

## Draft Review Guidelines

This draft version of the report gives you an opportunity to review the initial findings and report any concerns you may have. It is also an opportunity to suggest any edits to the text that you would like us to incorporate into the final version.

Please note that the results found in this draft report are preliminary and subject to change. Because of this, we recommend against publishing or publicizing the findings presented below until you have your finalized results.

Consider the environmental impact of printing this report.

### Editing Guidelines

- Please provide suggested revisions as one electronic document or digital comments on a single copy of each of the reports. Please send either as a word document or PDF file. Do not make changes in the actual text, as this makes it difficult for us to find and track changes.
- It is only necessary to indicate iterative revisions (for example, capitalizing a word, which we have consistently not capitalized) at the first instance, not at every instance.
- Before sending us suggested revisions, if you have received feedback from multiple people, please be sure that their suggestions do not contradict each other

# Lee College

## Environmental Scan and Program Demand Gap Analysis

### Executive Summary

May 2020



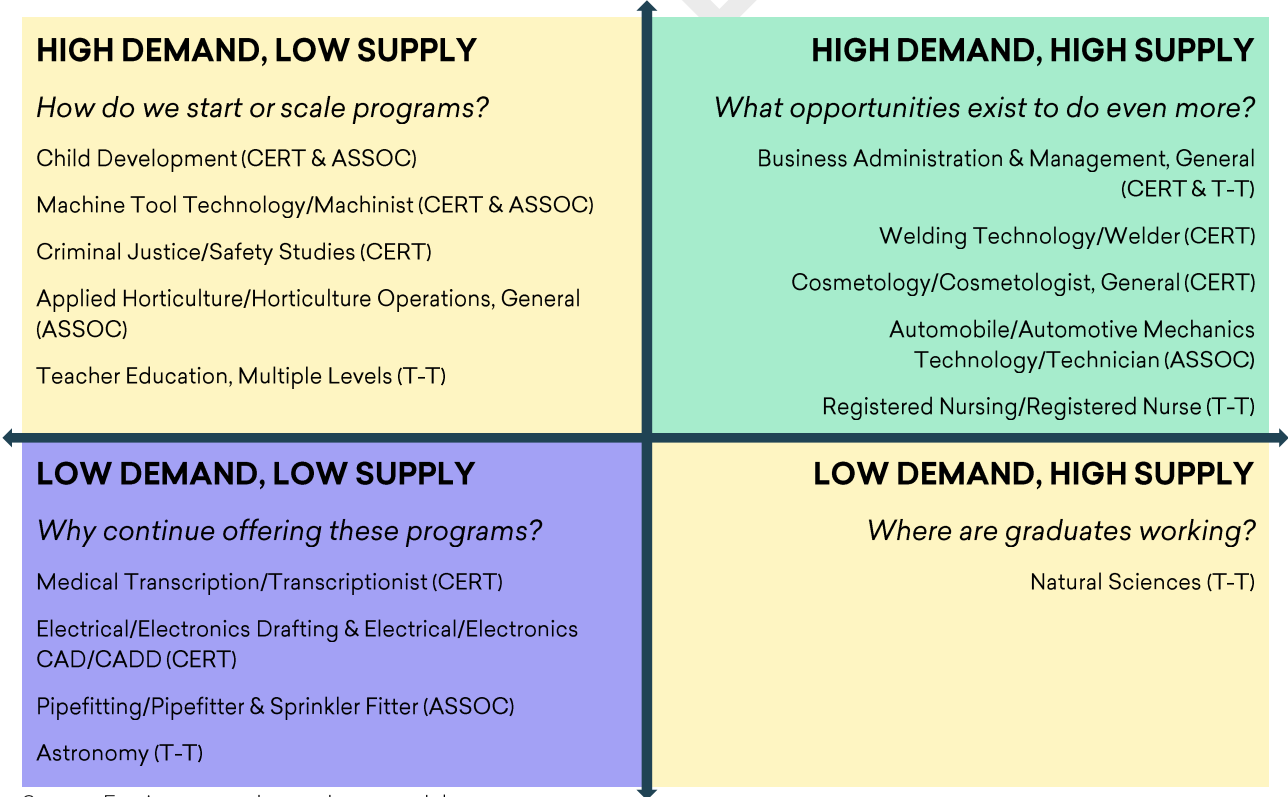
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# Executive Summary

Lee College (Lee) is a public, two-year postsecondary educational institution in Texas. To further its goal of providing the region with well-trained and well-educated residents, Lee continually pursues improvement in various forms. An up-to-date understanding of the regional economy and the demand for skilled labor is vital to the planning efforts of the college as it seeks to adapt its program offerings to the requirements of an ever-changing workforce. Lee partnered with Emsi, a leading provider of labor market data, to complete a program demand gap analysis, which assesses regional job openings against educational program completions.

## RECOMMENDATIONS



Source: Emsi program demand gap model.

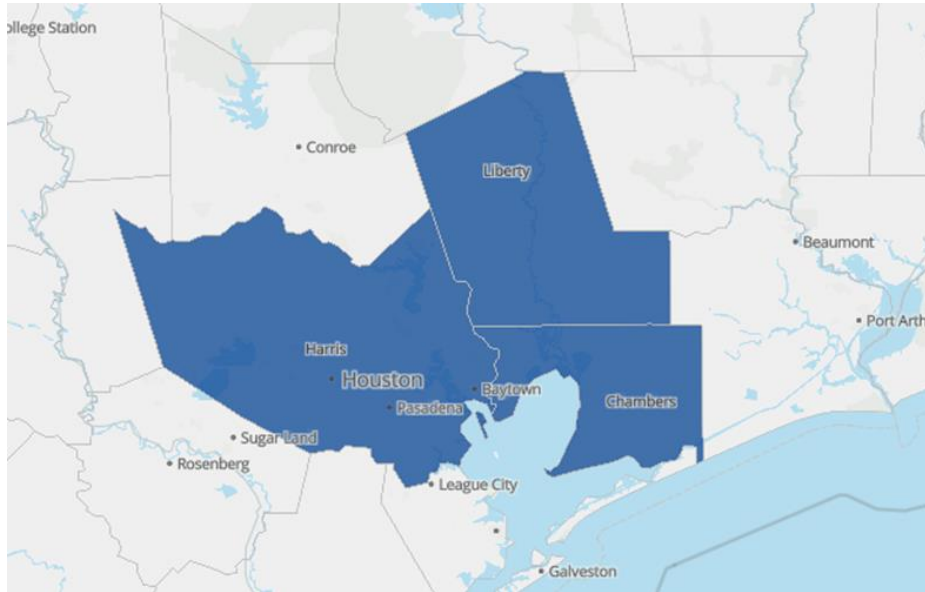
*“Strong community colleges assess trends in job growth and salaries to determine what programs will be needed for high-demand jobs. They then structure their programs and enrollment in accordance with those demands.”*

*Josh Wyner in What Excellent Community Colleges Do: Preparing All Students for Success*

## **INTRODUCTION**

For purposes of the program demand gap analysis, Lee serves a larger region beyond its main campus in Baytown. This region, called the Lee College Service Area, is comprised of three counties in Texas: Chambers, Harris, and Liberty. This report outlines the region’s economy and uses the region’s average annual projected job openings between 2019 and 2029 as a measurement of labor market demand. When job openings are compared to the region’s supply of educational program completions, the analysis determines how well Lee’s program offerings satisfy regional workforce demand. In addition, this report offers recommendations for new program development. In its entirety, the PDGA is a starting point for Lee as the college continues to develop programs using data-based decision-making strategies. The following figures and table display key findings of the analyses.

Figure 1: Map of the Lee College Service Area

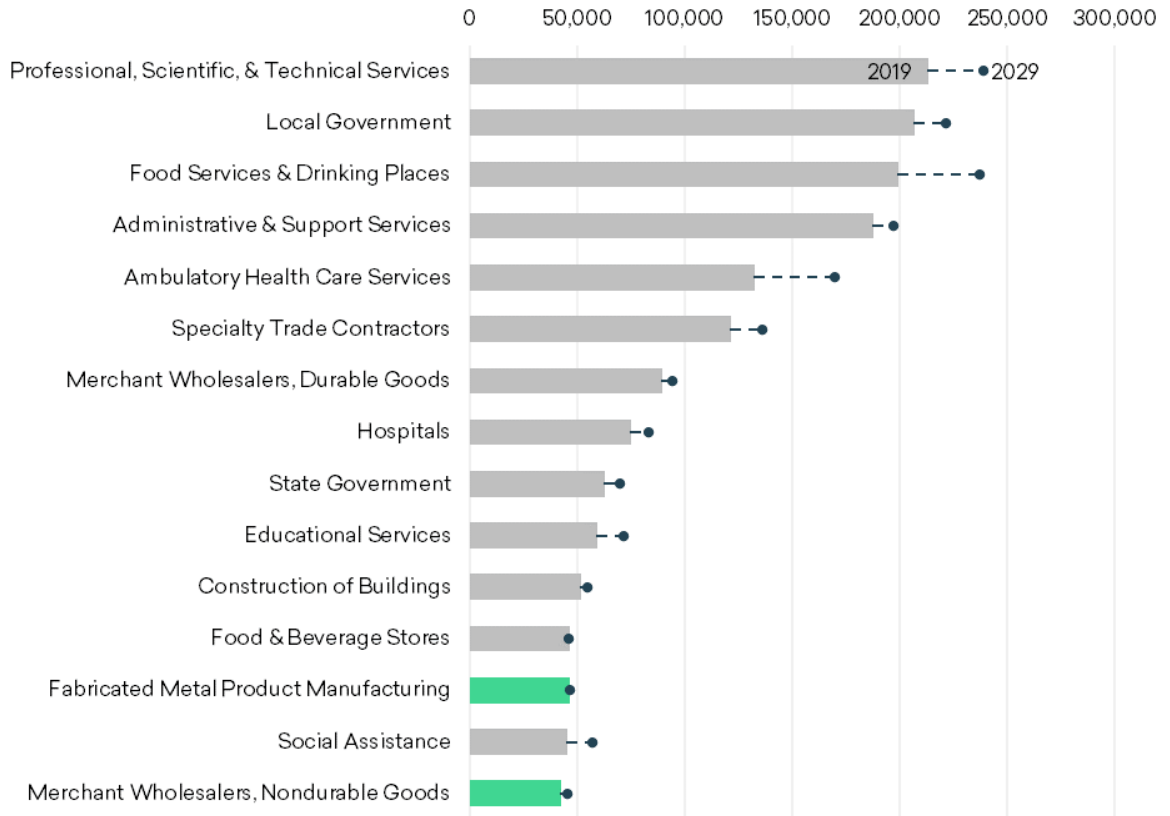


Source: Emsi Analyst. Region provided by Lee.

## ENVIRONMENTAL SCAN

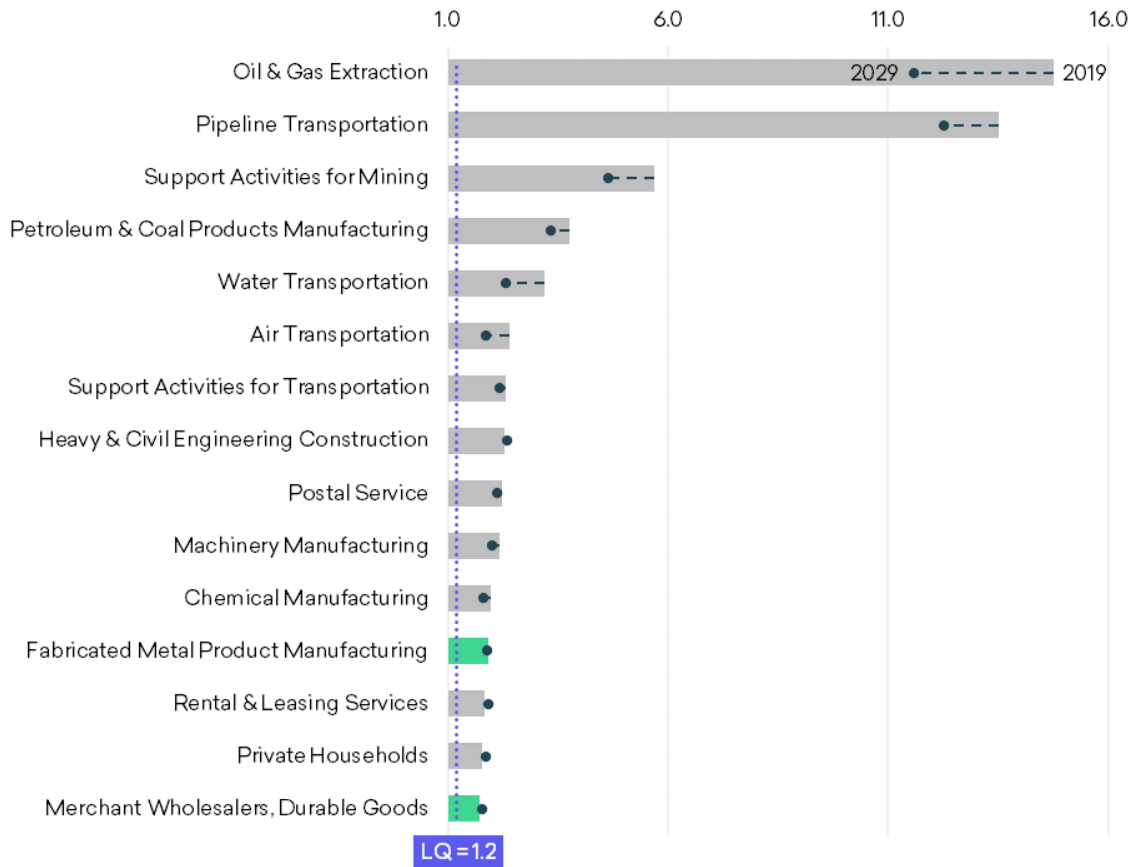
Figure 2 displays the top industry subsectors in terms of employment in the Lee College Service Area, and Figure 3 shows the top industry subsectors in terms of employment concentrations, referred to as location quotients (LQs). High LQs (usually anything greater than 1.2) are an indication that the region has a comparative advantage or specialization in certain industry subsectors relative to the rest of the nation or potentially to other regions.

Figure 2: Top Industry Subsectors in the Lee College Service Area by Jobs



Green colored bars represent industry subsectors that are both strong in jobs and high in LQ.  
 Source: Employees & Self-Employed 2020.2.

Figure 3: Top Industry Subsectors in the Lee College Service Area by Employment Concentration (LQ)



Green colored bars represent industry subsectors that are both strong in jobs and high in LQ.  
 Source: Employees & Self-Employed 2020.2.

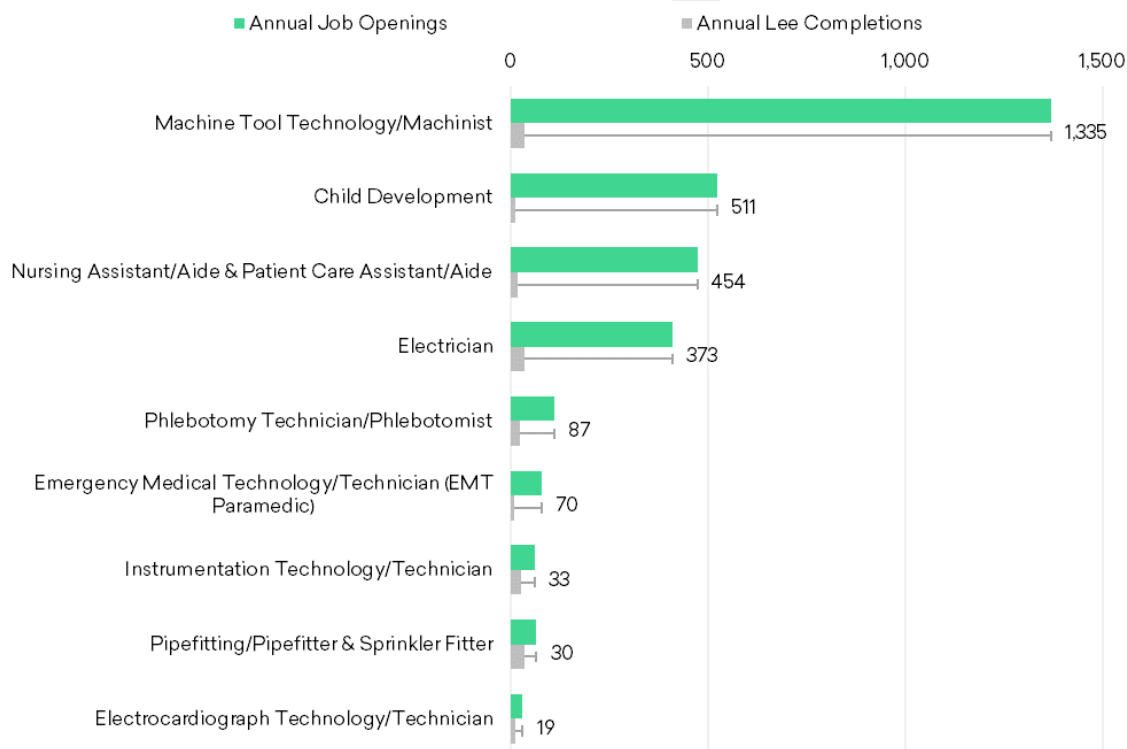
Note the green colored bars in the figures. Across all of the Lee College Service Area's industry subsectors, two are within the top 15 in terms of jobs with relatively high LQs. The appearance of these industry subsectors provides an indication of their strength in the region's economy and offers the college insight into potential employment opportunities for its students. These industry subsectors, ranked by 2019 jobs, are:

- Fabricated Metal Product Manufacturing
- Merchant Wholesalers, Durable Goods

## PROGRAM DEMAND GAP ANALYSIS

The program demand gap analysis provides results across all of Lee’s non-credit, certificate, and degree level programs, which have been classified by their formal CIP code.<sup>1</sup> The analysis connects the college’s program completers with the availability of regional job openings. For Lee’s non-credit programs, the analysis is similar in that it connects the college’s completers with the availability of regional job openings but without the additional reference to non-credit program completions from other postsecondary educational institutions in the Lee College Service Area. Furthermore, the analysis focuses on the gaps and surpluses in the programs by award level. A gap or surplus larger than 1,000 is considered beyond normal labor market fluctuations and therefore an area of consideration for program development.

Figure 4: Lee’s Non-Credit Programs with Gaps



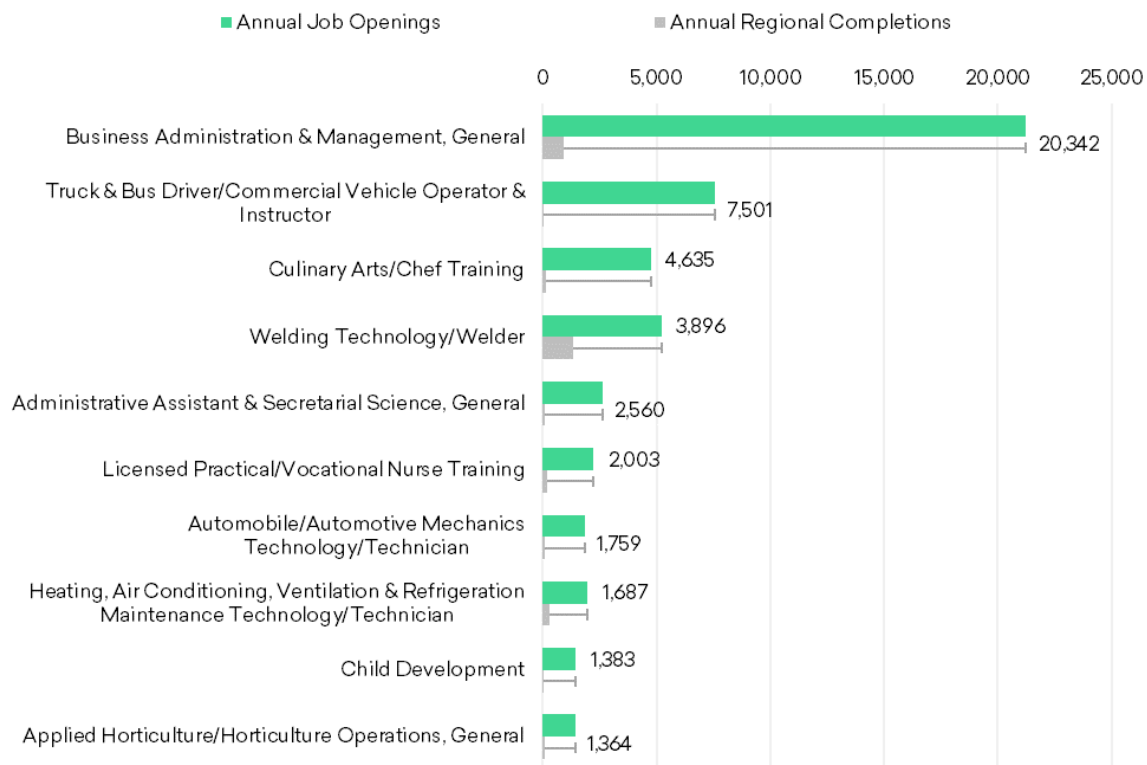
Non-credit programs are grouped by their six-digit CIP code.  
Source: Emsi program demand gap model.

1 CIP refers to the Classification of Instructional Program and was originally developed by the U.S. Department of Education’s National Center for Education Statistics (NCES).



Lee offers eleven non-credit programs, when grouped by their six-digit CIP codes. The non-credit programs can be designed for self-enrichment; however, Lee offers them with workforce skills in mind. Using a customized non-credit program-to-occupation map, the programs are analyzed using similar methods to the program demand gap analysis. One non-credit program has a significant gap (Figure 4). However, the Lee College Service Area is quite large, and completion of any one of the non-credit programs could lead to successful regional employment. The non-credit program analysis provides Lee administrators with opportunities for local student recruiting and curriculum re-alignment.

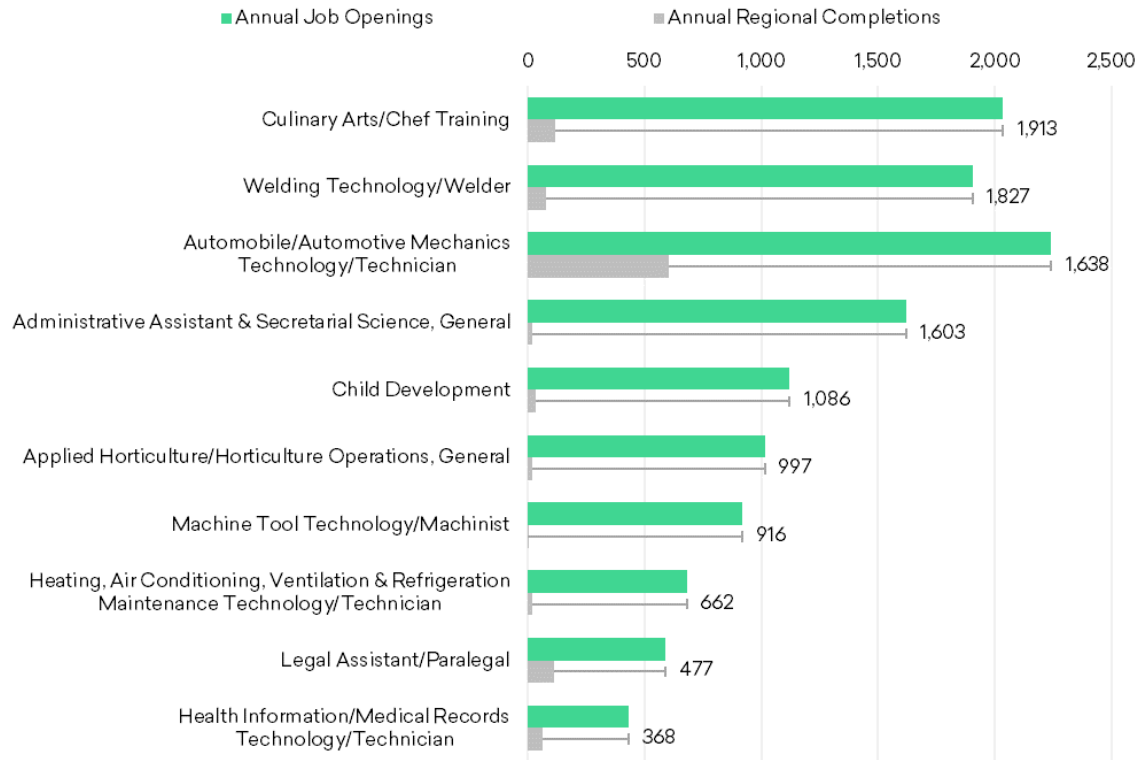
Figure 5: Top 10 Certificate Level Gaps



Source: Emsi program demand gap model.

Lee offers 40 certificate level programs, thirteen of which have a significant gap above the 1,000-openings level of significance, the top 10 of which are shown in Figure 5. Program expansions are recommended at this award level for programs that award completers with a Lee certificate and a certification, license, or industry-specific credential required for employment in an occupation. Such is the case with the college's Welding Technology/Welder program. No programs at this award level have a significant surplus.

Figure 6: Top 10 Associate Degree Level Gaps

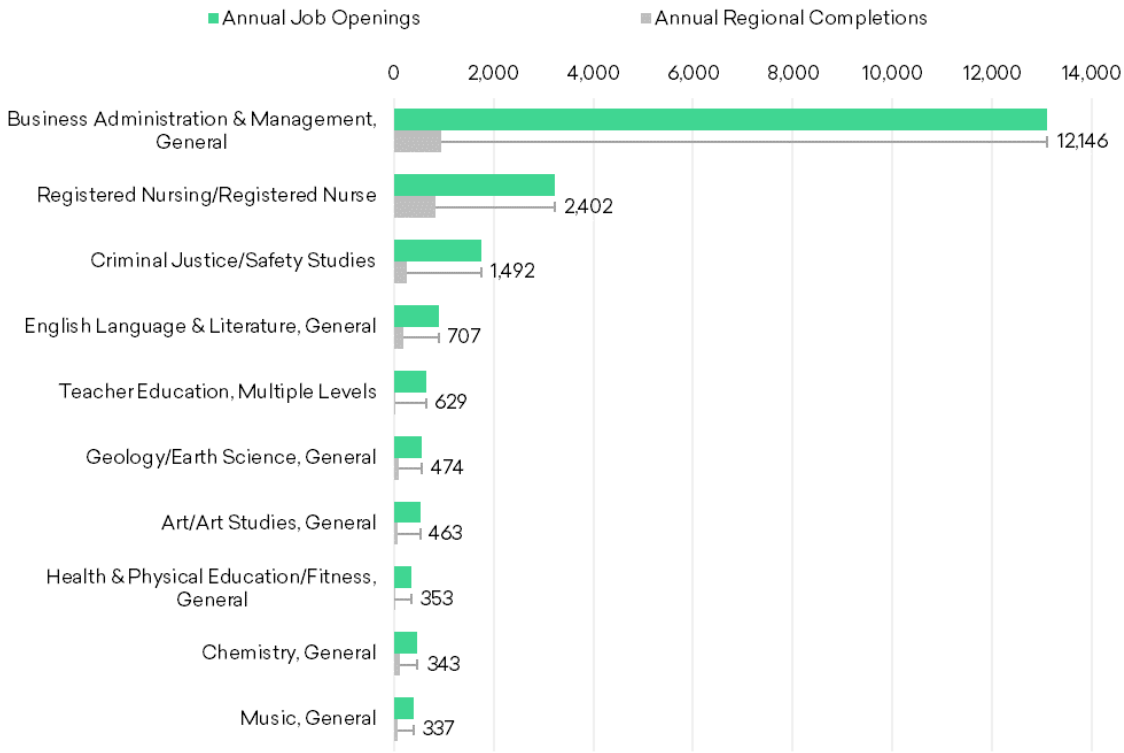


Source: Emsi program demand gap model.

At the associate degree level, five programs have a significant gap (Figure 6). Several should be considered for a college-wide expansion. Furthermore, if the associate degree level program is associated with a formal industry-specific certificate, permit, or license required for employment, it is also recommended for expansion.

Lee offers 22 transfer-track associate degree programs. In other words, a program completer could readily transfer into a similar bachelor's degree level program at another postsecondary educational institution in the state. Of these programs, three have a significant gap above the 1,000-openings level of significance, as shown in Figure 7. These programs should be considered for expansion. A program expansion should consider the process by which Lee's students transfer into regional bachelor's degree level programs. Administrative and academic support measures at Lee would enable student success. No programs at this award level have a significant surplus.

Figure 7: Top 10 Transfer-Track Degree Level Gaps



Lee's programs award completers with an associate degree, but the demand for jobs considers a bachelor's degree level of education.  
 Source: Emsi program demand gap model.

A liberal arts program expansion is not recommended at this time, but Lee administrators should be aware that students can find success in a variety of business-related occupations. Using Emsi's Profile Analytics database, many liberal arts program completers are currently employed as retail salespersons, administrative assistants, and customer service representatives, as well as a variety of managers and supervisors. These occupations have a considerable number of job openings in the Lee College Service Area. The college's liberal arts program, therefore, serves as a starting point to students' career goals beyond an associate degree level of education.

## PROGRAM ADDITIONS

Fifty certificate level programmatic areas of opportunity have been identified in the program demand gap analysis, most of which are related to construction & extraction occupations. At the associate degree level, there are fewer opportunities for new programs, considering the college's current offerings. Nonetheless, Lee should consider new programs related to healthcare practitioners & technical occupations, whether its focus is on job openings in the Lee College Service Area or Texas. Another fifty programmatic areas of opportunity were identified at the bachelor's level, many of which are related to business & financial operations occupations, a demand which Lee could establish or adjust existing transfer-track associate degrees to meet. For all award levels, many program additions are related to the college's current program offerings, which indicates an opportunity for a curriculum adjustment to better align with the region's current and projected labor market demand. A selection of these occupations, which have the most regional job openings by award level, appear in Table 1.

Table 1: Program Additions by Education Level

SOC TITLE	2019 JOBS	2029 JOBS	% JOB CHANGE	ANNUAL JOB OPENINGS	MEDIAN HOURLY WAGE	EDUCATION LEVEL
Construction Laborers	34,711	40,227	15.9%	2,814	\$15.29	CERT
Industrial Truck & Tractor Operators	15,861	16,639	4.9%	1,423	\$17.04	CERT
Carpenters	18,848	20,301	7.7%	1,401	\$18.94	CERT
Shipping, Receiving, & Traffic Clerks	12,835	12,868	0.3%	959	\$16.47	CERT
Operating Engineers & Other Construction Equipment Operators	8,645	10,036	16.1%	873	\$20.21	CERT
First-Line Supervisors of Production & Operating Workers	11,854	11,750	(0.9%)	777	\$33.35	CERT
Roustabouts, Oil & Gas	6,449	6,245	(3.2%)	629	\$18.15	CERT
First-Line Supervisors of Transportation & Material Moving Workers, Except Aircraft Cargo Handling Supervisors	7,847	8,463	7.8%	609	\$29.44	CERT
Service Unit Operators, Oil, Gas, & Mining	5,378	5,038	(6.3%)	547	\$23.95	CERT
Bus & Truck Mechanics & Diesel Engine Specialists	6,301	6,865	9.0%	463	\$23.80	CERT
Dental Hygienists	2,108	2,594	23.1%	121	\$34.17	ASSOC
Respiratory Therapists	2,213	2,702	22.1%	119	\$29.44	ASSOC
Radiologic Technologists	3,684	4,173	13.3%	159	\$31.99	ASSOC
Postsecondary Teachers, General	19,286	22,527	16.8%	768	\$40.88	T-T

<b>SOC TITLE</b>	<b>2019 JOBS</b>	<b>2029 JOBS</b>	<b>% JOB CHANGE</b>	<b>ANNUAL JOB OPENINGS</b>	<b>MEDIAN HOURLY WAGE</b>	<b>EDUCATION LEVEL</b>
Insurance Sales Agents	12,383	13,907	12.3%	714	\$22.13	T-T
Securities, Commodities, & Financial Services Sales Agents	9,778	10,484	7.2%	649	\$25.85	T-T
Civil Engineers	8,678	9,191	5.9%	498	\$50.97	T-T
Buyers & Purchasing Agents	9,594	9,181	(4.3%)	478	\$29.27	T-T

SOC refers to the Standard Occupational Classification system used to classify occupations. Average annual job openings represent regional data from 2019 to 2029. Numbers may not sum due to rounding.

Source: Emsi program demand gap model.

DRAFT



Emsi is a leading provider of labor market data to professionals in higher education, economic development, workforce development, talent acquisition, and site selection. Our data, which cover more than 99% of the U.S. workforce, are compiled from a wide variety of government sources, job postings, and online profiles and résumés. Our data are used to solve a variety of problems: align programs with regional needs, equip students with career visions, understand regional economic and workforce activity, and find and hire the right talent. We serve clients across the U.S., the UK, and Canada.

