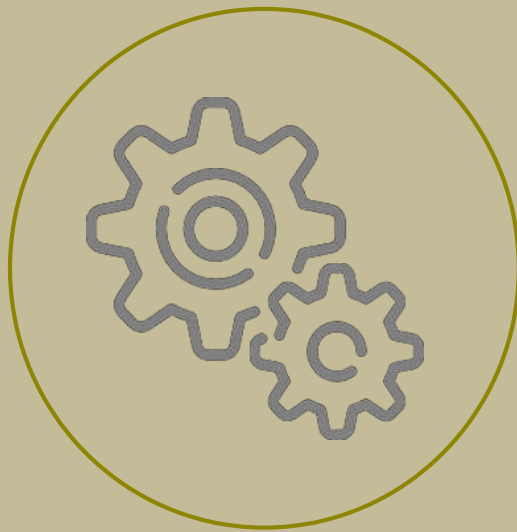


08

**Education  
Infrastructure  
Review and Gap  
Analysis by  
Industry Sector**

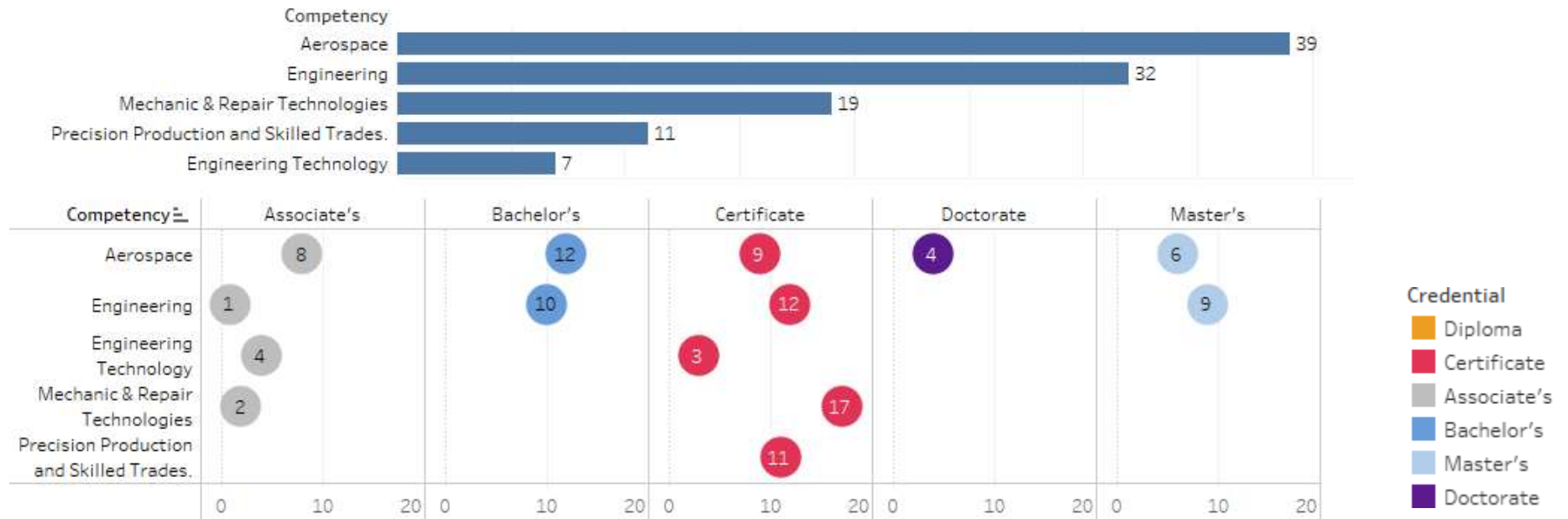




# Advanced Manufacturing



# Advanced Manufacturing Programs – Competencies



\*Program counts include all dual-credit and postsecondary programs. They do not include non-credit degree programs.

# Advanced Manufacturing Programs – Postsecondary Competencies

Institution	Engineering	Aerospace	Engineering Technology	Mechanic & Repair Technologies	Precision Production and Skilled Trades.
Affordable Training		2 (Associate's), 1 (Certificate)	2 (Certificate)	1 (Associate's), 2 (Certificate)	2 (Certificate)
Jacksonville University		2 (Bachelor's)			
University of North Florida	3 (Bachelor's), 4 (Master's)				
Chipola College			2 (Associate's)		
Embry-Riddle Aeronautical University (ERAU)	1 (Associate's), 7 (Bachelor's), 5 (Master's)	4 (Associate's), 10 (Bachelor's), 4 (Doctorate), 6 (Master's)			
A. Philip Randolph Academies of Technology					1 (Certificate)
Bradford-Union Area Vocational Technical Center				4 (Certificate)	2 (Certificate)
First Coast Technical College		1 (Certificate)		1 (Certificate)	
Florida Career College - Jacksonville		2 (Associate's)			
Florida State College - Jacksonville	2 (Certificate)	1 (Certificate)	2 (Associate's)	4 (Certificate)	1 (Certificate)
Frank H. Peterson Academies of Technology		1 (Certificate)		1 (Certificate)	
Jones Technical Institute (J-Tech)				1 (Associate's)	

**Credential**

- Diploma
- Certificate
- Associate's
- Bachelor's
- Master's
- Doctorate

Within the industry, Embry-Riddle Aeronautical University (ERAU) provides the highest number and most diverse postsecondary credentials in the region's vicinity in Advanced Manufacturing, with 17 Bachelor's degrees in Engineering and Aerospace and 11 Master's degrees in the same fields regionally.

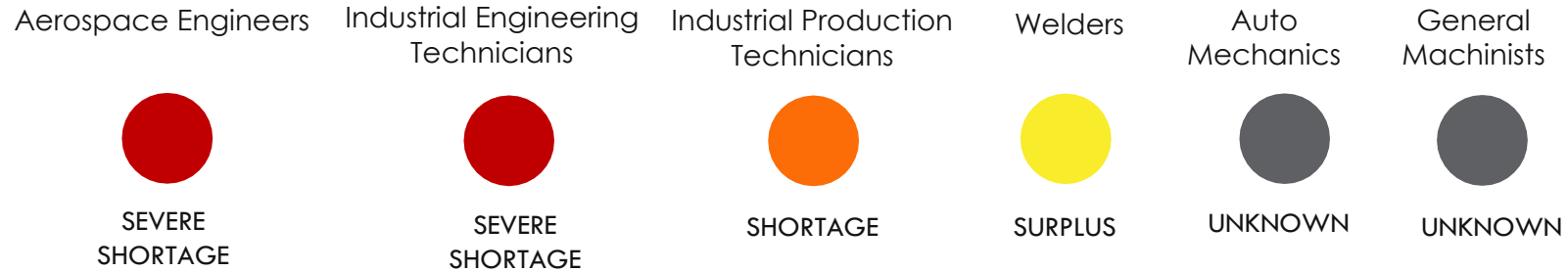


# Advanced Manufacturing Programs – Secondary Competencies

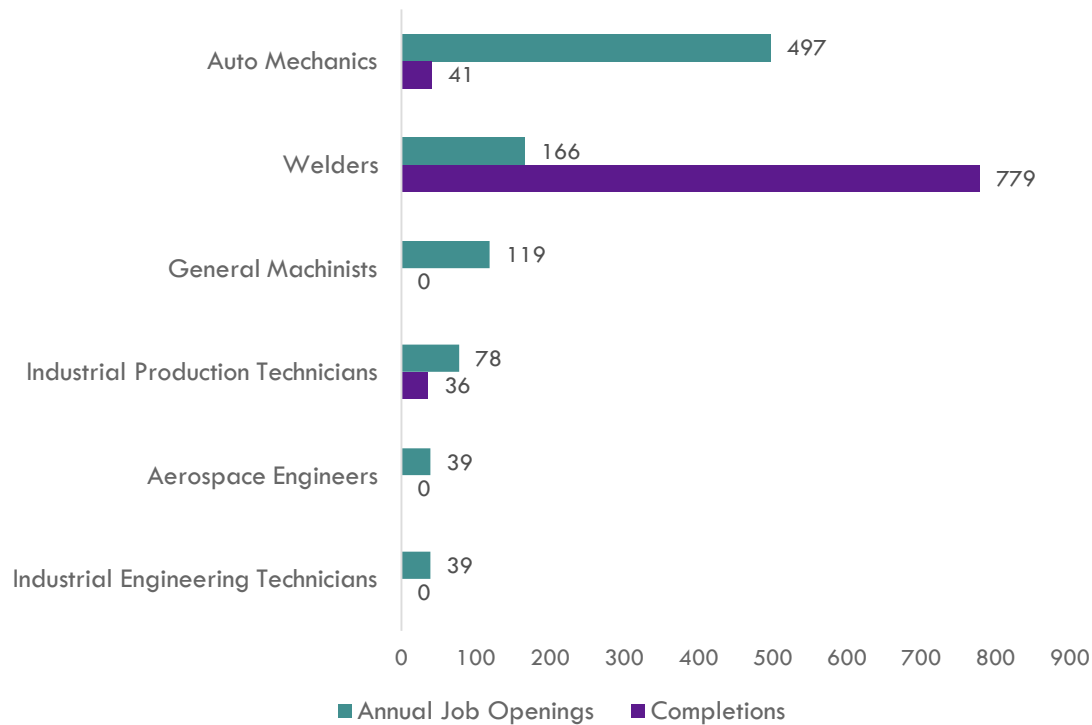
Institution	Engineering	Aerospace	Engineering Technology	Mechanic & Repair Technologies	Precision Production and Skilled Trades.
Baker County High School				1	
Edward H. White High School		1			
Middleburg High School	1		1	2	1
Palatka High School	1			1	1
St. Johns Technical High School	1				
Orange Park High School	1				
A. Philip Randolph Academies of Technology					1
Allen D. Nease High School	1				
Baldwin Middle-High School		1			
Belle Terre Elementary School	1				
Buddy Taylor Middle School	1				
Clay High School				1	
Crescent City High School					1
Englewood High School	1				
Fernandina Beach High School		1			
Flagler Palm Coast High School		1			
Oakleaf High School		1			
Ridgeview High School					1
Robert E. Lee High School	1				
Wadsworth Elementary School	1				
West Nassau County High School					1



# Gap Analysis by Industry – Advanced Manufacturing



Annual Job Openings vs. Completions



Within Advanced Manufacturing, the most severe shortages are Industrial Engineering Technicians and Aerospace Engineers, both with 39 annual job openings and zero completions in the region.

However, within this industry, Welders are at a surplus, with only 166 job openings and 779 completions regionally.



# Advanced Manufacturing – Key Takeaways

Overall, the Northeast Florida region provides a sufficient level of programs within Aerospace (minus Engineering and Repair/Maintenance\*) to keep up with demand, but is lacking in other areas of Advanced Manufacturing. For example, within the industry there is a severe shortage of Petroleum, Geological and Aerospace Engineers.

When assessing the available Engineering postsecondary programs for these areas, there are five associate's degree programs, 10 bachelor's degree programs, 12 certificate-level programs, nine master's-level programs and zero doctorate level programs to meet this need.

Additionally, most of these programs are provided by Embry-Riddle Aeronautical University (ERAU) and are lacking in most other institutions. When it comes to CTE programs, 10 of the 21 high schools offer Engineering programs and five offer an Aerospace program.

There is also a shortage of Industrial Production Technicians. When assessing the region's postsecondary training that aligns with this skill (Precision Production & Skilled Trades) there are only five programs regionwide. Meanwhile, the region's institutions are providing a surplus of welders, with 779 completions, but only 166 annual job openings.

\* Aerospace Repair/Maintenance included in Advanced Transportation Technologies



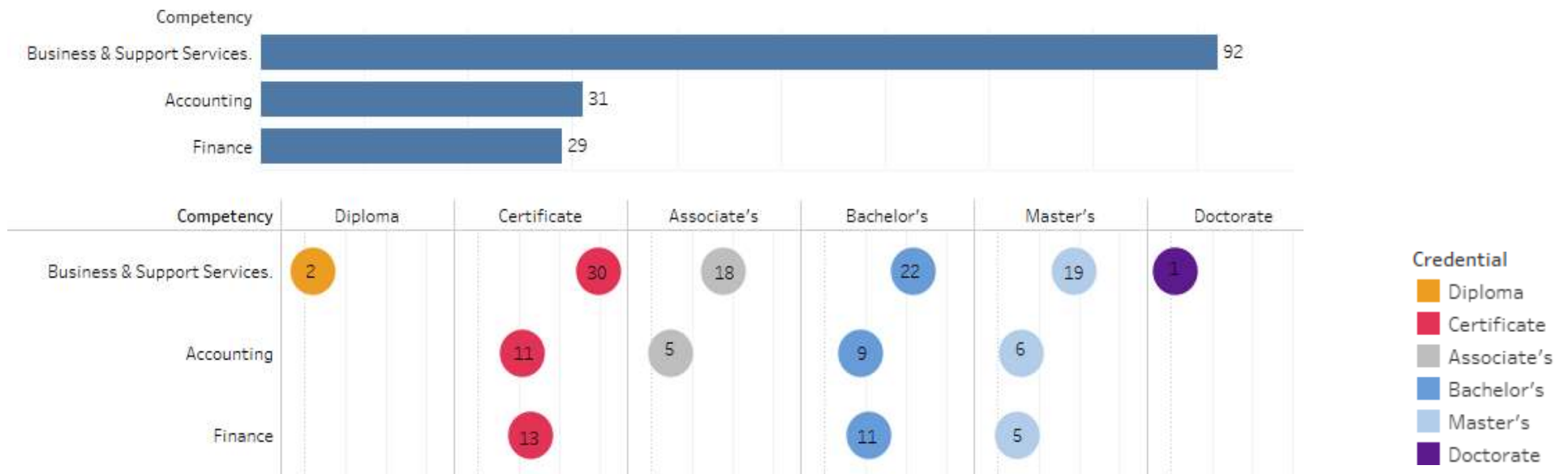


## Financial Services





# Financial Services Programs – Competencies



Within the Financial Services industry for the region, the most common program competency is Business and Support Services, in which the most significant offering is a credential, followed by Bachelor's degrees, and Master's and Associate's degrees, with very few dual credit high school programs and only one doctorate offering.

\*Program counts include all dual-credit and postsecondary programs. They do not include non-credit degree programs.

# Financial Services Institutions – Postsecondary Competencies

Institution	Business & Support Services.	Accounting	Finance
Affordable Training	7 (Certificate), 5 (Associate's), 3 (Bachelor's)	4 (Certificate), 1 (Associate's)	2 (Bachelor's)
Jacksonville University	3 (Bachelor's), 9 (Associate's), 1 (Doctorate)	1 (Bachelor's), 3 (Master's)	2 (Bachelor's), 1 (Master's)
Florida Career College-Jacksonville	1 (Diploma), 3 (Certificate), 4 (Associate's), 3 (Bachelor's)	2 (Certificate), 1 (Associate's), 2 (Bachelor's)	1 (Certificate)
Florida State College - Jacksonville	5 (Certificate), 1 (Associate's), 1 (Bachelor's)		6 (Certificate)
Virginia College-Jacksonville	1 (Diploma), 2 (Associate's), 2 (Bachelor's), 1 (Master's)	2 (Certificate)	2 (Certificate), 4 (Bachelor's)
Keiser University	3 (Bachelor's), 3 (Bachelor's)	1 (Associate's), 1 (Bachelor's), 2 (Bachelor's)	
St. Johns River State College	2 (Certificate), 3 (Associate's)	2 (Associate's)	
Embry-Riddle Aeronautical University (ERAU)	1 (Bachelor's), 3 (Bachelor's)		
University of North Florida	1 (Bachelor's), 3 (Bachelor's)	1 (Bachelor's), 1 (Master's)	5 (Bachelor's)
Chipola College	2 (Associate's), 1 (Bachelor's)	1 (Bachelor's)	
Florida Gateway College	1 (Certificate), 1 (Associate's)	1 (Certificate)	
Edward Waters College	2 (Bachelor's)	1 (Bachelor's)	1 (Bachelor's)
Flagler College	1 (Bachelor's)	1 (Bachelor's)	1 (Bachelor's)
Trinity Baptist College	1 (Bachelor's)	1 (Bachelor's)	

Credential

- Diploma
- Certificate
- Associate's
- Bachelor's
- Master's
- Doctorate



# Financial Services Institutions – Secondary Competencies

Institution	Business & Support Services.	Accounting	Finance
St. Johns Technical High School	1		
Ponte Vedra High School	1		
Palatka High School	1	1	
Middleburg High School	1		
Mandarin High School	1		
Interlachen High School	1		
Indian Trails Middle School	1		
Fleming Island High School	1		
First Coast High School	1		1
Edward H. White High School	1		
Duncan U. Fletcher High School	1		
Baker County High School	1		
Pedro Menendez High School			1
Orange Park High School		1	
Matanzas High School			1
Bartram Trail High School			1



# Gap Analysis by Industry – Financial Services

Accountants & Tax  
Examiners



SEVERE  
SHORTAGE

Financial Managers  
& Analysts



SEVERE  
SHORTAGE

Banking Analysts



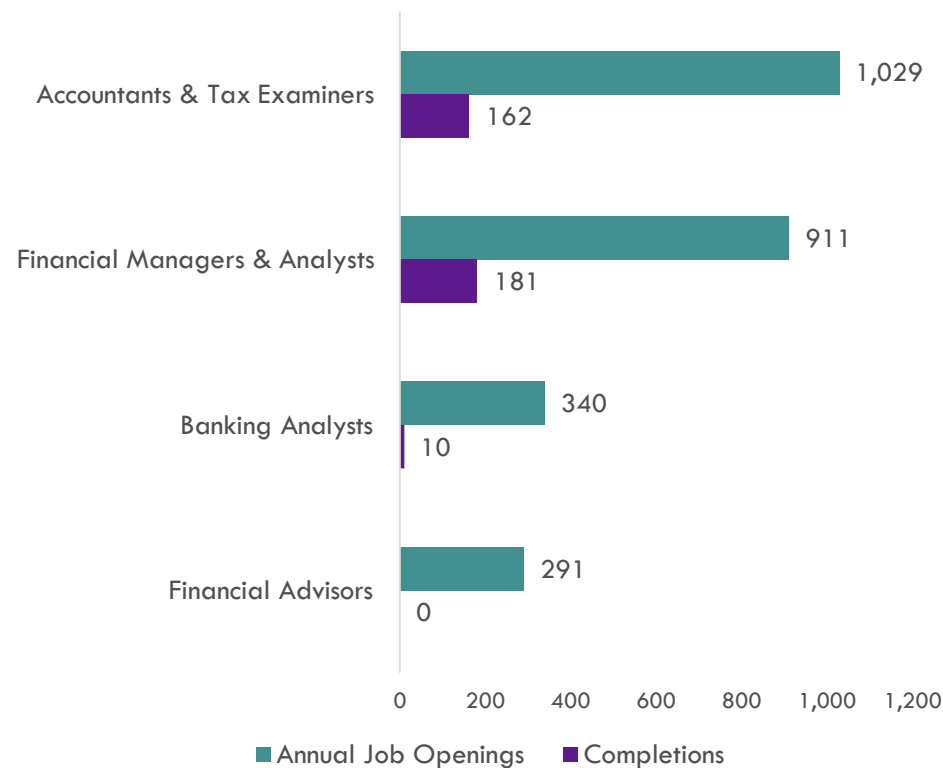
SEVERE  
SHORTAGE

Financial Advisors



SEVERE  
SHORTAGE

## Annual Job Openings vs. Completions



Within the Financial Services industry, all occupations have severe shortages with the most significant shortage being Accountants and Tax Examiners, with 1,029 annual job openings and only 162 completions.

Additionally, Financial Advisors and Banking Analysts have almost no completions in the region, but roughly 300 job openings annually.



# Financial Services Institutions – Key Takeaways

Within the Financial Services industry, most competencies offered at the region's institutions lie within Business and Support services, with a reasonable spread among the type of credentials offered. However, when focusing primarily on Accounting & Finance there are only five Associate's degree programs offered in accounting, but no finance Associate's degrees, as well as no doctorate level or CTE programs offered for any of these competencies.

This lack of program offerings in these specific areas shows itself in the Gap Analysis in which all Finance and Accounting-focused occupations are in a severe shortage in the area, with Accountants and Tax Examiners experiencing the most severe shortage with 1,029 annual openings and only 162 completions regionwide.



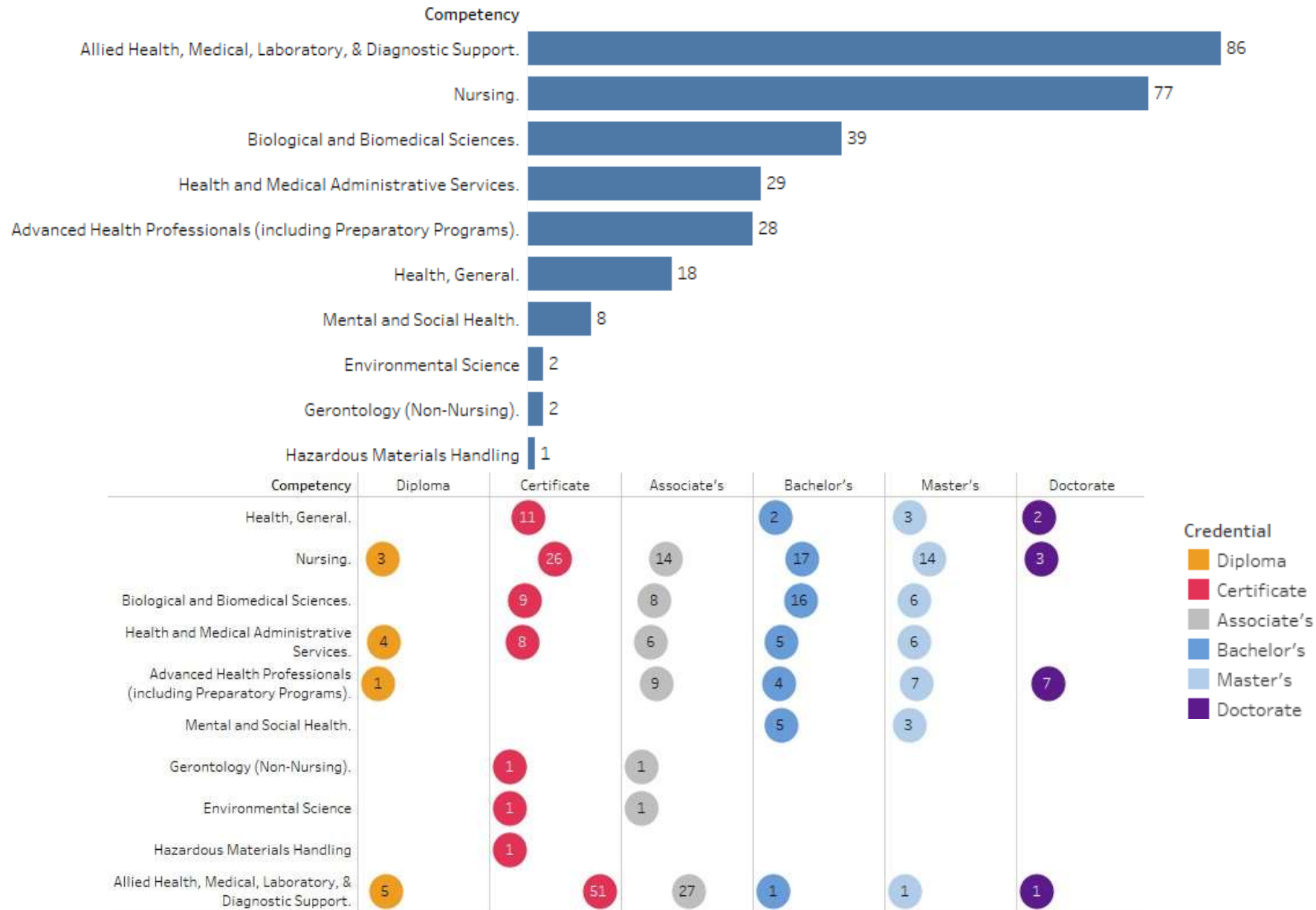


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## Health & Biomedical



# Health & Biomedical Programs – Competencies



\* Program counts include all dual-credit and postsecondary programs. They do not include non-credit degree programs.



# Health & Biomedical Institutions – Postsecondary Competencies (Part 1)

Institution	Health, General.	Advanced Health Professionals (including Preparatory Programs).	Allied Health, Medical, Laboratory, & Diagnostic Support.	Biological and Biomedical Sciences.	Gerontology (Non-Nursing).	Health and Medical Administrative Services.	Mental and Social Health.	Nursing.
Affordable Training		3	8	3 1	1		1	2 1
Jacksonville University		1 1 1	1 1	5 1			1 1	4 11 2
Florida Career College-Jacksonville			1 1			1		1 1
Keiser University	1	2	2	1		2 1 2		1 1 2
Virginia College-Jacksonville		1	1 1			2 1 1		
University of North Florida	1 2	3 3 2		8 5		1 1	3 2	2
Chipola College			1					1 1
Edward Waters College						1		
Embry-Riddle Aeronautical University (ERAU)			1					
Florida Gateway College		1				1		1 1
Chamberlain College of Nursing-Florida								2
Florida State College - Jacksonville		2	8	5 1				2 3
Fortis College-Orange Park			1 1					1
Jersey College								1 2
St. Johns River State College			3			3 1		2 2
University of St. Augustine for Health Sciences (USAHS)	1 2	3 4				2		1 1

#### Credential

- Diploma
- Certificate
- Associate's
- Bachelor's
- Master's
- Doctorate





# Health & Biomedical Institutions – Postsecondary Competencies (Part 2)

Institution	Health, General.	Allied Health, Medical, Laboratory, & Diagnostic Support.	Biological and Biomedical Sciences.	Gerontology (Non-Nursing).	Hazardous Materials Handling	Health and Medical Administrative Services.	Nursing.
Affordable Training	1	10	4	1	1	2	3
University of North Florida							2
Chipola College		6					1
Florida Gateway College		2					1
Bradford-Union Area Vocation..		1					3
Darnell-Cookman School of th..	1						
First Coast Technical College		6					2
Flagler Technical Institute		1					3
Florida State College - Jackson..		10	3			1	2
Fortis College-Orange Park		4				3	
Mayo School of Health Sciences		3					
St. Johns River State College		3					1

**Credential**

- Diploma
- Certificate
- Associate's
- Bachelor's
- Master's
- Doctorate



# Health & Biomedical Institutions – Secondary Competencies

Institution	Health, General.	Allied Health, Medical, Laboratory, & Diagnostic Support.	Biological and Biomedical Sciences.	Health and Medical Administrative Services.	Nursing.
Baker County High School	1	1			2
Interlachen High School		1		1	1
Middleburg High School		1			1
Palatka High School		1	1		1
Ponte Vedra High School			1		
Pedro Menendez High School		1			
Orange Park High School	1				
Matanzas High School	1				
Buddy Taylor Middle School	1				
Clay High School	1				
Crescent City High School	1				
Fernandina Beach High School					1
Keystone Heights Junior/Senior High School	1				
Rymfire Elementary School	1				
West Nassau County High School					1

# Gap Analysis by Industry – Health & Biomedical

Doctors, Surgeons & Psychiatrists



SEVERE SHORTAGE

Dental Hygienists



SHORTAGE

Registered Nurses



BALANCED

Nurse Practitioners



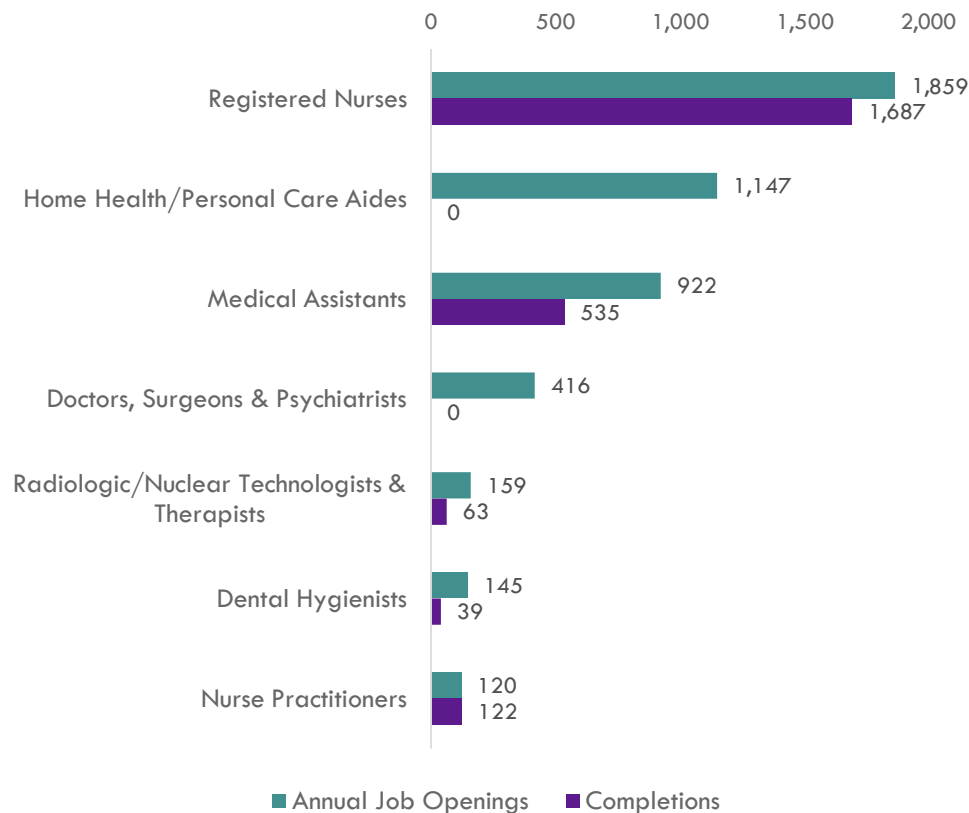
SURPLUS

Home Health / Personal Care Aides



UNKNOWN

## Annual Job Openings vs. Completions



Within the Health and Biomedical field, Doctors, Surgeons, and Psychiatrists have the most severe shortage, with 416 annual job openings and zero completions regionally. Dental Hygienists report an overall shortage, with 145 job openings and 39 completions. There is no completion data for Home Health/Personal Care Aides because non-credit data was unavailable.

Registered Nurses are on balance regionally, while Nurse Practitioners are at a surplus for the region. This speaks to the potential need for more advanced training for these practitioners to advance to high-level occupations.



# Health & Biomedical Institutions – Key Takeaways

The most common competencies offered in the region are Allied Health, Medical, Laboratory and Diagnostic Support, and Nursing, with 86 and 77 programs offered regionwide. Although the region produces a healthy number of Registered Nurses (which typically require degrees at the Bachelor's level and below), the region has a severe shortage in Doctors, Surgeons & Psychiatrists which typically require more advanced degrees.

When assessing the availability of programs that could provide upward-moving pathways, it is clear that the region is overproducing Nurse Practitioners within the sub-baccalaureate level, but only three institutions offer master's level degree and above – the University of North Florida, Jacksonville University and the University of St. Augustine for Health Sciences.

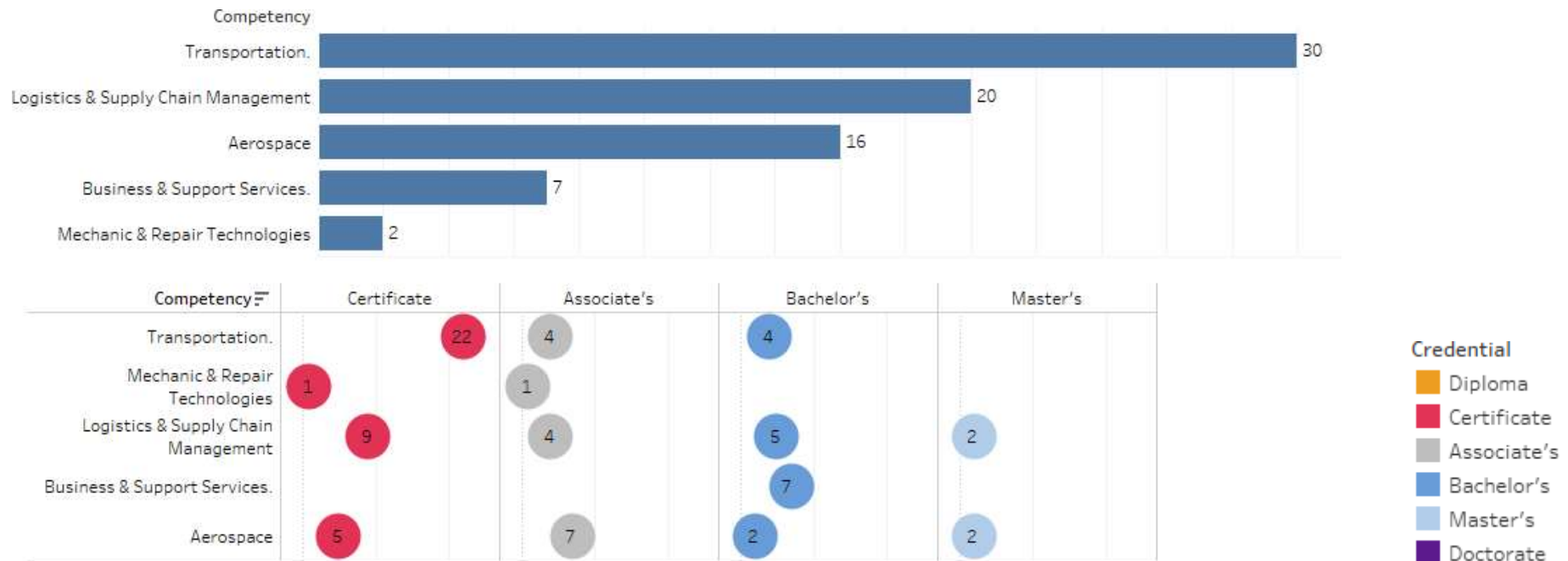




# Advanced Transportation & Logistics



# Advanced Transportation & Logistics Programs – Competencies



Within the Advanced Transportation & Logistics industry, the most common competency is squarely in Transportation, with 30 programs supporting this competency – 22 certificates, four bachelor's and four associate's degree programs.

Following that is Logistics & Supply Chain Management, with 20 programs regionwide, with the most being certificates at nine, five bachelor's degree programs, four associate's degree programs, and two master's level programs.

\* Program counts include all dual-credit and postsecondary programs. They do not include non-credit degree programs.

# Advanced Transportation & Logistics Institutions – Postsecondary Competencies

Institution	Business & Support Services	Aerospace	Logistics & Supply Chain Management	Mechanic & Repair Technologies	Transportation
Affordable Training		2 (Certificate), 2 (Associate's)	1 (Certificate), 1 (Associate's), 1 (Bachelor's)	1 (Certificate)	4 (Certificate), 1 (Associate's)
Bradford-Union Area Vocational Technical Center					3 (Certificate)
Chipola College					1 (Bachelor's)
Embry-Riddle Aeronautical University (ERAU)	2 (Bachelor's)	1 (Certificate), 3 (Associate's), 2 (Bachelor's), 2 (Master's)	2 (Associate's), 2 (Bachelor's), 2 (Master's)		3 (Certificate), 3 (Bachelor's)
First Coast Technical College					1 (Certificate)
Flagler Technical Institute					1 (Certificate)
Florida Career College-Jacksonville		2 (Certificate), 2 (Associate's)		1 (Associate's)	1 (Certificate)
Jacksonville University	2 (Bachelor's)				
University of North Florida	1 (Bachelor's)		1 (Bachelor's)		
Virginia College-Jacksonville	2 (Bachelor's)				

**Credential**

- Diploma
- Certificate
- Associate's
- Bachelor's
- Master's
- Doctorate

For postsecondary programs, many offer a certification in Transportation allowing for a career pathway into many areas in this sector.

For Bachelors programs, most are within Business & Support Services, for a total of 18 across all competencies. Master's level programs are severely lacking, with only four offered at Embry-Riddle Aeronautical University (ERAU) in Aerospace and Logistics & Supply Chain Management.



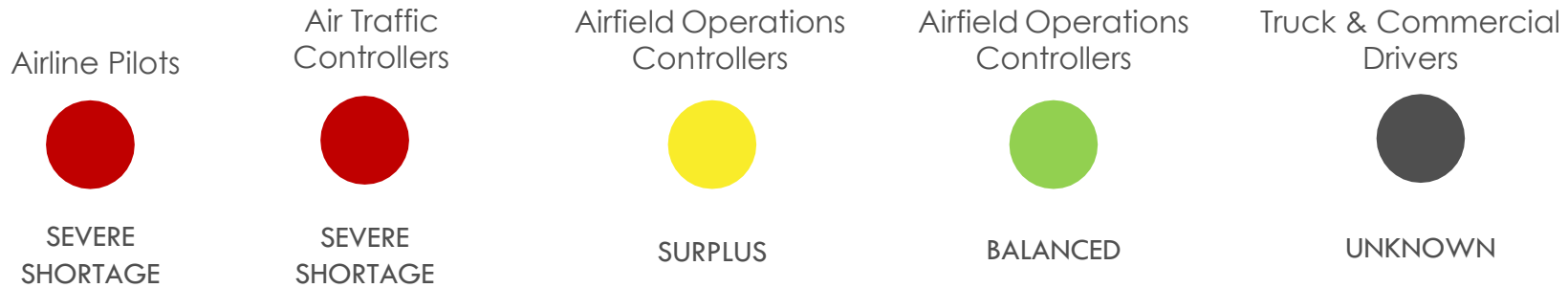
# Advanced Transportation & Logistics Institutions – Secondary Competencies

Institution	Logistics & Supply Chain Management	Transportation.
Baker County High School	1	
First Coast High School	1	
Keystone Heights Junior/Senior High School	1	
Robert E. Lee High School	1	
St. Augustine High School		1
West Nassau County High School		1
Westside High School	1	

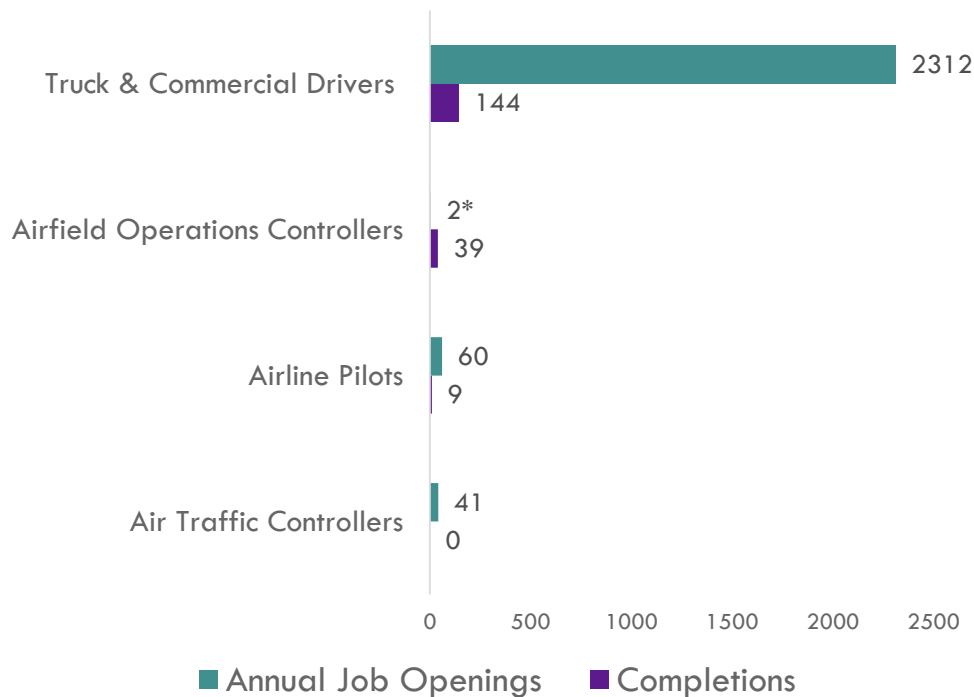
Within the Advanced Transportation and Logistics industry, most high schools provide one program in Logistics and Supply Chain Management, with St. Augustine High School and West Nassau County High School offering one program each in Transportation.



# Gap Analysis by Industry – Adv. Trans. & Logistics



Annual Job Openings vs. Completions



Although there are more than 2,000 annual job openings for Truck and Commercial Drivers, the true gap is unknown because the lack of non-credit degree data available.

Within Advanced Transportation, the most severe shortages are with Airline Pilots, with 60 annual job openings and only nine completions and Air Traffic Controllers with 41 annual job openings and zero completions. However, there is a surplus of Airfield Operations Controllers which points to the need for more advanced training access in this industry regionally.

\* Value too small to show visible bar within chart parameters



# Advanced Transportation & Logistics Programs – Key Takeaways

Within the Advanced Transportation Technologies Industry, there are several certificate programs in Transportation offered, but no master's level programs in Transportation or Business & Support Services. For Logistics & Supply Chain Management, there are an almost equal number of associate's and bachelor's degree programs and slightly less certificate programs.

However, there are only two master's degree level programs in this area. Conversely, almost every high school in the region offers a program in Logistics & Supply Chain Management. The primary providers for this industry include Embry-Riddle Aeronautical University (ERAU), Florida State College at Jacksonville, and Affordable Training.

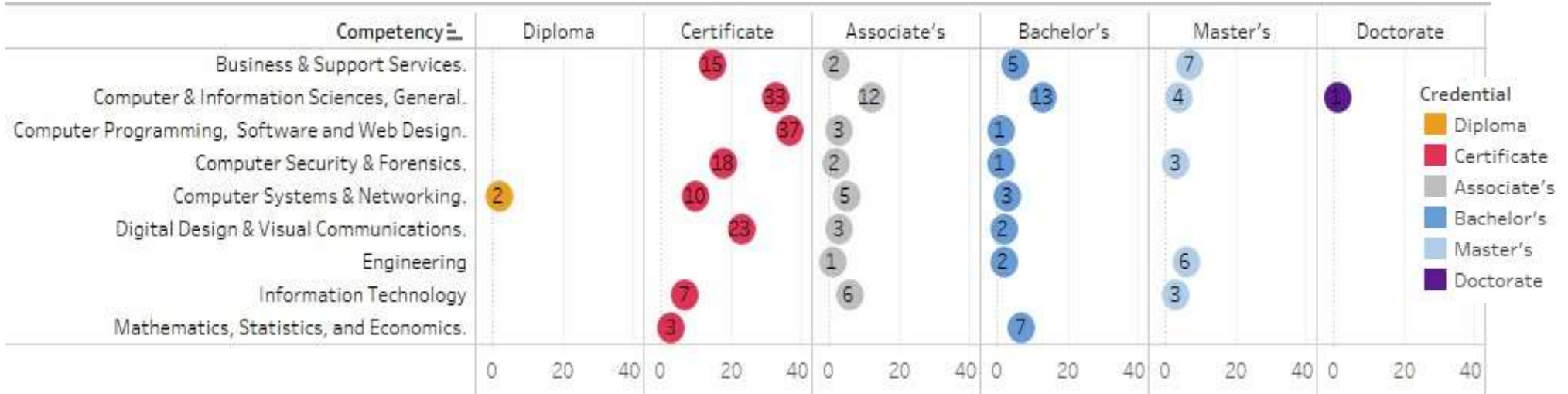
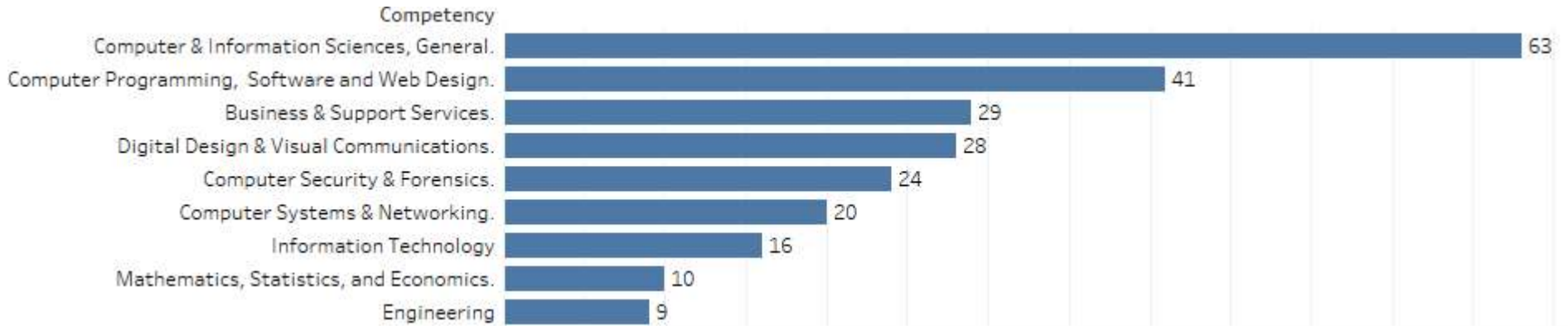




## IT & Innovation



# Information Technology Programs – Competencies



\*Program counts include all dual-credit and postsecondary programs. They do not include non-credit degree programs.



# Information Technology Institutions – Postsecondary Competencies

Institution	Business & Support Services.	Computer & Information Sciences, General.	Engineering	Computer Programming, Software and Web Design.	Computer Security & Forensics.	Computer Systems & Networking.	Digital Design & Visual Communications.	Information Technology
Affordable Training	1 2	1 3		4	1 1	1 1 2	1 1 1	2 1 1
Jacksonville University	1	2					1 1	3 1
Florida Career College-Jacksonville		1				1		
Keiser University	1 1	2 1 1		1	1			
Virginia College-Jacksonville						1 1		
University of North Florida		3 4					1	3
Chipola College		4 1			2	1 2		
Edward Waters College		1						
Embry-Riddle Aeronautical University (ERAU)	2 2 6	1 1	2 6	1	3	2		
Florida Gateway College		1		2		1 1	1 2	1
A. Philip Randolph Academies of Technology		1						
Bradford-Union Area Vocational Technical Center		1						
Frank H. Peterson Academies of Technology						1		
LeaderQuest IT Training	3				12	2		
New Horizons Computer Learning	10	11		19				
Stanton College Preparatory School		1						

Credential

<span style="color: yellow;">■</span>	Diploma
<span style="color: red;">■</span>	Certificate
<span style="color: gray;">■</span>	Associate's
<span style="color: blue;">■</span>	Bachelor's
<span style="color: lightblue;">■</span>	Master's
<span style="color: purple;">■</span>	Doctorate



# Information Technology Institutions – Secondary Competencies

Institution	Business & Support Services.	Computer & Information Sciences, General.	Computer Programming, Software and Web Design.	Computer Security & Forensics.	Digital Design & Visual Communications.	Information Technology
Baker County High School					2	
Edward H. White High School			1		1	
First Coast High School			1		2	
Indian Trails Middle School		1				
Interlachen High School		1				
Middleburg High School		1			1	
Ponte Vedra High School		1				
St. Johns Technical High School					1	
Pedro Menendez High School						1
Bartram Trail High School		1				
A. Philip Randolph Academies of Technology		1				
Allen D. Nease High School					1	
Andrew Jackson High School				1	1	
Atlantic Coast High School						1
Belle Terre Elementary School		1				
Clay High School					1	
Englewood High School					1	
Fernandina Beach High School		1			1	
Frank H. Peterson Academies of Technology					1	
Keystone Heights Junior/Senior High School					1	
New Horizons Computer Learning	10	11	19			
Oakleaf High School					1	

Almost every institution in the region that offers IT programs has a program in Digital Design and Visual Communications, with a total of 17 across the 26 total CTE institutions. Following that is Computer and Information Sciences, General with nine programs offered in the region.

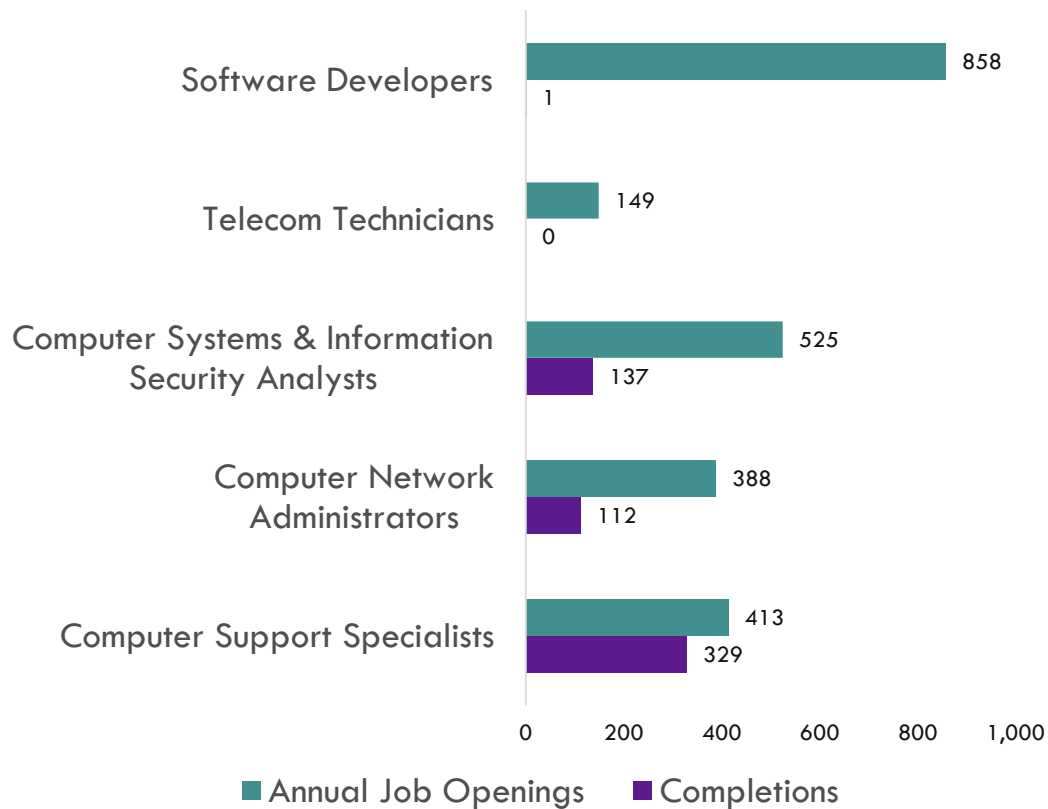
However, there is a significant shortage in Computer Programming competencies with only eight across the 26 total CTE institutions.



# Gap Analysis by Industry – IT & Innovation



## Annual Job Openings vs. Completions



Occupations with the most severe shortages include Software Developers, with 858 annual job openings and only one completion, and Telecom Technicians with 149 annual job openings and zero completions.

Following that, Computer Systems and Information Security Analysts and Computer Network Administrators have a shortage and Computer Support Specialists are balanced.

# Information Technology Institutions – Key Takeaways

Within the Information Technology and Innovation industry, the most common competency offered is Computer and Information Sciences, General, followed by Computer Programming, Software and Web Design. However, a majority of these programs are only at the certificate level as the region is woefully lacking in both doctorate and CTE-level programs for these fields – with only one doctorate program in Computer and Information Sciences, and two CTE programs in Computer Systems & Networking.

This lack of specialization within a specific IT field is reflected in the Gap Analysis in which the most severe shortage occurs with Software Developers with 858 annual job openings and only one completion regionwide. Overall, the region is producing a healthy amount of Computer Support Specialists, but not providing accessible pathways to move towards more advanced level careers.

