresholds to this region (as detailed on the previous page). Local reports indicate that declining industries could be caused by a declining population in the Mississippi Delta. According to NPR, the industrial shift toward technology and mechanization reduced the need for manual labor in this largely agricultural-based economy. In this lens, the decline in jobs has led to the decline in population.\* The complex cycle of economic and population downturn required Hanover to analyze the Mississippi Delta region differently than the other three regions.



	Total Employment 2019	Average Annual Wages	Total Demand 2029	Projected Employment Growth 2019-2029	Projected Annual % Growth 2019-2029
Human Services	6,044	\$35,180	7,696	107	0.2%



### SOUTHCENTRAL MISSISSIPPI WORKS SUMMARY



10 in Mississippi high schools are aligned with occupations of high projected growth/demand in Southcentral Mississippi Works.

- Athletic Training (Sports Medicine)
- Computer Programming/ Specific Apps
- Family & Consumer Sciences
- Finance & Accounting
- Game & Interactive Media Design
- Health Services, Allied Health, General
- Industrial Mechanics & Maintenance Tech.
- Information & Communication Tech.
- Instrumentation Tech.
- Sales, Distribution & Marketing





## **INDUSTRIES OF HIGH GROWTH**

Five industries are projected to experience high growth in Southcentral Mississippi Works:



	Total Employment 2019	Average Annual Wages	Total Demand 2029	Projected Employment Growth 2019-2029	Projected Annual % Growth 2019-2029
Human Services	19,895	\$38,656	27,387	1,795	0.9%
Health Science	39,046	\$81,335	32,590	3,343	0.9%
Architecture & Construction	22,840	\$39,772	24,551	1,360	0.6%
Information Technology	4,659	\$75,625	3,326	227	0.5%
Finance	11,897	\$61,273	11,413	536	0.5%



### **Next Steps**

- Share findings with other state agencies responsible for economic development and employment services
- Present Hanover Research results at the MS-ACTE Summer Conference, Fall CTE Directors Meetings, and the Fall Collaboration Meetings held in conjunction with the Mississippi Community College Board
- Formulate actions in collaboration with the Mississippi CTE Advisory Panel
- Work with local school districts to align CTE programming with the results of the Hanover Research report and the needs identified through the Perkins V regional needs assessment meetings





# **Questions?**





# LABOR MARKET TRENDS AND CTE COURSE ALIGNMENT IN MISSISSIPPI

Prepared for the Mississippi Department of Education

# TABLE OF CONTENTS

INTRODUCTION	<u>P. 3</u>
METHODOLOGY	<u>P. 4</u>
KEY FINDINGS	<u>P. 9</u>
STATE OF MISSISSIPPI	<u>P. 11</u>
MISSISSIPPI TWIN DISTRICTS	<u>P. 21</u>
MISSISSIPPI PARTNERSHIP	<u>P. 31</u>
MISSISSIPPI DELTA	<u>P. 44</u>
SOUTHCENTRAL MISSISSIPPI WORKS	<u>P. 53</u>
REFERENCES	<u>P. 64</u>



# INTRODUCTION

The Mississippi Department of Education (MDE) has prioritized college and career readiness as one of its six goals under the 5-Year Strategic Plan for 2016-2020. In particular, MDE wants to ensure alignment of Career and Technical Education (CTE) programs across the state to identify the demand for various industries and occupations and to continue deploying and promoting CTE programs that meet state and regional industry needs in both the short- and long-term. To support this effort, MDE has partnered with Hanover Research (Hanover) to conduct the following research studies:

#### December 2019

#### Labor Market Analysis

Analyzed projected growth and demand of industries and occupations statewide and in Mississippi's four workforce development regions (Mississippi Twin Districts, Mississippi Partnership, Mississippi Delta, Southcentral Mississippi Works).

#### February 2020

#### **CTE Course Alignment Analysis**

Determined the extent of alignment between statewide and workforce development region labor market projections and current CTE programming in Mississippi school districts.

MDE now prepares to share the findings from these two research studies more broadly. As such, Hanover has developed the following capstone-style report that synthesizes the findings from this secondary research agenda over the past several months to identify key findings and emerging trends. Hanover has also designed the accompanying discussion guide to help Mississippi's education leaders engage in a structured conversation about the findings from the research.



For each geographic level, Hanover identified occupations projected to be in **high growth** over 10 years that typically require <u>no formal education</u>, <u>a high school diploma or its equivalent</u>, <u>a post-secondary non-degree award</u>, or <u>an Associate's degree</u>. Hanover also outlined broad trends in employment by industry based on projected growth rate, projected annual job openings, average annual income, and occupation gaps.

As described in each section of this report, Hanover used different thresholds of high-growth for each region. Notably, all industries in the **Mississippi Delta** region are in decline (aside from the Health Care and Social Assistance industry, which is projected to remain stagnant), leading Hanover to apply significantly lower growth thresholds to this region.

### **DATA SOURCES**

Our analysis primarily relied on long-term (10-year) employment projections, from 2019 to 2029, culled from Chmura Economics' JobsEQ. Hanover also relied on wage data from the Bureau of Labor Statistics (BLS) and the Massachusetts Institute of Technology (MIT), as well as educational attainment data obtained via the BLS Employment Projections tool.

To analyze the employment outlook at the regional levels, Hanover examined 10-year labor market projections which align with six-digit occupation codes as defined by the **BLS Standard Occupational Classification (SOC)** system. Using SOC codes, Hanover assigned each occupation to a career cluster as identified by **Advance CTE**. Projections at the regional levels were drawn from Chmura's **JobsEQ** tool, which uses BLS data to forecast future employment growth at various geographic levels from 2019 to 2029 at both the occupational level and the industry level. Hanover used the **BLS Employment Projections** tool to obtain data on educational attainment, and the **MIT living wage calculator** to determine the minimum livable wages for one-person and three-person households.



#### **DEFINING A LIVING WAGE**

Hanover determines whether high-growth occupations offer a "living" wage using the Massachusetts Institute of Technology's (MIT) Living Wage Calculator. The calculator "draws upon geographically specific expenditure data related to a family's likely minimum food, childcare, health insurance, housing, transportation, and other basic necessities (e.g., clothing, personal care items, etc.) costs." It tallies the basic needs budget for various household configurations and adds in relevant taxes using the following equations:

**BASIC NEEDS BUDGET =** Food Costs + Childcare Costs + Insurance Premiums + Health Care Costs + Housing Costs + Transportation Costs + Other Necessities Costs

LIVING WAGE = Basic Needs Budget + (Basic Needs Budget \* Tax Rate)

NUMBER OF ADULTS	NUMBER OF CHILDREN	MISSISSIPPI LIVING WAGES
1 Adult	None	\$22,973
1 Adult	1 Child	\$43,828
1 Adult	2 Children	\$49,401
1 Adult	3 Children	\$59,466
2 Adults (1 Working)	None	\$37,449
2 Adults (1 Working)	1 Child	\$45,125
2 Adults (1 Working)	2 Children	\$50,433
2 Adults (1 Working)	3 Children	\$55,535
2 Adults (Both Working)	None	\$37,449
2 Adults (Both Working)	1 Child	\$48,537
2 Adults (Both Working)	2 Children	\$54,933
2 Adults (Both Working)	3 Children	\$61,121

#### ANNUAL LIVING WAGE (2018 DOLLARS) BY HOUSEHOLD ARRANGEMENT



K-12 FDUCATION

Source: [1] "Living Wage Calculator." Massachusetts Institute of Technology. http://livingwage.mit.edu/ [2] Nadeau, C.A. "Living Wage Calculator: User's Guide/Technical Notes, 2018 Update." Open Data Nation and Department of Urban Studies and Planning, Massachusetts Institute of Technology, 2018. p. 3. http://livingwage.mit.edu/resources/Living-Wage-User-Guide-and-Technical-Notes-2018.pdf Note: Estimated costs for the basic needs budget are based on data from 2016 to 2018. Estimated tax rates are based on 2017 federal tax rates and 2016 state tax rates.

### LIVABLE WAGE THRESHOLDS

According to the United States Census Bureau, the estimated average household size in the state of Mississippi is 2.62 people. Hanover classified occupations as paying a living wage for one-person and three-person households if the median annual salaries exceed the state-level livable salaries displayed below.

2018 LIVING WAGE CONFIGURATIONS	MISSISSIPPI
1-Person Household	\$22,973
3-Person Household 2 adults (1 working)/1 child	\$45,125

In the following slides, Hanover has color-coded the data points based on the livable wages as follows:

- Salaries displayed in **GREEN** correlate to occupations that pay at or above the livable wage for a three-person household.
- Salaries displayed in **BLUE** correlate to occupations that pay at or above the livable wage for a single-person household.
- Salaries displayed in **RED** correlate to occupations that pay less than the livable wage for a singleperson household.



### **CAREER CLUSTERS OVERVIEW**

Hanover has categorized all occupations in the following analysis with the following career clusters, as developed by Advance CTE.



AGRICULTURE, FOOD, AND NATURAL RESOURCES



ARCHITECTURE AND CONSTRUCTION



ARTS, AUDIO/VIDEO TECHNOLOGY, AND COMMUNICATION



BUSINESS MANAGEMENT AND ADMINISTRATION



**EDUCATION AND TRAINING** 



FINANCE



**GOVERNMENT AND PUBLIC ADMINISTRATION** 



HEALTH SCIENCE



K-12 EDUCATION



HUMAN SERVICES



INFORMATION TECHNOLOGY



LAW, PUBLIC SAFETY, CORRECTIONS, AND SECURITY



MANUFACTURING



MARKETING



SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS



TRANSPORTATION, DISTRIBUTION, AND LOGISTICS

Source: [1] "Career Clusters." Advance CTE. [2] "Career Clusters Guide." State of New Mexico Public Education Department.

### METHODOLOGY – CTE COURSE ALIGNMENT

### **CTE COURSE ALIGNMENT ANALYSIS**

Hanover aligned all of the MDE high school CTE courses with relevant occupations based solely on course title and occupation title. There may be some occupations that students may qualify for that are not included in the course alignment analysis, particularly if there were no obvious and direct links between course and occupation title. Hanover was able to determine each course's alignment to the overall labor market in Mississippi and the four workforce development areas, separately, with the cumulative growth projections of all occupations aligned to each course.

Notably, some courses may align with industries and occupations of both high and low growth, depending on how general or specific the course may be. Some courses are particularly specific to one industry while others may offer transferable skills across several industries.



### **KEY FINDINGS**



The highest growth occupations in the state of Mississippi are in the health care, social services, hospitality, and construction industries. Home health aides, personal care aides, oil and gas technicians, physical therapist assistants, and food services workers are among the highest-growth occupations in all four major regions of Mississippi.

The highest-growth occupation in the Mississippi Twin Districts, Mississippi Partnership, and Southcentral Mississippi Works regions is the home health aide position. Home health aides earn a living wage for a oneperson household in the Mississippi Twin Districts and Mississippi Delta regions. However, this position does not earn a living wage in the Mississippi Partnership region. The home health aide position is the third highest-growth occupation in the Mississippi Delta and does not pay a living wage in this region. Home health aides require a high school diploma or equivalent.



The high-growth occupations in the Mississippi Twin Districts, Mississippi Partnership, and Southcentral Mississippi Works regions are largely similar. These high-growth occupations, mostly in the health care and social services industries, are home health aides, personal care aides, and physical therapist and medical assistants. The four regions in Mississippi have varying thresholds of high-growth industries and occupations.

- While the Mississippi Twin Districts and Southcentral Mississippi Works regions' high-growth occupations are projected to grow by 1% or more, and 100 or more new jobs over ten years, the Mississippi Partnership and Mississippi Delta regions are different.
- The Mississippi Partnership region is projected to experience the most growth out of all four regions in Mississippi. High-growth occupations in the Mississippi Partnership region are projected to grow by 1% or more, and 1,000 or more new jobs over ten years.
- The Mississippi Delta region is projected to experience overall decline in most industries and occupations. The highest growth occupations in the Mississippi Delta are projected to grow by 0.1% or more, and 5 or more new jobs over ten years.



The Mississippi Delta is projected to continue experiencing economic downturn. 7% of occupations are expected to grow in this region over ten years, and 2% are expected to remain stagnant. The remaining 91% of occupations are all in decline.



### **KEY FINDINGS**

The 10 Mississippi high school CTE courses that are only aligned with high-growth industries (i.e., not aligned with any mid- or low-growth industries) in the Mississippi Twin Districts, Mississippi Partnership, and Southcentral Mississippi Works are: Athletic Training (Sports Medicine), Carpentry/Carpenter, Computer Programming/Specific Apps, Construction Trades, General, Electrician, Health Informatics, Heating & Air Conditioning & Refrigerating, Medical Lab Tech., Practical Nurse (LPN Training), and Technology Foundations. All of these courses align with either the Architecture & Construction, Health Science, or Information Technology industries, which are also three of the industries with the highest average annual growth rates projected for the state of Mississippi.

**M** 

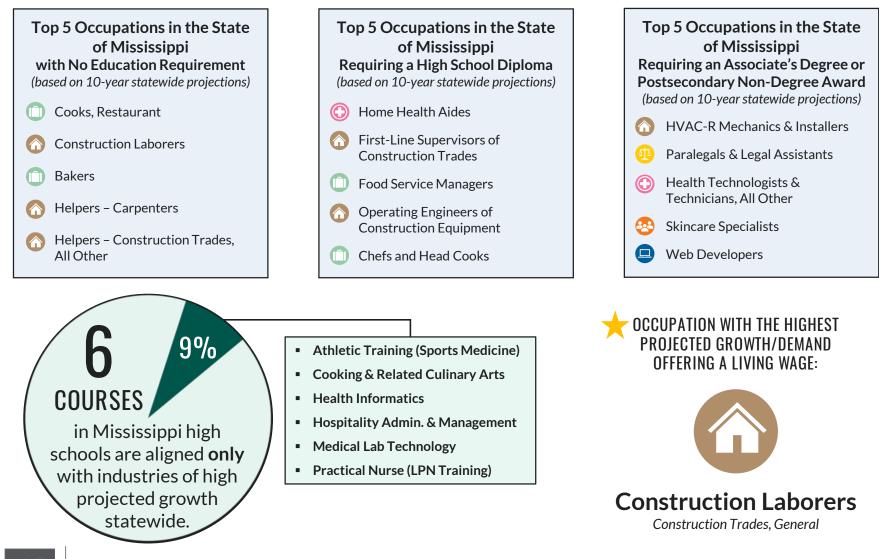
The four Mississippi high school CTE courses that are only aligned with high-growth industries (i.e., not aligned with any mid- or low-growth industries) statewide and in the Mississippi Twin Districts, Mississippi Partnership, and Southcentral Mississippi Works are: Athletic Training (Sports Medicine), Health Informatics, Medical Lab Tech., and Practical Nurse (LPN Training). All of these courses align with the Health Science industry, which is projected to experience the highest growth in the state of Mississippi and these three workforce development areas. Notably, no courses aligned with the Health Science industry in the statewide market is aligned with any low projected growth occupations. The three industries expected to experience growth in the state of Mississippi overall are Human Services, Health Science, and Hospitality & Tourism. There are no courses that align with high growth industries in the Mississippi Delta region, because all industries in the Mississippi Delta are projected to experience, mid- to low-growth or decline. The four industries expected to experience high growth in the Mississippi Twin Districts are: Human Services, Health Science, Information Technology, and Architecture & Construction. The five industries expected to experience high growth in Southcentral Mississippi Works are: Human Services, Health Science, Architecture & Construction, Information Technology, and Finance. The only industries in the Mississippi Partnership that are not expected to experience high growth are: Agriculture, Food & Natural Resources and Business Management & Administration, both of which are projected to experience mid-growth, and Arts, Audio/Video Technology & Communications and Manufacturing, both of which are projected to experience decline.



The occupation that is expected to experience the highest rates of growth and demand in the state of Mississippi overall is: Cooks, Restaurant, which is aligned with the Cooking & Related Culinary Arts CTE course. This occupation is also projected to experience the highest rates of growth and demand in the Mississippi Partnership. In the Mississippi Twin Districts, Mississippi Delta, and Southcentral Mississippi Works, the occupation that is projected to experience the highest rates of growth and demand is Home Health Aides, which is aligned to the Health Services, Allied Health, General CTE course.

# **STATE OF MISSISSIPPI**

### STATE OF MISSISSIPPI SUMMARY



R K-12 EDUCATION

### **PROJECTED GROWTH THRESHOLDS**

Hanover used the following definitions to determine industries and occupations of high, mid, and low projected growth/demand in the **state of Mississippi**.

INDUSTRY GROWTH THRESHOLDS
----------------------------

Industries of High Growth	High growth/demand industries in Mississippi and all workforce development areas are those with greater than or equal to 0.5% projected growth/demand from 2019 to 2029.
Industries of Mid Growth	Mid growth/demand industries in Mississippi and all workforce development areas are those with projected growth/demand rates between 0.2% and 0.5%.
Industries of <mark>Low</mark> Growth	Low growth/demand industries in Mississippi and all workforce development areas are those with less than 0.2% projected growth/demand from 2019 to 2029.

OCCUPATION GROWTH THRESHOLDS				
Occupations of High Growth	High growth/demand occupations in the state of Mississippi are those with greater than or equal to 0.5% projected growth/demand and 100 projected annual job openings from 2019 to 2029.			
Occupations of Mid Growth	Mid growth/demand occupations in the state of Mississippi are those that fulfill one of the two requirements for high growth/demand.			
Occupations of Low Growth	Low growth/demand occupations in the state of Mississippi are those that do not fulfill either of the requirements for high growth/demand.			



### **INDUSTRIES OF HIGH GROWTH**

Three industries are projected to experience high growth in the state of Mississippi:



	Total Employment 2019	Average Annual Wages	Total Demand 2029	Projected Employment Growth 2019-2029	Projected Annual % Growth 2019-2029
Human Services	60,761	\$38,324	83,610	5,524	0.9%
Health Science	118,535	\$79,715	95,994	7,707	0.7%
Hospitality & Tourism	160,422	\$28,167	262,647	8,477	0.5%



### Courses aligned to <u>industries</u> of HIGH projected growth in the state of Mississippi:



- Child Care Provider/Assistant
- Cosmetology/Cosmetologist, General
- Family & Consumer Sciences



**HOSPITALITY** 

& TOURISM

- Athletic Training (Sports Medicine)
- Health Informatics
- Health Services, Allied Health, General
- Medical Lab Tech.
- Practical Nurse (LPN Training)
- Cooking & Related Culinary Arts
- Custodian/Groundskeeper
- Family & Consumer Sciences
- Hospitality Administration/Mgmt., General

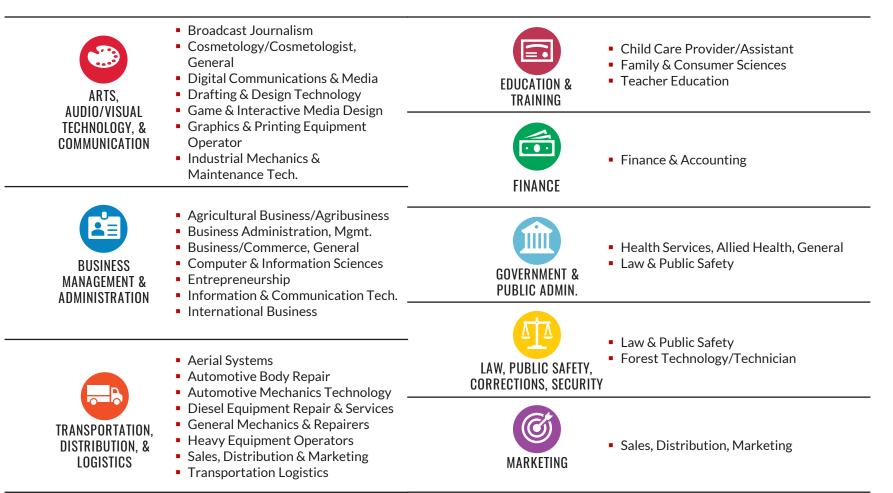


#### Courses aligned to <u>industries</u> of LOW projected growth in the state of Mississippi:

<ul> <li>Ag. &amp; Food Products Processing</li> <li>Agricultural Business/Agribusiness</li> <li>Agricultural Mechanics</li> <li>Agricultural Mechanization (AEST)</li> <li>Agricultural Power Machinery Operation</li> <li>Agriculture &amp; Natural Resources</li> <li>Agriculture, Ag. Operations, Other</li> <li>Animal Sciences, General (AEST)</li> </ul>	<ul> <li>Aquaculture Operations &amp; Production Mgmt.</li> <li>Environmental Science (AEST)</li> <li>Forest Technology/Technician</li> <li>General Mechanics &amp; Repairers</li> <li>Horticulture Service Operation &amp; Mgmt.</li> <li>Introduction to Agriscience</li> <li>Plant Sciences, General (AEST)</li> </ul>
<ul> <li>Aerial Systems</li> <li>Ag. &amp; Food Products Processing</li> <li>Agricultural Mechanization (AEST)</li> <li>Agricultural Power Machinery Operation</li> <li>Automotive Body Repair</li> <li>Drafting &amp; Design Technology</li> <li>Energy Technology</li> <li>Family &amp; Consumer Sciences</li> <li>Furniture Design &amp; Manufacturing</li> <li>General Mechanics &amp; Repairs</li> <li>Graphic &amp; Printing Equipment Operator</li> </ul>	<ul> <li>Industrial Mechanics &amp; Maintenance Tech.</li> <li>Instrumentation Tech.</li> <li>Metal Fabrication</li> <li>Plastics Engineering Technology</li> <li>Energy Technology</li> <li>Machine Shop Tech./Asst.</li> <li>Metal Fabrication</li> <li>Plastics Engineering Tech.</li> <li>Small Engine Mech. &amp; Repair</li> <li>Welding Technology/Welder</li> </ul>
<ul> <li>Aerial Systems</li> <li>Agricultural Mechanization</li> <li>Computer &amp; Information Sciences</li> <li>Environmental Science (AEST)</li> <li>Industrial Mechanics &amp; Maintenance Tech.</li> </ul>	<ul> <li>Information &amp; Communication Tech.</li> <li>Instrumentation Tech.</li> <li>Mechanical Engineering</li> <li>Science, Technology, Engineering, Math</li> <li>Technology &amp; Engineering Principles</li> </ul>
	<ul> <li>Agricultural Business/Agribusiness</li> <li>Agricultural Mechanics</li> <li>Agricultural Mechanization (AEST)</li> <li>Agricultural Power Machinery Operation</li> <li>Agriculture &amp; Natural Resources</li> <li>Agriculture, Ag. Operations, Other</li> <li>Animal Sciences, General (AEST)</li> </ul> <ul> <li>Aerial Systems</li> <li>Agricultural Mechanization (AEST)</li> <li>Agricultural Mechanization (AEST)</li> <li>Agricultural Mechanization (AEST)</li> <li>Agricultural Mechanization (AEST)</li> <li>Agricultural Power Machinery Operation</li> <li>Automotive Body Repair</li> <li>Drafting &amp; Design Technology</li> <li>Energy Technology</li> <li>Family &amp; Consumer Sciences</li> <li>Furniture Design &amp; Manufacturing</li> <li>General Mechanics &amp; Repairs</li> <li>Graphic &amp; Printing Equipment Operator</li> </ul> <ul> <li>Aerial Systems</li> <li>Agricultural Mechanization</li> <li>Computer &amp; Information Sciences</li> <li>Environmental Science (AEST)</li> </ul>

K-12 FDUCATION

#### Courses aligned to <u>industries</u> of LOW projected growth in the state of Mississippi:





### **OCCUPATIONS OF HIGH GROWTH & DEMAND**

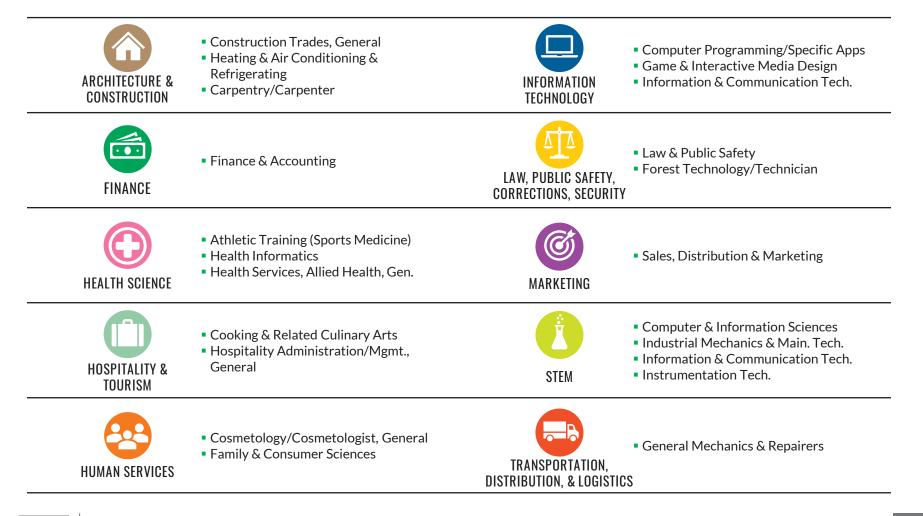
#### The Top 10 occupations of high growth & demand in the state of Mississippi are:

		Total Employment 2019	Average Annual Wages	Total Demand 2029	Projected Employment Growth 2019- 2029	Projected Annual % Growth 2019- 2029
	First-Line Supervisors of Food Prep. & Serving Workers	9,356	\$30,200	14,620	942	1.0%
	Construction Laborers	12,468	\$30,400	13,624	736	0.6%
	First-line Supervisors of Construction Trades and Extraction Workers	5,288	\$58,100	5,392	269	0.5%
	Medical Assistants	3,722	\$30,500	4,803	625	1.6%
	Plumbers, Pipefitters, and Steamfitters	4,019	\$45,300	4,496	255	0.6%
	Medical Secretaries	3,405	\$30,800	4,095	342	1.0%
$\bigcirc$	Food Service Managers	3,477	\$48,600	4,068	263	0.7%
	Billing and Posting Clerks	3,875	\$32,700	4,066	197	0.5%
	Operating Engineers and Other Construction Equipment Operators	3,260	\$38,300	3,756	166	0.5%
2	Social and Human Service Assistants	2,736	\$28,700	3,653	303	1.1%



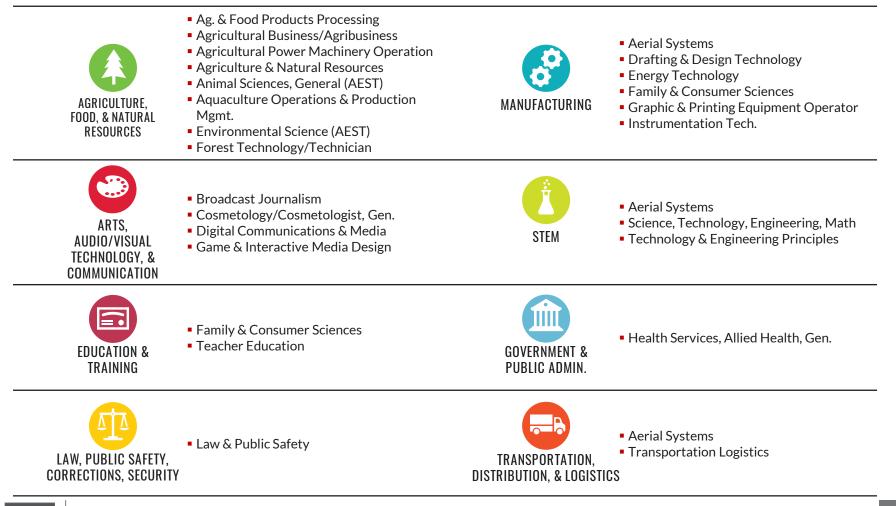
\*Notes: [1] These occupations are ranked in order of the projected annual percent growth from 2019 to 2029. [2] Hanover only included occupations that pay a living wage and require an Associate's degree and below.

#### Courses aligned to occupations of HIGH projected growth & demand in the state of Mississippi:





#### Courses aligned to <u>occupations</u> of LOW projected growth & demand in the state of Mississippi:





# **MISSISSIPPI TWIN DISTRICTS**

### **MISSISSIPPI TWIN DISTRICTS SUMMARY**



**9** COURSES in Mississippi high schools are aligned with occupations of high projected growth/demand in the Mississippi Twin Districts.

- Athletic Training (Sports Medicine)
- Computer Programming/ Specific Apps
- Family & Consumer Sciences
- Finance & Accounting
- Game & Interactive Media Design
- Health Services, Allied Health, General
- Information & Communication Tech.
- Law & Public Safety
- Sales, Distribution & Marketing





### **PROJECTED GROWTH THRESHOLDS**

Hanover used the following definitions to determine industries and occupations of high, mid, and low projected growth/demand in the **Mississippi Twin Districts**.

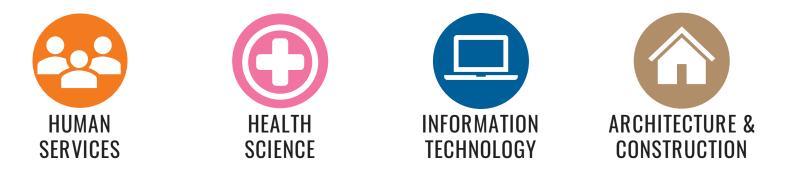
INDUSTRY GROWTH THRESHOLDS				
Industries of High Growth	High growth/demand industries in Mississippi and all workforce development areas are those with greater than or equal to 0.5% projected growth/demand from 2019 to 2029.			
Industries of Mid Growth	Mid growth/demand industries in Mississippi and all workforce development areas are those with projected growth/demand rates between 0.2% and 0.5%.			
Industries of <mark>Low</mark> Growth	Low growth/demand industries in Mississippi and all workforce development areas are those with less than 0.2% projected growth/demand from 2019 to 2029.			

OCCUPATION GROWTH THRESHOLDS				
Occupations of High Growth	High growth/demand occupations in the Mississippi Twin Districts are those with greater than or equal to 1% projected growth/demand and 100 projected annual job openings from 2019 to 2029.			
Occupations of Mid Growth	Mid growth/demand occupations in the Mississippi Twin Districts are those that fulfill one of the two requirements for high growth/demand.			
Occupations of Low Growth	Low growth/demand occupations in the Mississippi Twin Districts are those that do not fulfill either of the requirements for high growth/demand.			



### **INDUSTRIES OF HIGH GROWTH**

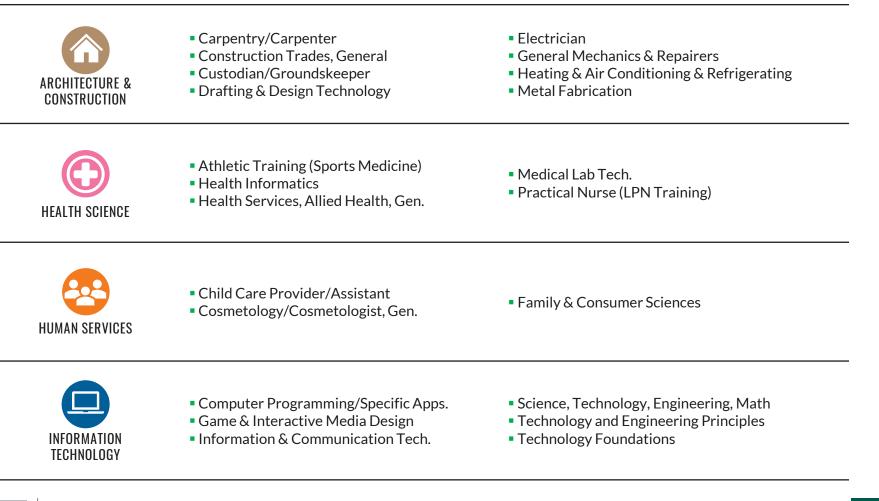
Four industries are projected to experience high growth in the Mississippi Twin Districts:



	Total Employment 2019	Average Annual Wages	Total Demand 2029	Projected Employment Growth 2019-2029	Projected Annual % Growth 2019-2029
Human Services	18,294	\$38,198	25,506	1,886	1.0%
Health Science	39,273	\$79,737	32,513	3,316	0.8%
Information Technology	4,094	\$73,117	2,925	198	0.5%
Architecture & Construction	31,513	\$41,911	33,336	1,463	0.5%



#### Courses aligned to <u>industries</u> of HIGH projected growth in the Mississippi Twin Districts:





#### Courses aligned to <u>industries</u> of LOW projected growth in the Mississippi Twin Districts:

AGRICULTURE, FOOD, & NATURAL RESOURCES	<ul> <li>Ag. &amp; Food Products Processing</li> <li>Agricultural Business/Agribusiness</li> <li>Agricultural Mechanics</li> <li>Agricultural Mechanization (AEST)</li> <li>Agricultural Power Machinery Operation</li> <li>Agriculture &amp; Natural Resources</li> <li>Agriculture, Ag. Operations, Other</li> <li>Animal Sciences, General (AEST)</li> </ul>	<ul> <li>Aquaculture Operations &amp; Production Mgmt.</li> <li>Environmental Science (AEST)</li> <li>Forest Technology/Technician</li> <li>General Mechanics &amp; Repairers</li> <li>Horticulture Service Operation &amp; Mgmt.</li> <li>Introduction to Agriscience</li> <li>Plant Sciences, General (AEST)</li> </ul>
MANUFACTURING	<ul> <li>Aerial Systems</li> <li>Ag. &amp; Food Products Processing</li> <li>Agricultural Mechanization (AEST)</li> <li>Agricultural Power Machinery Operation</li> <li>Automotive Body Repair</li> <li>Drafting &amp; Design Technology</li> <li>Energy Technology</li> <li>Family &amp; Consumer Sciences</li> <li>Furniture Design &amp; Manufacturing</li> </ul>	<ul> <li>General Mechanics &amp; Repairers</li> <li>Graphic &amp; Printing Equipment Operator</li> <li>Industrial Mechanics &amp; Maintenance Tech.</li> <li>Instrumentation Tech.</li> <li>Machine Shop Technology/Assistant</li> <li>Metal Fabrication</li> <li>Plastics Engineering Technology</li> <li>Small Engine Mechanics &amp; Repair</li> <li>Welding Technology/Welder</li> </ul>
STEM	<ul> <li>Aerial Systems</li> <li>Agricultural Mechanization (AEST)</li> <li>Computer &amp; Information Sciences</li> <li>Environmental Science (AEST)</li> <li>Industrial Mechanics &amp; Maintenance Tech.</li> </ul>	<ul> <li>Information &amp; Communication Tech.</li> <li>Instrumentation Tech.</li> <li>Mechanical Engineering</li> <li>Science, Technology, Engineering, Math</li> <li>Technology &amp; Engineering Principles</li> </ul>
TRANSPORTATION, DISTRIBUTION, & LOGISTICS	<ul> <li>Aerial Systems</li> <li>Automotive Body Repair</li> <li>Automotive Mechanics Technology</li> <li>Diesel Equipment Repair &amp; Services</li> </ul>	<ul> <li>General Mechanics &amp; Repairers</li> <li>Heavy Equipment Operation</li> <li>Sales, Distribution &amp; Marketing</li> <li>Transportation Logistics</li> </ul>



#### Courses aligned to <u>industries</u> of LOW projected growth in the Mississippi Twin Districts:

ARTS, AUDIO/VISUAL TECHNOLOGY, & COMMUNICATION	<ul> <li>Broadcast Journalism</li> <li>Cosmetology/Cosmetologist, General</li> <li>Digital Communications &amp; Media</li> </ul>	<ul> <li>Drafting &amp; Design Technology</li> <li>Game &amp; Interactive Media Design</li> <li>Graphic &amp; Printing Equipment Operator</li> </ul>
BUSINESS MANAGEMENT & ADMINISTRATION	<ul> <li>Agricultural Business/Agribusiness</li> <li>Business Administration, Management</li> <li>Business/Commerce, General</li> <li>Computer &amp; Information Sciences</li> </ul>	<ul> <li>Entrepreneurship</li> <li>Information &amp; Communication Tech.</li> <li>International Business</li> </ul>
GOVERNMENT & PUBLIC ADMIN.	<ul> <li>Health Services, Allied Health, Gen.</li> </ul>	<ul> <li>Law &amp; Public Safety</li> </ul>
LAW, PUBLIC SAFETY, CORRECTIONS, SECURITY	<ul> <li>Forest Technology/Technician</li> </ul>	<ul> <li>Law &amp; Public Safety</li> </ul>
MARKETING	<ul> <li>Sales, Distribution &amp; Marketing</li> </ul>	



### **OCCUPATIONS OF HIGH GROWTH & DEMAND**

#### The Top 10 occupations of high growth & demand in the Mississippi Twin Districts:

		Total Employment 2019	Average Annual Wages	Total Demand 2029	Projected Employment Growth 2019- 2029	Projected Annual % Growth 2019- 2029
O Home	Health Aides	1,314	\$23,400	2,240	525	3.4%
Physic	cal Therapist Aides	121	\$23,200	187	29	2.2%
Medic	cal Assistants	1,299	\$27,600	1,798	301	2.1%
Physic Assist	cal Therapist ants	272	\$49,600	414	62	2.1%
Occup Assist	pational Therapy ants	108	\$58,200	169	25	2.1%
Roust	abouts, Oil and Gas	200	\$26,000	296	35	1.6%
O Media	cal Secretaries	1,156	\$29,300	1,489	182	1.5%
	inary Assistants aboratory Animal akers	250	\$24,800	446	40	1.5%
Denta	al Hygienists	468	\$58,500	363	73	1.5%
	inary nologists and nicians	235	\$39,400	228	38	1.5%



\*Notes: [1] These occupations are ranked in order of the projected annual percent growth from 2019 to 2029. [2] Hanover only included occupations that pay a living wage and require an Associate's degree and below.

Courses aligned to occupations of HIGH projected growth & demand in the Mississippi Twin Districts:



HUMAN SERVICES

Family & Consumer Sciences







#### Courses aligned to <u>occupations</u> of LOW projected growth & demand in the Mississippi Twin Districts:

AGRICULTURE, FOOD, & NATURAL RESOURCES	<ul> <li>Ag. &amp; Food Products Processing</li> <li>Agricultural Business/Agribusiness</li> <li>Agricultural Power Machinery Operation</li> <li>Agriculture &amp; Natural Resources</li> <li>Agriculture, Ag. Operations, Other</li> </ul>	<ul> <li>Animal Sciences, General (AEST)</li> <li>Environmental Science (AEST)</li> <li>Forest Technology/Technician</li> <li>Introduction to Agriscience</li> </ul>
MANUFACTURING	<ul> <li>Aerial Systems</li> <li>Agricultural Power Machinery Operation</li> <li>Drafting &amp; Design Technology</li> <li>Energy Technology</li> <li>Family &amp; Consumer Sciences</li> <li>Furniture Design &amp; Manufacturing</li> </ul>	<ul> <li>Graphic &amp; Printing Equipment Operator</li> <li>Industrial Mechanics &amp; Maintenance Tech.</li> <li>Instrumentation Tech.</li> <li>Metal Fabrication</li> <li>Plastics Engineering Technology</li> </ul>
STEM	<ul> <li>Aerial Systems</li> <li>Computer &amp; Information Sciences</li> <li>Information &amp; Communication Tech.</li> </ul>	<ul> <li>Instrumentation Tech.</li> <li>Science, Technology, Engineering, Math</li> <li>Technology &amp; Engineering Principles</li> </ul>
TRANSPORTATION, DISTRIBUTION, & LOGISTICS	<ul> <li>Aerial Systems</li> <li>Automotive Body Repair</li> </ul>	<ul> <li>General Mechanics &amp; Repairers</li> <li>Transportation Logistics</li> </ul>



# **MISSISSIPPI PARTNERSHIP**

### **MISSISSIPPI PARTNERSHIP SUMMARY**



COURSES

in Mississippi high schools are aligned with occupations of high projected growth/demand in the Mississippi Partnership.

- Ag. & Food Products Processing
- Construction Trades, General
- Cosmetology/Cosmetologist, General
- Custodian/Groundskeeper
- Hospitality Administration/ Management, General
- Information & Communication Tech.
- Machine Shop Technology/Assistant
- Practical Nurse (LPN Training)





### **PROJECTED GROWTH THRESHOLDS**

Hanover used the following definitions to determine industries and occupations of high, mid, and low projected growth/demand in the **Mississippi Partnership**.

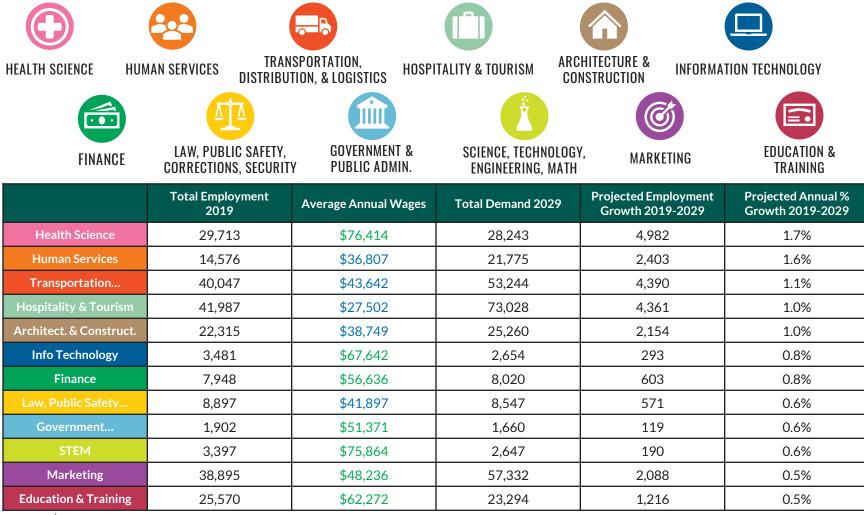
INDUSTRY GROWTH THRESHOLDS		
Industries of High Growth	High growth/demand industries in Mississippi and all workforce development areas are those with greater than or equal to 0.5% projected growth/demand from 2019 to 2029.	
Industries of <mark>Mid</mark> Growth	Mid growth/demand industries in Mississippi and all workforce development areas are those with projected growth/demand rates between 0.2% and 0.5%.	
Industries of <mark>Low</mark> Growth	Low growth/demand industries in Mississippi and all workforce development areas are those with less than 0.2% projected growth/demand from 2019 to 2029.	

OCCUPATION GROWTH THRESHOLDS		
Occupations of High Growth	High growth/demand occupations in the Mississippi Partnership are those with greater than or equal to 1% projected growth/demand and 1,000 projected annual job openings from 2019 to 2029.	
Occupations of Mid Growth	Mid growth/demand occupations in the Mississippi Partnership are those that fulfill one of the two requirements for high growth/demand.	
Occupations of Low Growth	Low growth/demand occupations in the Mississippi Partnership are those that do not fulfill either of the requirements for high growth/demand.	



### **INDUSTRIES OF HIGH GROWTH**

Twelve industries are projected to experience high growth in the Mississippi Partnership:





#### Courses aligned to industries of HIGH projected growth in the Mississippi Partnership:

ARCHITECTURE & CONSTRUCTION	<ul> <li>Carpentry/Carpenter</li> <li>Construction Trades/General</li> <li>Custodian/Groundskeeper</li> <li>Drafting &amp; Design Technology</li> </ul>	<ul> <li>Electrician</li> <li>General Mechanics &amp; Repairers</li> <li>Heating &amp; Air Conditioning &amp; Refrigerating</li> <li>Metal Fabrication</li> </ul>
EDUCATION & TRAINING	<ul> <li>Child Care Provider/Assistant</li> <li>Family &amp; Consumer Sciences</li> </ul>	<ul> <li>Teacher Education</li> </ul>
FINANCE	<ul> <li>Finance &amp; Accounting</li> </ul>	
GOVERNMENT & PUBLIC ADMIN.	<ul> <li>Health Services, Allied Health, Gen.</li> </ul>	<ul> <li>Law &amp; Public Safety</li> </ul>
HEALTH SCIENCE	<ul> <li>Athletic Training (Sports Medicine)</li> <li>Health Informatics</li> <li>Health Services, Allied Health, Gen.</li> </ul>	<ul> <li>Medical Lab Tech.</li> <li>Practical Nurse (LPN Training)</li> </ul>



#### Courses aligned to industries of HIGH projected growth in the Mississippi Partnership:

HOSPITALITY & TOURISM	<ul> <li>Cooking &amp; Related Culinary Arts</li> <li>Custodian/Groundskeeper</li> </ul>	<ul> <li>Family &amp; Consumer Sciences</li> <li>Hospitality Administration/Mgmt., General</li> </ul>	
HUMAN SERVICES	<ul> <li>Cosmetology/Cosmetologist, General</li> </ul>	<ul> <li>Family &amp; Consumer Sciences</li> </ul>	
INFORMATION TECHNOLOGY	<ul> <li>Computer Programming/Specific Apps</li> <li>Game &amp; Interactive Media Design</li> <li>Information &amp; Communication Tech.</li> </ul>	<ul> <li>Science, Technology, Engineering, Math</li> <li>Technology and Engineering Principles</li> <li>Technology Foundations</li> </ul>	
LAW, PUBLIC SAFETY, CORRECTIONS, SECURITY	<ul> <li>Forest Technology/Technician</li> </ul>	<ul> <li>Law &amp; Public Safety</li> </ul>	
MARKETING	<ul> <li>Sales, Distribution &amp; Marketing</li> </ul>		



#### Courses aligned to industries of HIGH projected growth in the Mississippi Partnership:

<ul> <li>Aerial Systems</li> <li>Agricultural Mechanization (AEST)</li> <li>Computer &amp; Information Sciences</li> <li>Environmental Science (AEST)</li> <li>Industrial Mechanics &amp; Maintenance Tech.</li> </ul>		<ul> <li>Information &amp; Communication Tech.</li> <li>Instrumentation Tech.</li> <li>Mechanical Engineering</li> <li>Science, Technology, Engineering, Math</li> <li>Technology and Engineering Principles</li> </ul>	
		<ul> <li>General Mechanics &amp; Repairers</li> <li>Heavy Equipment Operation</li> <li>Sales, Distribution &amp; Marketing</li> <li>Transportation Logistics</li> </ul>	



#### Courses aligned to <u>industries</u> of LOW projected growth in the Mississippi Partnership:

ARTS, AUDIO/VISUAL TECHNOLOGY, & COMMUNICATION	<ul> <li>Broadcast Journalism</li> <li>Cosmetology/Cosmetologist, General</li> <li>Digital Communications &amp; Media</li> <li>Drafting &amp; Design Technology</li> </ul>	<ul> <li>Game &amp; Interactive Media Design</li> <li>Graphic &amp; Printing Equipment Operator</li> <li>Industrial Mechanics &amp; Maintenance Tech.</li> </ul>	
MANUFACTURING	<ul> <li>Aerial Systems</li> <li>Ag. &amp; Food Products Processing</li> <li>Agricultural Mechanization (AEST)</li> <li>Agricultural Power Machinery Operation</li> <li>Automotive Body Repair</li> <li>Drafting &amp; Design Technology</li> <li>Energy Technology</li> <li>Family &amp; Consumer Sciences</li> <li>Furniture Design &amp; Manufacturing</li> </ul>	<ul> <li>General Mechanics &amp; Repairers</li> <li>Graphic &amp; Printing Equipment Operator</li> <li>Industrial Mechanics &amp; Maintenance Tech.</li> <li>Instrumentation Tech.</li> <li>Machine Shop Technology Assistant</li> <li>Metal Fabrication</li> <li>Plastics Engineering Technology</li> <li>Small Engine Mechanics &amp; Repair</li> <li>Welding Technology/Welder</li> </ul>	



### **OCCUPATIONS OF HIGH GROWTH & DEMAND**

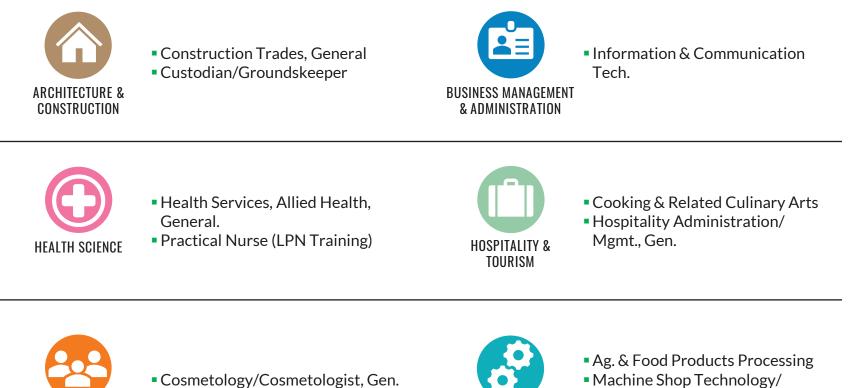
#### The two occupations of high growth & demand in the Mississippi Partnership are:

		Total Employment 2019	Average Annual Wages	Total Demand 2029	Projected Employment Growth 2019- 2029	Projected Annual % Growth 2019- 2029
	Medical Assistants	940	\$30,900	1,395	281	2.7%
	Medical Secretaries	864	\$30,000	1,211	203	2.1%
	Laborers and Freight, Stock, and Material Movers, Hand	12,083	\$25,600	19,419	1,853	1.4%
	Billing and Posting Clerks	974	\$32,200	1,164	147	1.4%
	Plumbers, Pipefitters, and Steamfitters	1,087	\$42,700	1,343	154	1.3%
	Industrial Truck and Tractor Operators	3,513	\$31,900	4,549	458	1.2%
	Construction Laborers	3,068	\$28,900	3,641	376	1.2%
	First-Line Supervisors of Food Preparation and Serving Workers	2,748	\$32,800	4,420	352	1.2%
	Receptionists and Information Clerks	2,036	\$26,000	3,005	254	1.2%
8	HelpersProduction Workers	1,570	\$28,400	2,676	205	1.2%



\*Notes: [1] These occupations are ranked in order of the projected annual percent growth from 2019 to 2029. [2] Hanover only included occupations that pay a living wage and require an Associate's degree and below.

Courses aligned to occupations of HIGH projected growth & demand in the Mississippi Partnership:



Assistant

MANUFACTURING

HUMAN SERVICES

#### Courses aligned to <u>occupations</u> of LOW projected growth & demand in the Mississippi Partnership:

AGRICULTURE, FOOD, & NATURAL RESOURCES	<ul> <li>Ag. &amp; Food Products Processing</li> <li>Agricultural Business/Agribusiness</li> <li>Agricultural Mechanics</li> <li>Agricultural Mechanization (AEST)</li> <li>Agricultural Power Machinery Operation</li> <li>Agriculture &amp; Natural Resources</li> <li>Agriculture, Ag. Operations, Other</li> </ul>	<ul> <li>Animal Sciences (AEST</li> <li>Aquaculture Operations &amp; Production Mgmt.</li> <li>Environmental Science (AEST)</li> <li>Forest Technology/Technician</li> <li>General Mechanics &amp; Repairers</li> <li>Introduction to Agriscience</li> <li>Plant Sciences, General (AEST)</li> </ul>
MANUFACTURING	<ul> <li>Aerial Systems</li> <li>Ag. &amp; Food Products Processing</li> <li>Agricultural Power Machinery Operation</li> <li>Drafting &amp; Design Technology</li> <li>Energy Technology</li> <li>Family &amp; Consumer Sciences</li> <li>Furniture Design &amp; Manufacturing</li> <li>General Mechanics &amp; Repairers</li> </ul>	<ul> <li>Graphic &amp; Printing Equipment Operator</li> <li>Industrial Mechanics &amp; Maintenance Tech.</li> <li>Instrumentation Tech.</li> <li>Machine Shop Technology/Assistant</li> <li>Metal Fabrication</li> <li>Plastics Engineering Technology</li> <li>Welding Technology/Welder</li> </ul>
STEM	<ul> <li>Aerial Systems</li> <li>Agricultural Mechanization (AEST)</li> <li>Environmental Science (AEST)</li> <li>Industrial Mechanics &amp; Maintenance Tech.</li> </ul>	<ul> <li>Instrumentation Tech.</li> <li>Mechanical Engineering</li> <li>Science, Technology, Engineering, Math</li> <li>Technology &amp; Engineering Principles</li> </ul>
TRANSPORTATION, DISTRIBUTION, & LOGISTICS	<ul> <li>Aerial Systems</li> <li>Automotive Body Repair</li> <li>Automotive Mechanics Technology</li> <li>Diesel Equipment Repair &amp; Services</li> </ul>	<ul> <li>General Mechanics &amp; Repairers</li> <li>Heavy Equipment Operation</li> <li>Transportation Logistics</li> </ul>

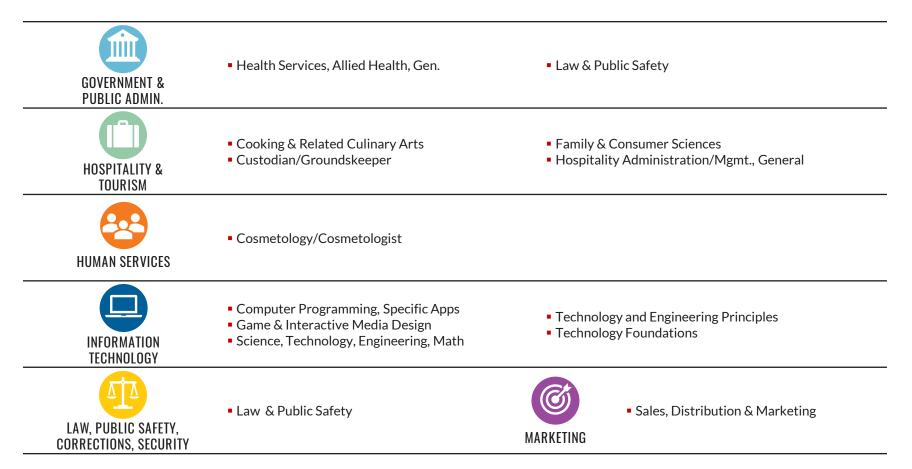


#### Courses aligned to <u>occupations</u> of LOW projected growth & demand in the Mississippi Partnership:

ARCHITECTURE & CONSTRUCTION	<ul> <li>Construction Trades/General</li> <li>Custodian/Groundskeeper</li> </ul>	<ul> <li>Drafting &amp; Design Technology</li> <li>Metal Fabrication</li> </ul>
ARTS, AUDIO/VISUAL TECHNOLOGY, & COMMUNICATION	<ul> <li>Broadcast Journalism</li> <li>Digital Communications &amp; Media</li> <li>Drafting &amp; Design Technology</li> </ul>	<ul> <li>Game &amp; Interactive Media Design</li> <li>Graphic &amp; Printing Equipment Operator</li> <li>Industrial Mechanics &amp; Maintenance Tech.</li> </ul>
BUSINESS MANAGEMENT & ADMINISTRATION	<ul> <li>Agricultural Business/Agribusiness</li> <li>Business Administration, Management</li> <li>Business/Commerce, General</li> <li>Computer &amp; Information Systems</li> </ul>	<ul> <li>Entrepreneurship</li> <li>Information &amp; Communication Tech.</li> <li>International Business</li> </ul>
EDUCATION & TRAINING	<ul> <li>Family &amp; Consumer Sciences</li> </ul>	<ul> <li>Teacher Education</li> </ul>
FINANCE	<ul> <li>Finance &amp; Accounting</li> </ul>	



#### Courses aligned to <u>occupations</u> of LOW projected growth & demand in the Mississippi Partnership:





# **MISSISSIPPI DELTA**

#### **MISSISSIPPI DELTA SUMMARY**



T in Mississippi high schools are aligned with occupations of high projected growth/demand in the Mississippi Delta.

- Athletic Training (Sports Medicine)
- Computer Programming/ Specific Apps
- Energy Technology
- Family & Consumer Sciences
- Forest Technology/Technician
- Game & Interactive Media Design
- Sales, Distribution & Marketing





Child, Family, and School Social Workers Family & Consumer Sciences

### **PROJECTED GROWTH THRESHOLDS**

Hanover used the following definitions to determine industries and occupations of high, mid, and low projected growth/demand in the **Mississippi Delta**.

INDUSTRY GROWTH THRESHOLDS				
Industries of High Growth	High growth/demand industries in Mississippi and all workforce development areas are those with greater than or equal to 0.5% projected growth/demand from 2019 to 2029.			
Industries of Mid Growth	Mid growth/demand industries in Mississippi and all workforce development areas are those with projected growth/demand rates between 0.2% and 0.5%.			
Industries of <mark>Low</mark> Growth	Low growth/demand industries in Mississippi and all workforce development areas are those with less than 0.2% projected growth/demand from 2019 to 2029.			

OCCUPATION GROWTH THRESHOLDS				
Occupations of High Growth	High growth/demand occupations in the Mississippi Delta are those with greater than or equal to 0.1% projected growth/demand and 5 projected annual job openings from 2019 to 2029.			
Occupations of Mid Growth	Mid growth/demand occupations in the Mississippi Delta are those that fulfill one of the two requirements for high growth/demand.			
Occupations of Low Growth	Low growth/demand occupations in the Mississippi Delta are those that do not fulfill either of the requirements for high growth/demand.			



#### INDUSTRIES OF GROWTH

Notably, all industries in the **Mississippi Delta** region are in decline (aside from the Health Care and Social Assistance industry, which is projected to remain stagnant), leading Hanover to apply significantly lower growth thresholds to this region (as detailed on the previous page). Local reports indicate that declining industries could be caused by a declining population in the Mississippi Delta. According to NPR, the industrial shift toward technology and mechanization reduced the need for manual labor in this largely agricultural-based economy. In this lens, the decline in jobs has led to the decline in population.\* The complex cycle of economic and population downturn required Hanover to analyze the Mississippi Delta region differently than the other three regions.



	Total Employment 2019	Average Annual Wages	Total Demand 2029	Projected Employment Growth 2019-2029	Projected Annual % Growth 2019-2029
Human Services	6,044	\$35,180	7,696	107	0.2%



#### Courses aligned to the <u>industry</u> of MID projected growth in the Mississippi Delta:



Because all industries other than Human Services are projected to decline in the Mississippi Delta, Hanover has opted to only present the courses aligned to Human Services and will forego displaying the Mississippi CTE courses aligned to the industries in decline for this particular workforce development region.



### **OCCUPATIONS OF HIGH GROWTH & DEMAND**

#### The Top 10 occupations of high growth & demand in the Mississippi Delta are:

		Total Employment 2019	Average Annual Wages	Total Demand 2029	Projected Employment Growth 2019- 2029	Projected Annual % Growth 2019- 2029
	Solar Photovoltaic Installers	6	\$32,500	11	4	5.4%
8	Wind Turbine Service Technicians	4	\$47,600	8	3	5.0%
	Bicycle Repairers	5	\$25,000	7	0	1.0%
	Medical Assistants	245	\$27,400	288	22	0.9%
8	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	19	\$59,300	19	2	0.9%
	Physical Therapist Assistants	53	\$52,000	69	4	0.8%
2	Social and Human Service Assistants	274	\$28,500	348	19	0.7%
	Physical Therapist Aides	20	\$25,100	26	2	0.7%
	Occupational Therapy Assistants	24	\$54,000	31	1	0.6%
	Forest Fire Inspectors and Prevention Specialists	15	\$25,300	16	1	0.5%



\*Notes: [1] These occupations are ranked in order of the projected annual percent growth from 2019 to 2029. [2] Hanover only included occupations that pay a living wage and require an Associate's degree and below.

#### Courses aligned to <u>occupations</u> of HIGH projected growth & demand in the Mississippi Delta:





Forest Technology/Technician

LAW, PUBLIC SAFETY, Corrections, security



Family & Consumer Sciences



Energy Technology

MANUFACTURING



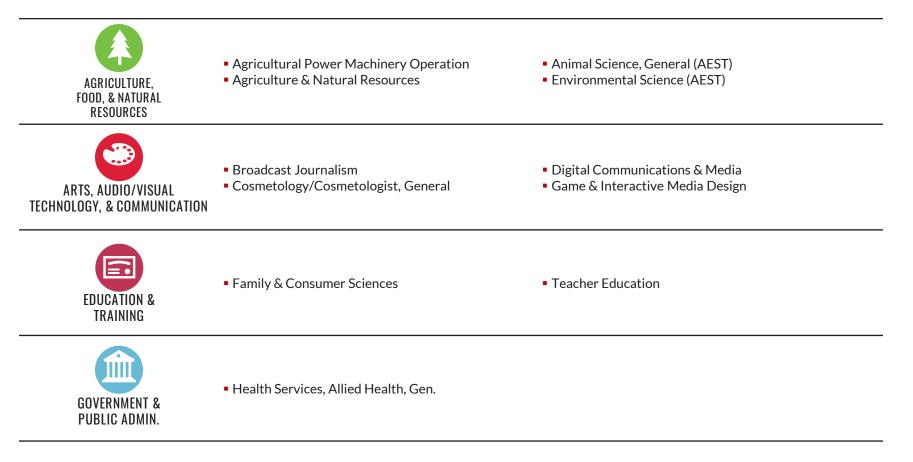
- Computer Programming/Specific Apps
- Game & Interactive Media Design



Sales, Distribution & Marketing

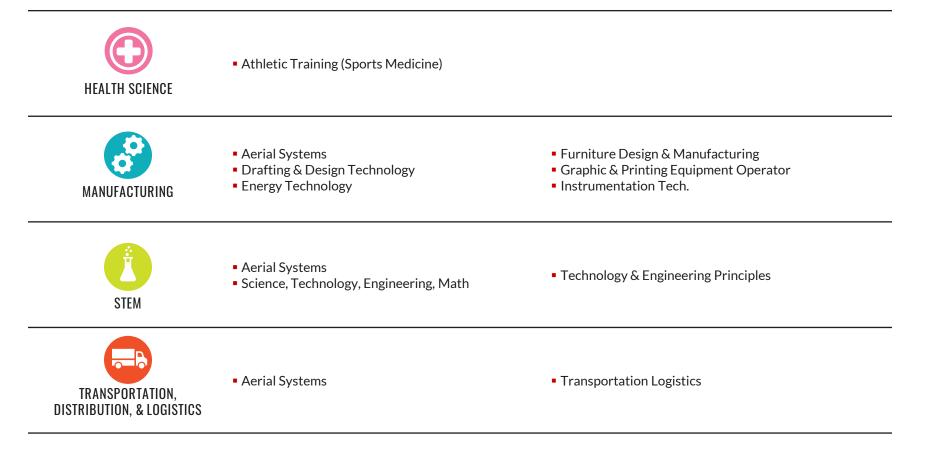


#### Courses aligned to occupations of LOW projected growth & demand in the Mississippi Delta:





#### Courses aligned to <u>occupations</u> of LOW projected growth & demand in the Mississippi Delta:





## SOUTHCENTRAL MISSISSIPPI WORKS

#### SOUTHCENTRAL MISSISSIPPI WORKS SUMMARY



10 in Mississippi high schools are aligned with occupations of high projected growth/demand in Southcentral Mississippi Works.

- Athletic Training (Sports Medicine)
- Computer Programming/ Specific Apps
- Family & Consumer Sciences
- Finance & Accounting
- Game & Interactive Media Design
- Health Services, Allied Health, General
- Industrial Mechanics & Maintenance Tech.
- Information & Communication Tech.
- Instrumentation Tech.
- Sales, Distribution & Marketing





### **PROJECTED GROWTH THRESHOLDS**

Hanover used the following definitions to determine industries and occupations of high, mid, and low projected growth/demand in **Southcentral Mississippi Works**.

INDUSTRY GROWTH THRESHOLDS			
Industries of High Growth	High growth/demand industries in Mississippi and all workforce development areas are those with greater than or equal to 0.5% projected growth/demand from 2019 to 2029.		
Industries of Mid Growth	Mid growth/demand industries in Mississippi and all workforce development areas are those with projected growth/demand rates between 0.2% and 0.5%.		
Industries of <mark>Low</mark> Growth	Low growth/demand industries in Mississippi and all workforce development areas are those with less than 0.2% projected growth/demand from 2019 to 2029.		

OCCUPATION GROWTH THRESHOLDS				
Occupations of High Growth	High growth/demand occupations in Southcentral Mississippi Works are those with greater than or equal to 1% projected growth/demand and 100 projected annual job openings from 2019 to 2029.			
Occupations of Mid Growth	Mid growth/demand occupations in Southcentral Mississippi Works are those that fulfill one of the two requirements for high growth/demand.			
Occupations of Low Growth	Low growth/demand occupations in Southcentral Mississippi Works are those that do not fulfill either of the requirements for high growth/demand.			



#### **INDUSTRIES OF HIGH GROWTH**

Five industries are projected to experience high growth in Southcentral Mississippi Works:



	Total Employment 2019	Average Annual Wages	Total Demand 2029	Projected Employment Growth 2019-2029	Projected Annual % Growth 2019-2029
Human Services	19,895	\$38,656	27,387	1,795	0.9%
Health Science	39,046	\$81,335	32,590	3,343	0.9%
Architecture & Construction	22,840	\$39,772	24,551	1,360	0.6%
Information Technology	4,659	\$75,625	3,326	227	0.5%
Finance	11,897	\$61,273	11,413	536	0.5%



#### Courses aligned to <u>industries</u> of HIGH projected growth in Southcentral Mississippi Works:

ARCHITECTURE & CONSTRUCTION	<ul> <li>Carpenter/Carpentry</li> <li>Construction Trades/General</li> <li>Custodian/Groundskeeper</li> <li>Drafting &amp; Design Technology</li> </ul>	<ul> <li>Electrician</li> <li>General Mechanics &amp; Repairers</li> <li>Heating &amp; Air Conditioning &amp; Refrigerating</li> <li>Metal Fabrication</li> </ul>
FINANCE	<ul> <li>Finance &amp; Accounting</li> </ul>	
HEALTH SCIENCE	<ul> <li>Athletic Training (Sports Medicine)</li> <li>Health Informatics</li> <li>Health Services, Allied Health, Gen.</li> </ul>	<ul> <li>Medical Lab Tech.</li> <li>Practical Nurse (LPN Training)</li> </ul>
HUMAN SERVICES	<ul> <li>Child Care Provider/Assistant</li> <li>Cosmetology/Cosmetologist, General</li> </ul>	<ul> <li>Family &amp; Consumer Sciences</li> </ul>
INFORMATION TECHNOLOGY	<ul> <li>Computer Programming/Specific Apps</li> <li>Game &amp; Interactive Media Design</li> <li>Information &amp; Communication Tech.</li> </ul>	<ul> <li>Science, Technology, Engineering, Math</li> <li>Technology &amp; Engineering Principles</li> <li>Technology Foundations</li> </ul>



#### Courses aligned to <u>industries</u> of LOW projected growth in Southcentral Mississippi Works:

AGRICULTURE, FOOD, & NATURAL RESOURCES	<ul> <li>Ag. &amp; Food Products Processing</li> <li>Agricultural Business/Agribusiness</li> <li>Agricultural Mechanics</li> <li>Agricultural Mechanization (AEST)</li> <li>Agricultural Power Machinery Operation</li> <li>Agriculture &amp; Natural Resources</li> <li>Agriculture, Ag. Operations, Other</li> <li>Animal Sciences, General (AEST)</li> </ul>	<ul> <li>Aquaculture Operations &amp; Production Mgmt.</li> <li>Environmental Science (AEST)</li> <li>Forest Technology/Technician</li> <li>General Mechanics &amp; Repairers</li> <li>Horticulture Service Operation &amp; Mgmt.</li> <li>Introduction to Agriscience</li> <li>Plant Sciences, General (AEST)</li> </ul>
ARTS, AUDIO/VISUAL TECHNOLOGY, & COMMUNICATION	<ul> <li>Broadcast Journalism</li> <li>Cosmetology/Cosmetologist, General</li> <li>Digital Communications &amp; Media</li> <li>Drafting &amp; Design Technology</li> </ul>	<ul> <li>Game &amp; Interactive Media Design</li> <li>Graphic &amp; Printing Equipment Operator</li> <li>Industrial Mechanics &amp; Maintenance Tech.</li> </ul>
BUSINESS MANAGEMENT & ADMINISTRATION	<ul> <li>Agricultural Business/Agribusiness</li> <li>Business Administration, Management</li> <li>Business/Commerce, General</li> <li>Computer &amp; Information Sciences</li> </ul>	<ul> <li>Entrepreneurship</li> <li>Information &amp; Communication Tech.</li> <li>International Business</li> </ul>
EDUCATION &	<ul> <li>Child Care Provider/Assistant</li> <li>Family &amp; Consumer Sciences</li> </ul>	<ul> <li>Teacher Education</li> </ul>



TRAINING

#### Courses aligned to <u>industries</u> of LOW projected growth in Southcentral Mississippi Works:

GOVERNMENT & PUBLIC ADMIN.	<ul> <li>Health Services, Allied Health, Gen.</li> </ul>	<ul> <li>Law &amp; Public Safety</li> </ul>	
LAW, PUBLIC SAFETY, CORRECTIONS, SECURITY	<ul> <li>Forest Technology/Technician</li> </ul>	<ul> <li>Law &amp; Public Safety</li> </ul>	
MANUFACTURING	<ul> <li>Aerial Systems</li> <li>Ag. &amp; Food Products Processing</li> <li>Agricultural Mechanization (AEST)</li> <li>Agricultural Power Machinery Operation</li> <li>Automotive Body Repair</li> <li>Drafting &amp; Design Technology</li> <li>Energy Technology</li> <li>Family &amp; Consumer Sciences</li> <li>Furniture Design &amp; Manufacturing</li> </ul>	<ul> <li>General Mechanics &amp; Repairers</li> <li>Graphic &amp; Printing Equipment Operator</li> <li>Industrial Mechanics &amp; Maintenance Tech.</li> <li>Instrumentation Tech.</li> <li>Machine Shop Technology/Assistant</li> <li>Metal Fabrication</li> <li>Plastics Engineering Technology</li> <li>Small Engine Mechanics &amp; Repair</li> <li>Welding Technology/Welder</li> </ul>	



Sales, Distribution & Marketing



### **OCCUPATIONS OF HIGH GROWTH & DEMAND**

#### The Top 10 occupations of high growth & demand in Southcentral Mississippi Works are:

	Total Employment 2019	Average Annual Wages	Total Demand 2029	Projected Employment Growth 2019- 2029	Projected Annual % Growth 2019- 2029
O Home Health Aides	1,540	\$23,800	2,539	556	3.1%
Physical Therapist Assistants	294	\$47,700	462	77	2.4%
Physical Therapist Aides	141	\$23,300	223	38	2.4%
Occupational Therapy Assistants	124	\$50,900	198	31	2.2%
Medical Assistants	1,119	\$33,400	1,526	243	2.0%
Roustabouts, Oil and Gas	156	\$28,400	238	33	1.9%
Rotary Drill Operators, Oil and Gas	76	\$42,200	113	15	1.9%
Service Unit Operators, Oil, Gas, and Mining	114	\$55,200	167	22	1.8%
Massage Therapists	289	\$30,000	366	51	1.7%
Dental Hygienists	442	\$60,300	342	68	1.5%



\*Notes: [1] These occupations are ranked in order of the projected annual percent growth from 2019 to 2029. [2] Hanover only included occupations that pay a living wage and require an Associate's degree and below.

Courses aligned to <u>occupations</u> of HIGH projected growth & demand in Southcentral Mississippi Works:

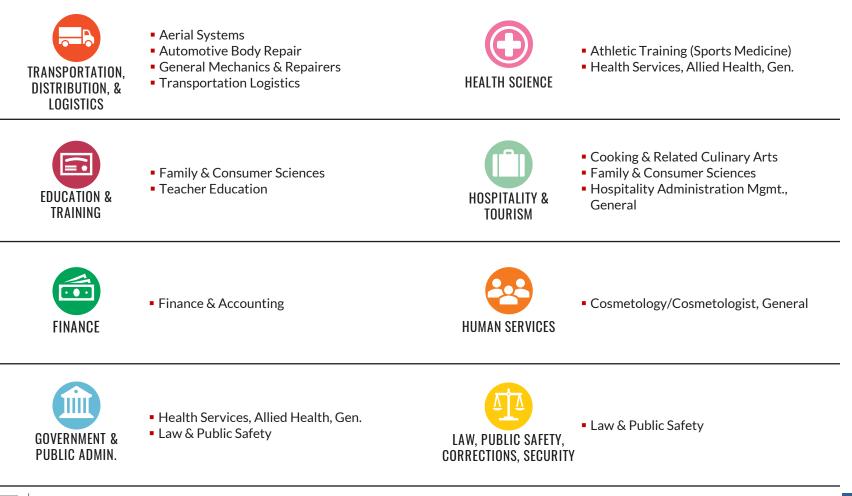


#### Courses aligned to <u>occupations</u> of LOW projected growth & demand in Southcentral Mississippi Works:

AGRICULTURE, FOOD, & NATURAL RESOURCES	<ul> <li>Ag. &amp; Food Products Processing</li> <li>Agricultural Business/Agribusiness</li> <li>Agricultural Mechanics</li> <li>Agricultural Power Machinery Operation</li> <li>Agriculture &amp; Natural Resources</li> <li>Agriculture, Ag. Operations, Other</li> </ul>	<ul> <li>Animal Sciences, General (AEST)</li> <li>Aquaculture Operations &amp; Production Mgmt.</li> <li>Environmental Science (AEST)</li> <li>Forest Technology/Technician</li> <li>Introduction to Agriscience</li> <li>Plant Sciences, General (AEST)</li> </ul>
ARTS, AUDIO/VISUAL TECHNOLOGY, & COMMUNICATION	<ul> <li>Broadcast Journalism</li> <li>Cosmetology/Cosmetologist, General</li> <li>Digital Communications &amp; Media</li> </ul>	<ul> <li>Game &amp; Interactive Media Design</li> <li>Graphic &amp; Printing Equipment Operator</li> <li>Industrial Mechanics &amp; Maintenance Tech.</li> </ul>
MANUFACTURING	<ul> <li>Aerial Systems</li> <li>Agricultural Mechanization (AEST)</li> <li>Agricultural Power Machinery Operation</li> <li>Drafting &amp; Design Technology</li> <li>Energy Technology</li> <li>Family &amp; Consumer Sciences</li> <li>Furniture Design &amp; Manufacturing</li> </ul>	<ul> <li>Graphic &amp; Printing Equipment Operator</li> <li>Industrial Mechanics &amp; Maintenance Tech.</li> <li>Instrumentation Tech.</li> <li>Metal Fabrication</li> <li>Plastics Engineering Technology</li> <li>Small Engine Mechanics &amp; Repair</li> </ul>
STEM	<ul> <li>Aerial Systems</li> <li>Computer Information Sciences</li> <li>Information &amp; Communication Tech.</li> </ul>	<ul> <li>Instrumentation Tech.</li> <li>Science, Technology, Engineering, Math</li> <li>Technology &amp; Engineering Principles</li> </ul>



#### Courses aligned to <u>occupations</u> of LOW projected growth & demand in Southcentral Mississippi Works:





# REFERENCES

#### REFERENCES

- "American Fact Finder." United States Census Bureau. https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml
- "Career Clusters Guide." State of New Mexico Public Education Department, 2016. https://webnew.ped.state.nm.us/wpcontent/uploads/2018/03/CareerClustersBook\_2016\_NM\_all\_FIN AL-REV\_12.9.16.pdf
- "Career Clusters." Advance CTE. https://careertech.org/career-clusters
- Elliott, D. "Mississippi Delta's Economy, Way of Life Fading." NPR, 2005.
- "Employment Projections | Occupational Projections Data." Bureau of Labor Statistics. https://data.bls.gov/projections/occupationProj
- Gillette, B. "Loss of Population–Delta Leaders Working to Offset Decline." Delta Business Journal, 2019
- "MIT Living Wage Calculator." MIT Living Wage Calculator. https://livingwage.mit.edu/
- "Occupation Snapshot in Mississippi Twin Districts." Chmura JobsEQ -Occupation Snapshot, 2019. Retrieved from Chmura JobsEQ.
- "Occupation Snapshot in Mississippi Partnership." Chmura JobsEQ -Occupation Snapshot, 2019. Retrieved from Chmura JobsEQ.
- "Occupation Snapshot in Mississippi Delta." Chmura JobsEQ -Occupation Snapshot, 2019. Retrieved from Chmura JobsEQ.
- "Occupation Snapshot in Southcentral Mississippi Works." Chmura JobsEQ - Occupation Snapshot, 2019. Retrieved from Chmura JobsEQ.







#### Thank you.

12

CONTACT Emily Scher Content Director E: escher@hanoverresearch.com P: 202-793-8804 manoverresearch.com