Turner College of Business & Technology
Columbus State University

The Butler Center for Research and Economic Development

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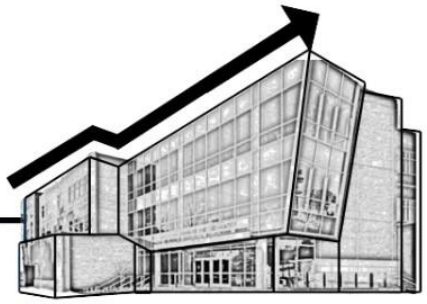

# Awards and Occupations Gap Report

## Columbus GA-AL MSA

2024

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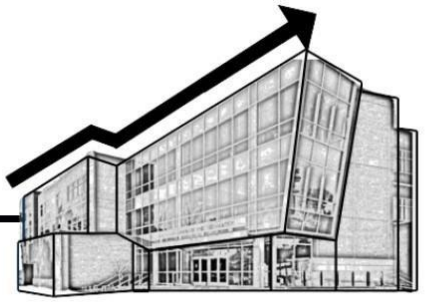

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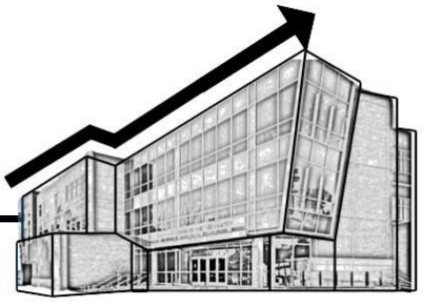
*Image sourced through Stacker (2022).*

# About

This education-occupation (CIP-SOC) analysis shows the difference between the number of post-secondary degree awards conferred and the occupation demand in the Columbus GA-AL MSA.

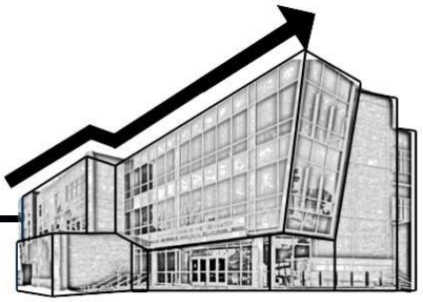
The Butler Center has been working on identifying trends in educational programs and occupations in the Columbus Area. The Excel sheets have links to other sheets and Word documents, so for the file to work properly, please download the zipped file and extract it before you open any Excel sheets. Also, please read the attached Word document before reviewing the data. We also did additional work



looking at data on business and technology trends. In the Gaps by Program_Turner College file, we combined all the national educational programs related to business and technology and aligned them with the relevant Turner College programs.

## Key Takeaways

There are several key takeaways from the report regarding 10 occupational gaps that currently exist in the Columbus area. First, software development occupation exhibits the biggest labor shortage, with the report adding that the TSYS School has a bachelor's degree program in information technology along with a new AI track for the bachelor's degree in computer science, both of which can qualify students for this occupation. Other educational programs, such as computer programming and cloud computing, are in demand. Second, there is a gap of 30 employees per year in general and operations management. This gap could be addressed by the Turner College's degree programs in business administration and general business with an entrepreneurship concentration. Third, there is currently a shortage in the area of healthcare management. This issue could be alleviated by adding a healthcare concentration to the undergraduate business administration program and/or the MBA program, but this will require either more resources or reallocating resources. Next, the report identified a gap in the area of business operations specialists. This gap exists in the business administration and international business programs, and we have programs covering these two areas. However, there is a need for hotel management and an e-commerce specialization. Hospitality management is a growing field, and there is a need to add such a concentration or minor. The report also found a gap in accountants, auditors, and financial managers that could be covered through the Turner College's undergraduate programs and the addition of a risk management concentration. Lastly, employment gaps related to other CSU colleges and schools were also identified. The most prominent of these are related to educational programs, including general education, curriculum and instruction, educational/instructional

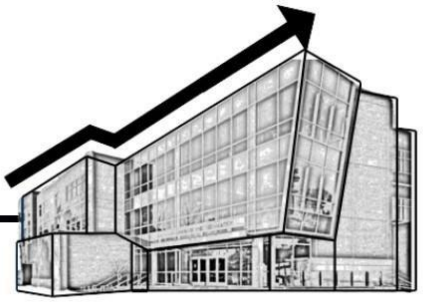


technology, and social/philosophical foundations of education. Other gaps were noted in the clergy, civil engineering, and law.

# Gaps by Program

We aligned the Columbus State University (CSU) educational programs using the CIP codes to the national programs in the “Gaps by Program” file, columns J-N. Programs highlighted in green are perfectly aligned, and those highlighted in yellow are aligned based on the first two CIP digits and program names. We coded each program to have a link that takes the reader to the related occupations. The second file is “Gap by Occupation,” where we coded column C to open a Word document with details on education and training requirements, regional post-secondary programs, industry wages, and attributes. In the Gaps by Program_Turner College file, we combined all the national educational programs related to business and technology and aligned them with the relevant Turner College programs. For all links to work properly, please extract the attached zipped file.

We used data from the Bureau of Labor Statistics (BLS), O*NET OnLine, National Center for Education Statistics, and JobsEQ. The crosswalk analysis does not include data on online schools. Online schools are defined as (1) institutions where all programs are offered entirely via distance education—as indicated in the NCES Institutional Characteristics data—and (2) the University of Phoenix. We only included occupations requiring an associate degree or higher in the occupation data. Negative values represent a shortage of degrees earned to the demand for the occupations, while positive values represent a surplus of awards to the demand for the occupations.



# Classification Systems

Occupation data are currently structured to the Standard Occupational Classification (SOC) system, which is maintained by the BLS. The SOC system is used to structure occupations for statistical research purposes. Like the NAICS, the SOC system relies on a hierarchical structure of codes that range from 2- to 6-digit, referred to as SOC codes, to organize occupations into different groups.

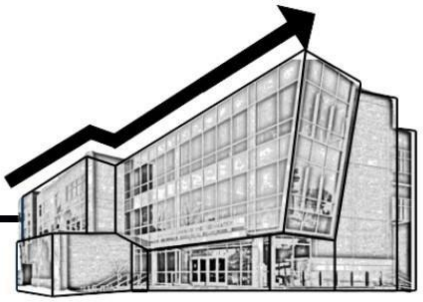
Occupations are classified based on the nature of the work performed, skills, training and education, and credentials typically required. Per this structure, all occupations are classified into one of 867 different occupation groups. While codes include up to six non-zero digits, there are only four occupation groups: major, minor, broad, and detailed.

Training programs are classified according to the Classification of Instructional Programs (CIP codes). For relating training programs, the analysis uses the JobsEQ modified version of the CIP to SOC crosswalk from the National Center for Education Statistics (NCES). While this is a helpful crosswalk for estimating occupation production from training program awards data, the crosswalk is neither perfect nor comprehensive. One limitation of the data is that many training programs graduates for one reason or another, do not end up employed in occupations that are most related to the training program from which they graduated. For example, many of the realtors have different degrees. Therefore, the education program analyses should
be considered in this light.

**Award Gap** - the difference between the number of awards earned and the Target Range per year.

**Awards** - the modeled number graduates projected to move into an occupation per year.

**Target Range** - the range between Annual Demand and the US Awards Benchmark.



**Annual demand** - the total annual demand for that occupation in the region. **US Awards Benchmark** - the average awards output for a region with similar employment levels.

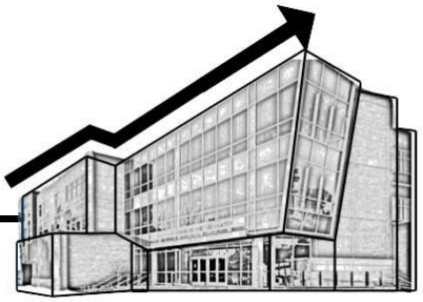
# Award Gaps and Occupation Gaps Analysis

The award gaps by program data only include programs where there is a shortage or negative gap. The total award gap for a program is the sum of all negative occupation award gaps within the CIP-SOC crosswalk. The Butler Center designed the Programs file so that you can click on the program to open the occupations with negative award gaps related to the targeted program.

It is expected to find discrepancies between the education programs gap and the occupation gap files. For the Award Gaps supply-demand analysis, the data assumes that all graduates stay in the region to work and disregard any potential domestic migration.

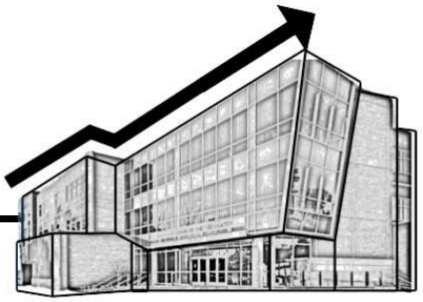
Award Gaps supply is calculated from the specific degrees offered at local schools. Award Gaps demand includes the growth and separation (exit and transfer) demand of occupations in the region due to the mix of industries and the overall regional growth rate. The “CIP-SOC” crosswalk translates the award completion data into estimates of new workers in related occupations. Award Gaps is designed to measure the “as-is” relationship of supply and demand. If a shortfall exists in an occupation, employers in the region need to hire graduates who attended schools outside the region. If a surplus exists in an occupation, this implies there do not exist enough jobs in the region to employ all these graduates and therefore at least some of these graduates will need to find jobs in their occupations in other regions.

Larger geographies capture more of the actual school-to-work pipeline in the community. Also graduates with higher levels of educational attainment tend to travel farther for school and work.



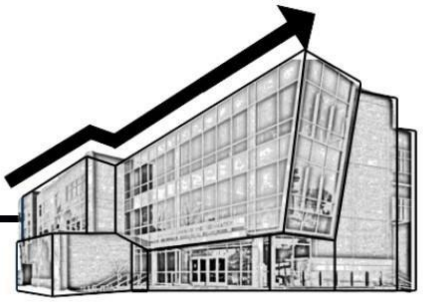
Occupation Gaps is also a supply-demand analysis but differs from Award Gaps in several important areas. First, Occupation Gaps takes into account the movement of graduated students between regions. Another difference is that while Award Gaps describes the current balance, the Occupation Gaps is a forecast of “potential” gaps. This forecast brings together industry and demographic trends. Any potential gap can be thought of as a signal of an underlying market force that may or may not come to fruition. If there is a growing excess of labor in an occupation, some of those workers will likely leave for alternative careers to lessen the surplus. On the other hand, for a potential shortfall, to attract sufficient talent, employers may increase wages or recruit from further distances to fill those gaps; in addition, if these gap areas are made known to jobseekers, more individuals may pursue training in these careers, further closing the gaps.

The Occupation Gaps is primarily designed to model the long-term demand potential of occupations. Award Gaps, on the other hand, are primarily designed to model the current supply/demand balance between local post-secondary schools and regional employers. The following table summarizes these considerations.



| | Award Gaps | Occupation Gaps |
|---|---|---|
| **Regional Scope** | The input region is considered an "island" in which only graduates from local programs can fill jobs requiring those skills. | Incorporates migration in and out of a given region; considers the talent pool of residents and commuters Potential gaps in the longer term, considering industry, occupation, and demographic trends |
| **Time Period** | Current balance between awards from local post-secondary schools and current demand for related jobs | |

If the gap "type" from Award Gaps and Occupation Gaps do not agree, this is not a contradiction, but rather, these gaps describe different conditions in the labor market. See the below table:



| | Occupation Gaps: Deficit | Occupation Gaps: Surplus |
|---|---|---|
| **Award Gaps: Deficit** | | In occupations where there is a deficit, per the Award Gaps, local post-secondary institutions are not graduating enough students to fill local positions. Nevertheless, per Occupation Gaps, there is still a projected occupation surplus from the existing resident and commuter population and graduates from schools outside the region, indicating the potential for supply to outstrip employer demand. |
| **Award Gaps: Surplus** | In occupations where there is a surplus, per the Award Gaps, local post-secondary institutions are graduating more students than local employers have openings for. Nevertheless, per Occupation Gaps, a sufficient number of these graduates are not projected to stay local after graduation. Hence, employers potentially will struggle to fill positions for these occupations over the long term. | |