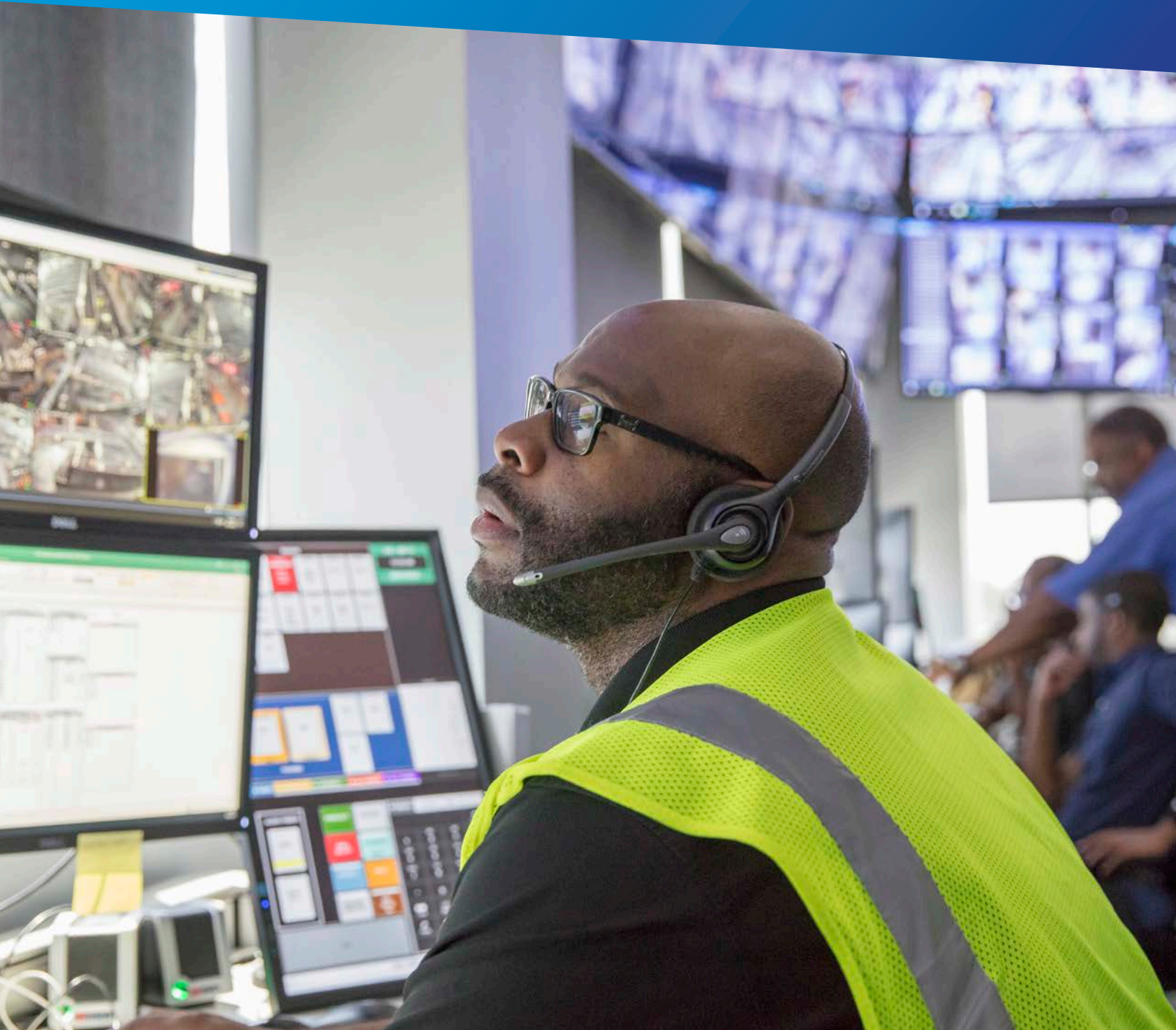


Georgia Leading the Way: The Logistics Workforce for the Future

LET'S TALK
LOGISTICS



STATEMENT OF INTENT

Georgia continues to be the top state for doing business in 2020 – named eight years in a row by Site Selection magazine ⁽¹⁾.

On the strength of Georgia’s competitive business environment and ease of access to the global market, 18 Fortune® 500 companies have chosen to locate their worldwide headquarters in Georgia, to date. These international supply chains include Coca-Cola, Delta Air Lines, Genuine Parts Co., Mohawk Industries, The Home Depot, UPS and more. An additional 32 Fortune® 1000 firms established their base of operations in the state, and more than 450 Fortune® 500 companies have a presence in the state. (Source: Georgia.org) Among this plethora of major brands and organizations, over 140 supply chain and logistics technology firms have been identified as a recognized cluster within Georgia’s rapidly growing technology community.

With nationally ranked infrastructure for roads, rail, air, ocean and IT to efficiently reach domestic and global markets, Georgia is keenly attuned to its supply chain industry. Further, Georgia continues to evolve its education and training programs to meet rapidly evolving times.

This report seeks to inform employers – as well as job seekers – of the educational opportunities for jobs and careers in the logistics and supply chain industries. There is a wealth of opportunity across the Georgia ecosystem, uniquely positioning our state compared to any other region of the U.S.

For the layperson: “The supply chain is a system of organizations, people, activities, information and resources involved in moving a product or service from supplier to customer. Supply chain activities involve the transformation of natural resources, raw materials, and components into a finished product that is delivered to the end customer” ⁽²⁾.

The terms “logistics” and “supply chain” are often used interchangeably. That being said, logistics is the lifeblood of any physical supply chain; and operationally, logistics is an essential link, with successful fulfillment of orders and products to customers being the ultimate goal of every supply chain.

In short: Georgia provides training and education to generate talent for the breadth of occupations within the logistics industry inclusive of supply chain.

Innovation is encouraged to continue as Georgia’s **leading research institutions advance the digital transformation of supply chains** for greater optimization and efficiency. Georgia’s total education system is **preparing talent for 21st century supply chains** through additional programs in industrial engineering, data analytics, computer science, artificial intelligence, robotics, cybersecurity and more.

A disclaimer: the occupations, statistics and information in this report, including completion rates for Georgia’s educational programs, belong to the logistics field and do not include supply chain educational program completion. This is primarily due to the lack of occupational and educational program codes specific to supply chain at the national level .

¹See note in Appendix 3 for clarification.

EXECUTIVE SUMMARY

For logistics employers: This report finds that logistics education training programs are vital to the continued supply of a skilled workforce. These programs require significant attention, promotion and resources in order to meet the healthy industry demand. **For job seekers in the logistics field:** Logistics is a strong sector with plentiful opportunities for gainful employment, and Georgia is uniquely situated as a hub for companies, innovators, schools and talent to effectively attract talent.

Across organizations, required entry-level education for logistics job openings is:

- No formal educational credential (60%), followed by
- High school diploma or equivalent (18%),
- Postsecondary nondegree award (17%),
- Bachelor's degree (4%) and
- Associate degree (0.3%).

Logistics jobs are well-paid work at all levels of education and experience and provide a living wage at each of the levels outlined above.

Georgia is capable of providing excellent, high-wage employment for statewide high school graduates, representing one of the many significant benefits to the state provided by the logistics industry.

Of 82 HOPE eligible institutions in Georgia,

- 15 state institutions offer logistics classes, but no major,
- 38 Georgia institutions offer logistics certification,
- 24 institutions have a logistics major or concentration and
- 14 Georgia institutions have logistics graduate programs.

There exists a significant focus on workforce development throughout Georgia at all levels. Workforce development programs typically focus on short training programs teaching a specific skill set. These programs are often custom-designed for a specific industry partner or may be focused on supplying a development pipeline for the industry more generally.

Training is not solely aimed at next-generation talent, either. Georgia and its institutions have developed multiple programs aimed at assisting veterans' transition into the civilian workforce. Two such examples are Georgia Tech's Veterans Education Training and Transition (VET2) program and the Georgia Veterans Education Career Transition Resource (VECTR) Program.

Access to training is also critical for individuals to enter the industry. The Georgia Student Finance Commission works to ensure that individuals in Georgia have access to higher education by administering over 20 state- and lottery-funded scholarships, grants and loans. One of these financial aid sources is the HOPE Program, providing over \$11 billion in aid to more than 1.9 million students to pursue higher education.

Outlined by this report, there are multiple benefits to working in the logistics industry, including

- High-value, short-term training,
- High-demand occupations,
- Good pay at all levels of education,
- Upward mobility, with additional learning/training opportunities and
- Market-wide job security.

The popular conception of truck driving as a primary logistics job is changing in Georgia, with a multitude of different careers available: including advanced and growing areas of logistics such as data, artificial intelligence, technology, robotics, and autonomous operation and driving.

This report finds that logistics is a great field for underemployed or unemployed Georgians. The average starting income for someone coming out of a logistics workforce development training program at Georgia Piedmont Technical College is \$18-20 per hour, with some companies paying upwards of \$70,000 per year.

The average annual pay for logistics jobs requiring a bachelor's degree is \$87,280, and \$62,256 for post-secondary non-degree awards or certifications.

The average annual pay for logistics jobs requiring a high school diploma is \$49,689, and for logistics jobs requiring no formal educational credential annual pay is \$32,480.

The average annual pay for all logistics jobs across education and experience is \$49,559.

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OVERVIEW OF THE LOGISTICS INDUSTRY IN GEORGIA

The logistics sector includes industries involved in moving and storing freight, cargo and inventory, namely delivery, logistics, transportation and warehousing. Logistics modes include air, rail, road and water transportation, as well as various support activities such as couriers, messengers, the postal service storage and warehousing ⁽³⁾.

There is historical precedence in Georgia for the ecosystem. The logistics industry has been and continues to be a dependable and substantial source of economic activity, growth and employment in the state, driving Georgia's economy forward ⁽³⁾. Further, Georgia logistics benefits urban and highly-developed parts of the state while also providing the means for rural areas to diversify their economic base, reducing local economic vulnerability ⁽³⁾.

Industry size and scope

In analyzing the logistics sector in Georgia, only industries that move and store cargo and supporting services and operations are included ⁽³⁾.

In 2018, the logistics industry in Georgia directly employed 181,245 individuals ⁽³⁾. Most of these jobs are accounted for within the private sector (79%) ⁽³⁾. In the same year, there were nearly 16,000 logistics establishments across the state, with 14,291 in the private sector ⁽³⁾.

Economic impact

The logistics industry is a reliable source of spending and employment, providing beneficial economic impacts for individuals and business in and around Georgia ⁽³⁾. In 2018, the statewide economic impact of the logistics industry topped \$60 billion in output and sales, over \$33 billion in state GDP, \$21 billion in income from labor, \$1.3 billion in state tax revenues, and \$1.4 in local tax revenue ⁽³⁾.

EDUCATIONAL CAPABILITIES STATEWIDE

According to the Bureau of Labor Statistics (BLS), about 4% of logistics jobs require a bachelor's degree, about 17% require a professional certification, while the remaining 78% of the logistics workforce require high school or no formal educational requirement. In no way does this discount the importance of formal or higher education programs, however, providing excellent, high-wage employment for Georgia's high school graduates is one of the many significant benefits to the state provided by the logistics industry.

Georgia supply chain and logistics education inventory

The Georgia Center of Innovation for Logistics developed and continually updates an inventory of educational offerings related to the supply chain and logistics industry in the state. This inventory includes institutions offering any level of supply chain or logistics-related class, certificate or degree. The categories used for this inventory were:

- Logistics or supply chain certificate,
- Logistics or supply chain major or concentration,
- Logistics or supply chain classes, but no major and
- Logistics or supply chain graduate programs.

In summary, of 82 HOPE eligible (university and technical college) institutions in Georgia:

- 15 state institutions offer logistics or supply chain classes, but no major,
- 38 Georgia institutions offer logistics or supply chain certification,
- 24 institutions have a logistics or supply chain major or concentration and
- 14 Georgia institutions have logistics or supply chain graduate programs.

Georgia Logistics and Supply Chain Educational Institutions

Figure 1: Map of Georgia logistics and supply chain educational institutions

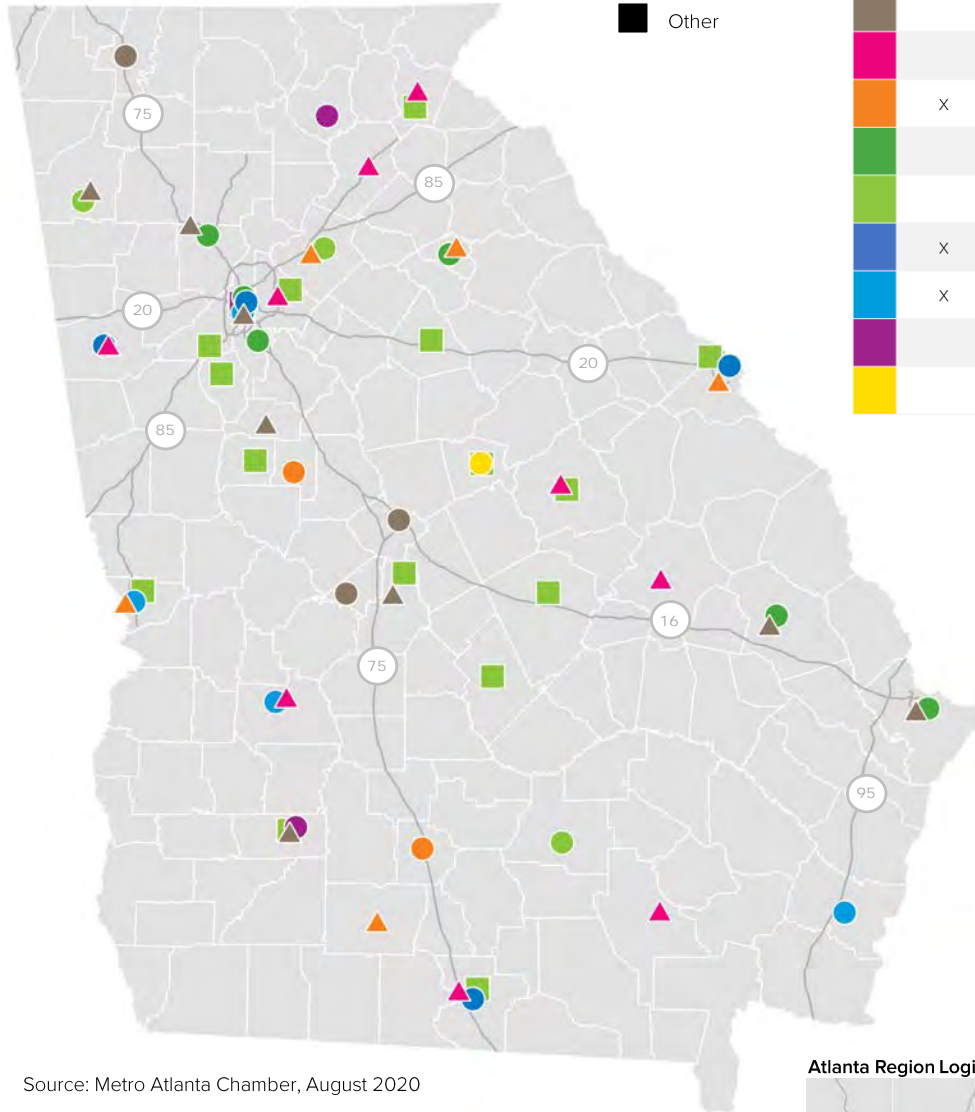
Georgia Logistics Educational Institutions

Institution Type

- USG
- ▲ TCSG
- Other

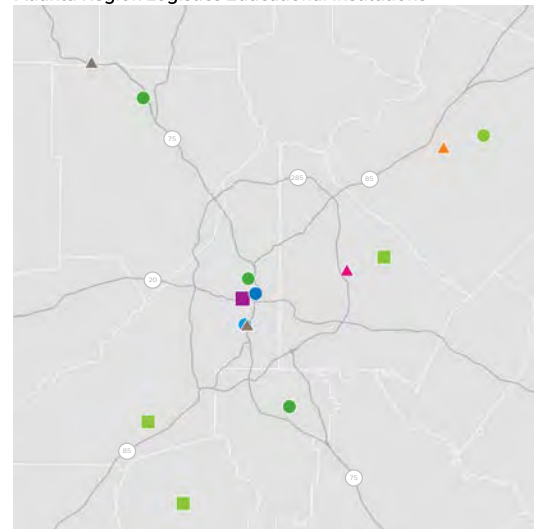
Logistics Academic Offerings

	Classes Only, No Major	Certifications	Major or Concentration	Graduate Program
■		X	X	
■		X		
■	X	X		
■		X	X	X
■			X	
■	X	X		X
■	X			
■			X	X
■		X		X



Source: Metro Atlanta Chamber, August 2020

Atlanta Region Logistics Educational Institutions



University System of Georgia

The University System of Georgia (USG) is composed of 26 higher education institutions, of which 25 offer concentrations and degrees in logistics and supply chain at the undergraduate and/or graduate level. As major providers of workforce talent, the USG institutions work with businesses and industry leaders within the state to foster strong relationships, ensure quality education, and promote development.

Bachelor's degrees

Bachelor's degree programs are often housed within an institution's business school and feature foundational business and management concepts. Seven institutions in the USG conferred bachelor's degrees in FY 2019 including:

- Albany State University (9%)
- Clayton State University (11%)
- Dalton State College (2%)
- Fort Valley State University (3%)
- Georgia Highlands College (5%)
- Georgia Southern University (67%)
- Kennesaw State University (3%)

These are based off the CIP codes identified by the Georgia Board of Regents. Many universities offer supply chain concentrations or majors as part of their BBA or BSB program, which would not be included in these results. See Appendix 3 for the list of CIP codes included in the number of education completions.

Graduate degrees

Graduate degree programs are designed to help develop professionals into leaders ready to advance their career. Three institutions in USG offer supply chain logistics doctorates: Georgia Southern University, University of Georgia and Valdosta State University ⁽⁴⁾. These three institutions, plus ten more, offer master's degrees in supply chain logistics for a total of 13 USG institutions offering graduate programs:

- Albany State University
- Augusta University
- Clayton State University
- Georgia College & State University
- Georgia Institute of Technology
- Georgia Southern University
- Georgia State University
- Kennesaw State University
- Savannah State University
- University of Georgia
- University of North Georgia
- University of West Georgia
- Valdosta State University

Technical College System of Georgia

The Technical College System of Georgia (TCSG) includes 22 colleges in over 88 locations across the state of Georgia. Each of these 22 institutions offer logistics-related courses, and 21 offer logistics related certifications, degrees, or diplomas. TCSG boasts 99% job placement and college transfers, system-wide, for overall programs ⁽⁵⁾.

TCSG colleges are great academic values by providing high-quality higher education at affordable costs, allowing students to enter high-demand fields such as logistics, transportation and supply chain without the traditional barriers to entry they might otherwise face.

Associate degrees

Associate degree programs are two-year technical undergraduate programs designed to prepare students for the workforce or for transferring to a bachelor's degree program. Associate degrees in logistics, supply chain, transportation and operations include courses designed to cover the fundamentals of each area, often including education on business and management principles. In 2019, there were two logistics-related associate degree programs offered through the TCSG: logistics management and supply chain management ⁽⁴⁾. Additionally, one institution in the USG offers a supply-chain logistics associate degree: Middle Georgia State University ⁽⁴⁾.

Certificate programs

Technical certificates in logistics, supply chain, transportation, and operations include courses to educate individuals on the fundamentals of these areas and provide them with the technical experience needed to succeed in the workforce. There are 20 logistics-related certificate programs offered through TCSG, with 1,932 graduates in 2019. The program with the highest number of graduates was commercial truck driving with approximately 85% of all certificate completions in the TCSG. See Table 1 for a list of all logistics-related certificate programs offered through TCSG.

Table 1: Certificate programs through TCSG

Certificate Program	Logistics Management Technician
Business Logistics Management	Logistics Specialist
Certified Warehousing and Distribution Specialist	Logistics Technician
Commercial Straight Truck and Passenger Driving	Procurement
Commercial Truck Driving	Purchasing Technician
Inventory Control Technician	Supply Chain Management
Logistics and Supply Chain Management	Supply Chain Management Degree
Logistics and Supply Chain Management Specialist	Supply Chain Manager TCC
Logistics and Supply Chain Technician	Supply Chain Specialist
Logistics Management	Warehouse and Distribution Technician
Logistics Management Specialist	

Source: (4)

Some institutions in the USG also offer logistics-related certificate programs including Abraham Baldwin Agricultural College, Georgia Southern University and Savannah State University ⁽⁴⁾.

Potential careers

Drilling down into educational requirements, associate degrees are entry-level education for air traffic controllers ⁽⁶⁾. Postsecondary certification is identified as entry-level education for captains, mates and pilots of water vessels, heavy and tractor-trailer drivers and ship engineers.

Private postsecondary institutions

There are 34 private, postsecondary institutions throughout the state that receive state funding for students. Four of these institutions offer logistics degree programs: Clark Atlanta University, DeVry University, Piedmont College and Saint Leo University.

Workforce development programs

There is a significant focus on workforce development through Georgia at all levels. Workforce development programs typically focus on short training programs, teaching a specific skill set. These programs are often custom-designed for a specific industry partner, or may be focused on supplying a development pipeline for the industry more generally. Workforce development programs exist in both TCSG and USG and with additional economic development partners.

TCSG

Each TCSG institution houses an economic development division that delivers on-demand, customized training designed to meet specific needs of local industry partners and businesses. This training may be for training current workers with new skills, for new hires or even for leadership development.

TCSG also operates the Georgia Quick Start program – the state’s signature workforce training program and billed as the nation’s No. 1 workforce training program ⁽⁷⁾. Georgia Quick Start develops and delivers custom training programs, in many cases for free to qualified industry partners.

While a significant number of custom workforce development programs occur through TCSG, Georgia Tech also offers custom training programs for industry partners ⁽⁸⁾.

USG

USG operates workforce development programs including Georgia Tech’s Logistics Education and Pathways (LEAP) Program. The workforce development programs are supported by Georgia Tech faculty, the Georgia Tech Supply Chain and Logistics Institute and the Georgia Tech Professional Education Department ⁽⁹⁾.

The overarching goal of LEAP is to develop the pipeline of well-trained candidates for the industry. There are currently eight customizable logistics courses focusing on career readiness, developed with input from Atlanta-based supply chain-intensive companies: customer service operations, demand planning, inventory management, manufacturing and service operations supply chain management principles, supply management and procurement, transportation operations and warehousing operations ⁽⁹⁾. Industry partners sponsor the LEAP program and recruit from its pool of program graduates.

In addition to the LEAP program, Georgia Tech also develops custom training programs for individual industry partners in supply chain, trade and logistics ⁽⁸⁾. Georgia Tech’s Supply Chain and Logistics Institute (SCL) works directly with businesses to identify training needs, design a customized curriculum, and deliver the program and an ongoing course improvement process.

High school programs

Department of Education Career, Technical and Agricultural Education

Georgia’s Career, Technical and Agricultural Education (CTAE) program prepares high-school students across the state for their possible next steps after graduation. With high-school course offerings and the Educating Georgia’s Future Workforce initiative, CTAE works with industry partners and higher education institutions to provide students with the knowledge and skills needed to succeed within the workforce. CTAE currently offers over 130 career pathways and 17 career clusters, including Transportation, Distribution & Logistics ⁽¹⁰⁾. During the Distribution and Logistics pathway, students work through two years of coursework including logistics fundamentals, logistics operations and materials management and can earn a certificate as either logistics assistant and logistics technician, as well as their 10-hour OSHA certification. For third year participation, students may also opt into the Georgia Tech LEAP program.

Maritime Logistics Education Taskforce

The Maritime Logistics Education Taskforce (MLET) formed in partnership with the Propeller Club-Port of Savannah, Savannah Traffic Club, Savannah Maritime Association, the Independent Customs Brokers and Freight Forwarders Association of Savannah, the Council of Supply Chain Management Professionals, the Navy League Savannah Council and the Savannah-Chatham County Public Schools.

MLET’s mission is to reach, educate and grow the current and future workforce of the logistics and maritime industry in Savannah and surrounding coastal areas ⁽¹¹⁾ in area high schools. Together with the Savannah-Chatham County Public School System, MLET matches high-school students with area logistics providers for paid, after-school internships. Through the program, each student works after school in a paid internship five days a week, four hours per day, for a 10-week period, amassing a total of 200 hours of experience ⁽¹¹⁾.

Veteran transition programs

Georgia and its institutions developed multiple programs aimed at assisting veterans transitioning into the civilian workforce. Two such examples are Georgia Tech’s Veterans Education Training and Transition (VET2) program and the Georgia Veterans Education Career Transition Resource (VECTR) Program.

Georgia Tech Veterans Education Training and Transition program

The Georgia Veterans Education Training and Transition (VET2) is a fully-funded military transition program providing education for veterans and job opportunities to help active duty service members, veterans and military spouses translate military values and experience into a successful civilian career ⁽¹²⁾. VET2 combines classroom, online instruction and internship opportunities to provide skill development in sought-after subjects such as Lean Six Sigma, supply chain and logistics management, and project management. Upon completion of the program, veterans receive a professional certificate from Georgia Tech and are positioned to enter the civilian job market.

Program offerings include the Lean Six Sigma Black Belt Certificate program, a project management professional certificate program, and programs for supply chain and logistics management, including workforce integration and training. Since 2013, over 900 veterans graduated from the program and 87% received full-time job offers with partner companies ⁽¹²⁾.

The VET2 program is funded by the U.S. Department of Labor Workforce Innovation and Opportunity Act and the Georgia Department of Economic Development and is provided at no cost to participating learners. All active duty military, reserve or National Guard personnel, veterans and military spouses who are transitioning to a civilian career are eligible to participate.

Georgia Veterans Education Career Transition Resource

Georgia Veterans Education Career Transition Resource (VECTR) provides a gateway for veterans' transition into Georgia's workforce and postsecondary educational institutions ⁽¹³⁾. VECTR provides educational coaching, workforce development and training and career counseling, as well as assistance in obtaining further education at any postsecondary level. The center also provides high-demand, accelerated training programs to translate veterans' experiences and training received during military service. VECTR partners with the Department of Veterans Affairs, Georgia Department of Labor, Georgia Department of Veterans Service and United Way/Mission United to provide a single source for veterans' needs related to seeking educational opportunities and benefits, employment services, and other community resources.

State education funding

The Georgia Student Finance Commission works to ensure that individuals in Georgia have access to higher education by administering over 20 state- and lottery-funded scholarships, grants and loans. One of these financial aid sources is the HOPE Program. The HOPE Program is funded by the Georgia Lottery for Education and covers six aid programs, the HOPE Scholarship, the Zell Miller Scholarship, the HOPE Career Grant, HOPE Grant, Zell Miller Grant, and the HOPE GED Grant ⁽¹⁴⁾.

The HOPE Career Grant provides college tuition assistance to students pursuing certificates and degrees in high-demand fields at eligible institutions. These 17 specific certificates and degrees are aligned with strategically important industries in which there is a shortage of talent to meet the ample amount of available jobs. As a high-demand industry, certificate and degree programs in logistics, transportation, and supply chain often meet the criteria for eligibility. Combined with the HOPE Grant, eligible students can have their tuition fully covered by these programs ⁽¹⁴⁾.

The HOPE Career Grant is available for any of several strategic industry areas. Commercial truck driving was added in 2014, diesel equipment technology in 2015 and logistics in 2018 ⁽¹⁴⁾. In FY 2020, the HOPE Career Grant funded 25,974 students statewide by distributing \$16.2 million in funding ⁽¹⁴⁾.

While the majority of funding available from the Georgia Student Finance Commission (GSFC) is through the HOPE Program, military programs and other programs are also available to fund education and workforce development programs statewide.

Military programs include:

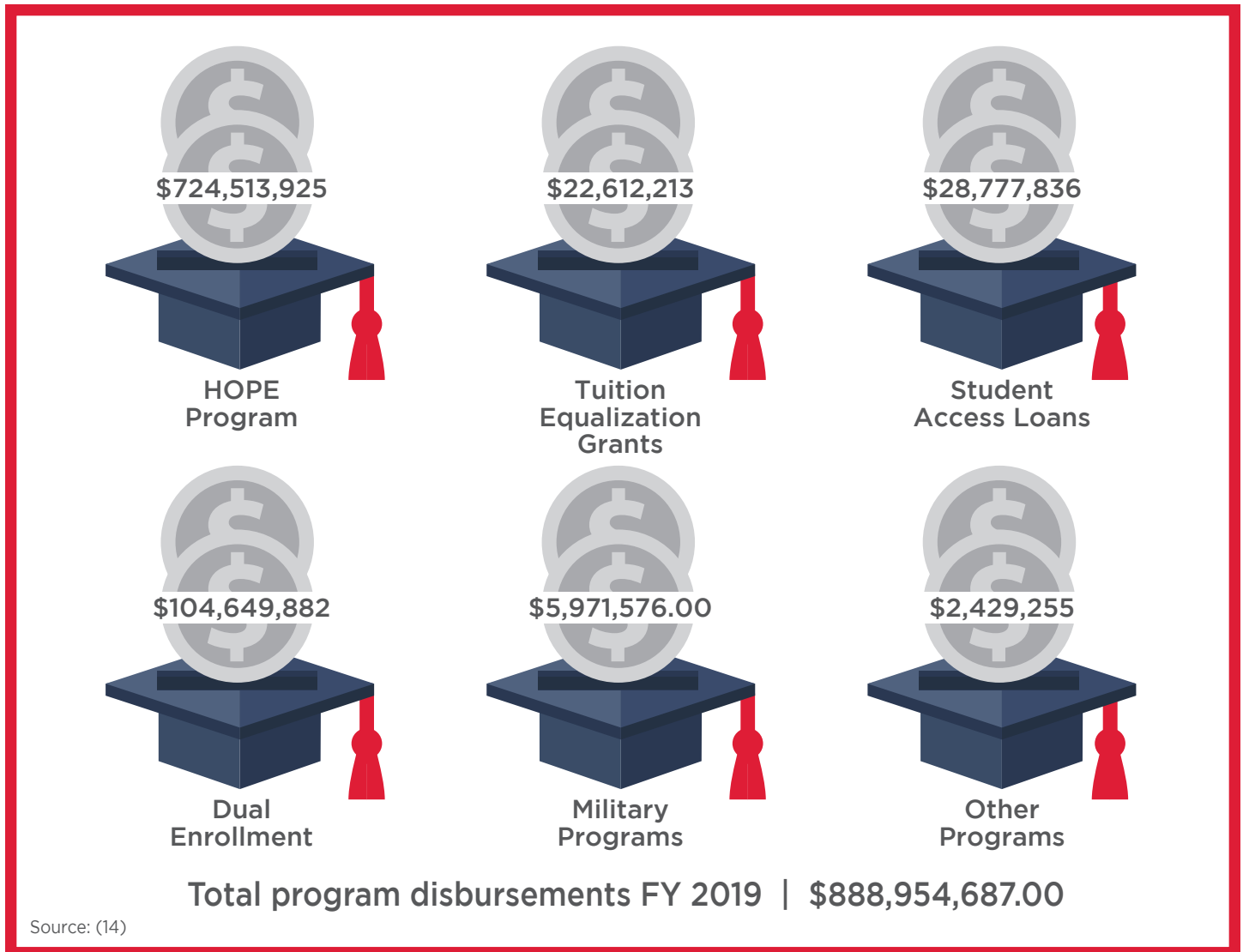
- Georgia National Guard Service Cancelable Loan
- HERO Scholarship
- ROTC Grants
- Institution provided scholarships, loans, and grants

Other funding programs include:

- Scholarship for Engineering Education
- Georgia Public Safety Memorial Grant
- REACH Georgia Scholarship
- Georgia Veterinary Education Loan Repayment Program
- John R. Justice Student Loan Repayment Program

Relative spending for each program category by GSFC in FY 2019 is shown in Table 2.

Table 2: Program disbursements FY 2019



Georgia's one-stop shops for workforce development

Atlanta CareerRise

Atlanta CareerRise assists companies to locate, develop and fund workforce development programs for new or expanding workforce needs. This organization helps businesses find funding at all levels including national, state, and local funding. ACR collaborates with five metro Atlanta workforce development boards, known collectively as the Metro Atlanta Industry Partnerships (MAIP). MAIP focuses on partnering with others to evaluate and satisfy workforce needs of workers and employers ⁽¹⁵⁾.

Savannah Technical College

Savannah Technical College (STC) conducts Fast Track training courses in supply chain, logistics, material handling, quality control, workplace communication and safety and equipment operations, developed and delivered to prepare ideal workforce candidates for regional businesses. This high-quality program is a partnership effort by the Coastal Workforce Service, the Georgia Department of Economic Development and regional warehouse and distribution industry partners. STC's Fast Track program includes a series of certification exams, after which students can earn a Certified Logistics Associate and Certified Logistics Technician certifications from the Manufacturing Skills Standards Council.

In addition to the Fast Track courses, STC's Office for Professional and Continuing Education and Office of Economic Development can deliver custom courses in distribution, logistics and warehousing.

Newton County Program

The Newton County Department of Economic Development maintains robust relationships with industry and educational institutions to encourage a strong cross pollination on education and workforce development. These relationships hinge on a partnership with Georgia Piedmont Technical College (GPTC). In terms of logistics, the GPTC Lithonia/ Stonecrest Transportation Training Center is the largest CDL training center in the state, and trains drivers for many companies including MARTA and UPS. GPTC also has training programs for businesses needing to expand the knowledge base and skillset for current employees, such as the GPTC Manufacturing Ready Program, which boasts an 87% placement rate ⁽¹⁶⁾. The collaboration between Newton County Department of Economic Development and GPTC has been so successful that the model is being expanded to include additional areas such as Savannah.

Savannah Technical College is working together with GPTC and Newton County to develop the Georgia Apprenticeship Program, which has a focus area on distribution. Another partner, Rockwell Automation, is working together with the consortium to bring this apprenticeship program to fruition. This Georgia Apprenticeship Program is sponsored by the US Department of Labor and GPTC is a registered apprenticeship provider.

Newton County considers the logistics and supply chain industry sectors essential to the economic well-being of the county. Since these programs started in Newton County, median household income has gone from \$30,000 per household to over \$60,000 ⁽¹⁶⁾.



LOGISTICS JOBS, EDUCATION REQUIREMENTS AND PAY

There are multiple benefits to working in the logistics industry, including

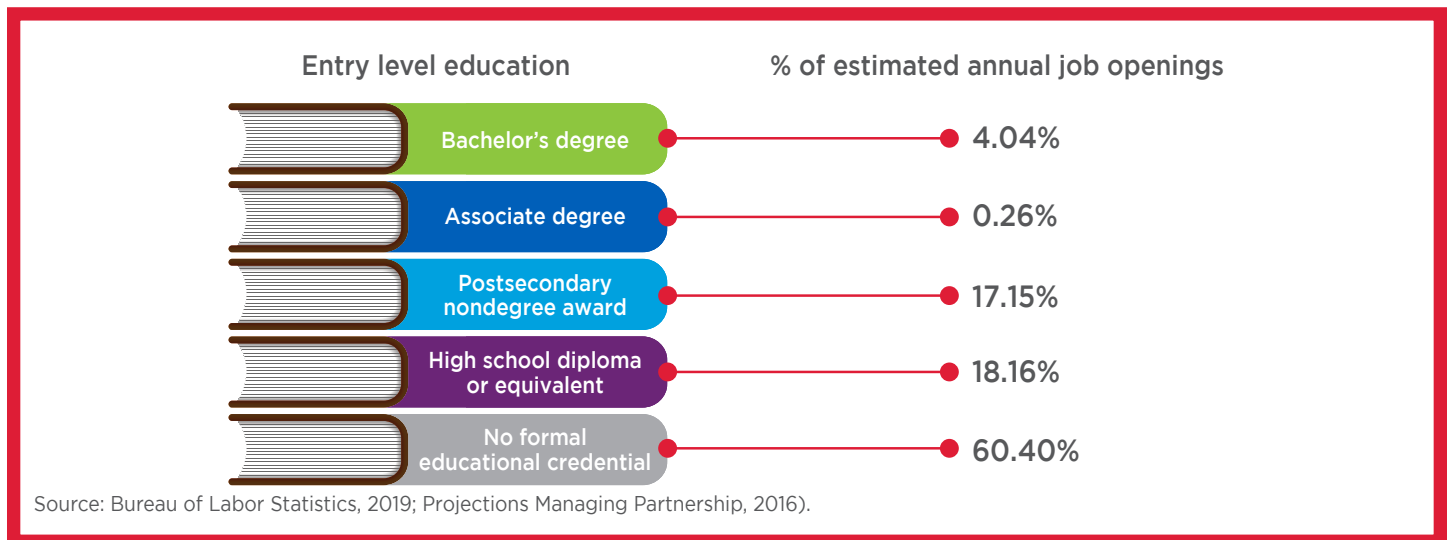
- High-value, short-term training,
- High-demand occupations,
- Good pay at all levels of education,
- Upward mobility, with additional learning/ training opportunities and
- Market-wide job security.

The average starting income for someone coming out of a logistics workforce development training program at GPTC is \$18-20 per hour, with some companies paying upwards of \$70,000 per year ⁽¹⁶⁾. Additionally, logistics jobs exist in a variety of subsectors, including data, artificial intelligence, technology, robotics and autonomous operation and driving.

Based on data, regularly required entry-level education for logistics occupations is: no formal educational credential (60%), followed by high school diploma or equivalent (18%), postsecondary nondegree award (17%), bachelor's degree (4%) and associate degrees (0.3%). See Table 3.

The full set of logistics occupations with their average wage, entry-level education and entry-level experience based on the most recently available BLS data is shown in Appendix 1.

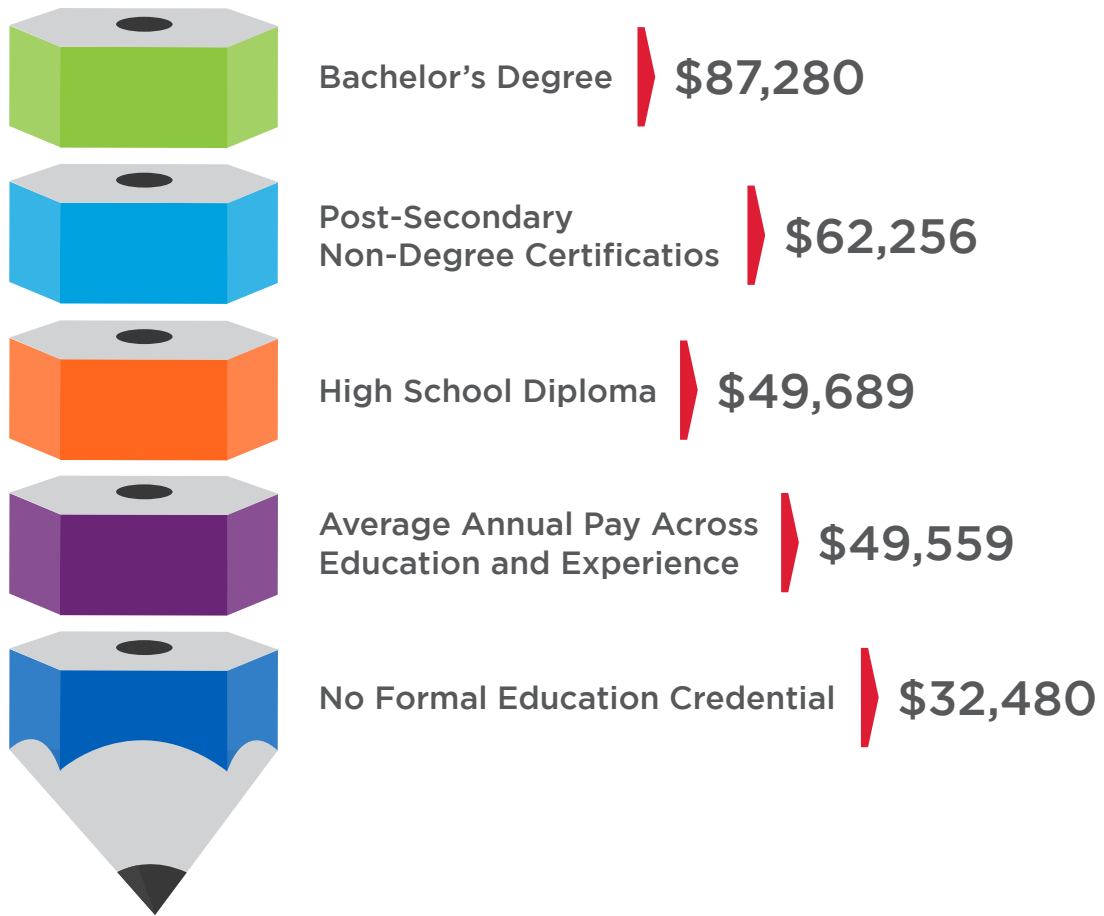
Table 3: Entry- level educational demand, annual



According to the Georgia Department of Labor, the federal minimum wage rate (\$7.25) applies to workers in Georgia ⁽¹⁷⁾. At 40 hours per week for 51 weeks per year, the typical annual wage for a minimum wage worker in Georgia is \$14,790. The logistics industry average annual wage with no formal educational credential and no work experience is \$32,480, well over twice minimum wage.

As would be expected, a higher educational achievement and work experience level provides higher income levels, topping out at over \$100,000, with increasing work experience. The average annual pay for logistics jobs requiring a bachelor's degree is \$87,280, and \$62,256 for certifications. The average for logistics jobs requiring a high school diploma is \$49,689, and for logistics jobs requiring no formal educational credential annual pay is \$32,480. Across education and experience levels, the average for all logistics jobs is \$49,559 (Bureau of Labor Statistics, 2019; Selig Center for Economic Growth, 2018).

Average Annual Pay for Logistics Jobs in Georgia



Source: Bureau of Labor Statistics, 2019; Selig Center for Economic Growth, 2018

WHAT ARE LOGISTICS JOBS REALLY LIKE?



Michael Brown

Occupation: Truck Driver/Owner-Operator

Location: Perry

Michael has been a certified commercial driver for over 20 years. Like many students throughout Georgia, Michael was unsure of what he wanted to do after graduating from high school. After taking a job at a textile facility and gaining experience operating yard trucks, Michael discovered that his childhood love of trucks translated into a love of driving them. So, Michael paid out of pocket to take his CDL exam and was certified as a commercial driver. He started transporting wood chips and later decided he wanted more of a challenge and became an owner/operator.

While there are some challenges in the industry, Michael feels truck driving is a great job for young people and high school graduates. He emphasizes the importance of a good life balance and staying active and healthy. According to Michael, if you focus on creating balance with what's important to you - like your family - driving can be a great career with good income.

As Michael noted, the industry allows for a good mix of certified training and learning on the job. In addition to this supply chain and logistics knowledge, Michael also emphasizes that being an owner/operator allowed him to add business management to his skillset. Michael loves his job and enjoys the flexibility and financial security it provides him and his family.



WHAT ARE LOGISTICS JOBS REALLY LIKE?



Jennifer Gentry

Occupation: Product Performance Specialist
at Shaw Industries
Location: Dalton

Jennifer Gentry has worked at Shaw Industries for over 16 years, and currently works as a product performance specialist. Jennifer has always had an interest in the movement of goods, inventory, warehouses, etc., and, since working at Shaw, decided to pursue a degree in supply chain and logistics and further her career in the industry. While continuing her role at Shaw, Jennifer attended a Technical College System of Georgia (TCSG) school to earn her Associate of Science degree in logistics and supply chain management.

Through this TCSG program, Jennifer was able to connect what she has learned at Shaw with the technical skills learned from her classes. As part of her program, Jennifer was able to work alongside some professional truck drivers and gain hands on experience she would not otherwise been able to have. This was a dream come true for Jennifer, who always wanted to ride in a big-rig truck, and affirmed that a career in logistics and supply chain was perfect for her. After completing her associate's degree, Jennifer will pursue a bachelor's degree in supply chain logistics at Kennesaw State University, through the school's undergraduate program designed specifically for students who have earned their associate's degree from a TCSG institution. While she did not know anything about the industry coming out of high school, she now feels equipped with the passion, knowledge, and skills needed to thrive.



WHAT ARE LOGISTICS JOBS REALLY LIKE?



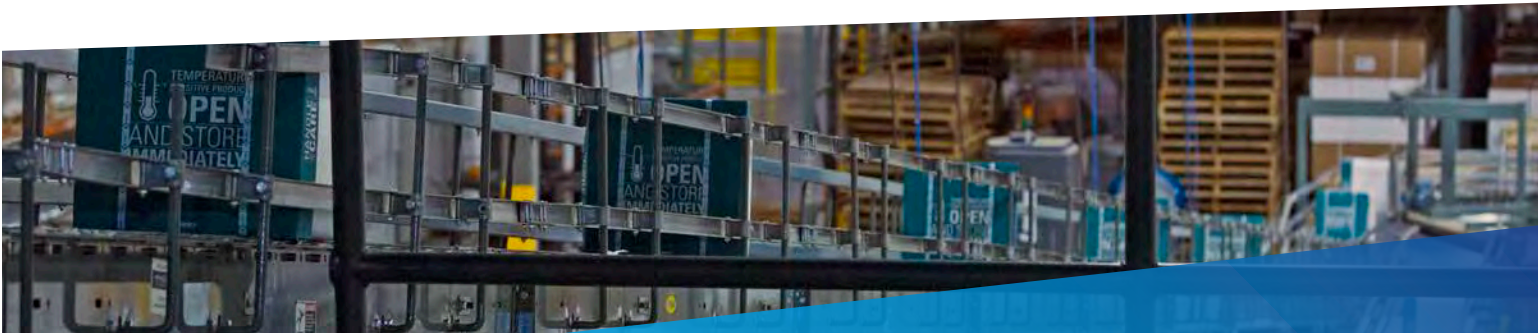
Ashley Harcrow

Occupation: Data Management Specialist
at Mohawk Industries
Location: Calhoun

Ashley Harcrow is currently a data management specialist at Mohawk Industries. When Ashley was looking to take her next steps after graduating high school, her brother suggested she look at Mohawk. Since then, she has found an appreciation for logistics and decided to earn her associate degree in order to learn more and advance within the company.

According to Ashley, earning her associate degree from a Technical College System of Georgia school allowed her to turn her on-the-job knowledge into concrete skills needed in the logistics industry. It has also helped her connect with more people across Mohawk. As part of her program, she was able to complete her capstone internship at Mohawk and meet with leaders within different divisions, gaining even more knowledge about the company and the industry. Ashley believes that with this expanded network and her associate degree, she will be a highly competitive candidate when she takes her next career steps in supply chain and logistics.

Ashley says that she was drawn to supply chain and logistics because she loves that each day she gets to use systems and processes to solve different and unique problems. Each day is different, but she knows she has the skills and capabilities to tackle these problems. Additionally, Ashley sees the supply chain and logistics industry as a great place for working mothers like herself. Her current department is predominately comprised of women with families, and she feels that jobs in the industry provide greater flexibility and balance than others. Ashley was able to use HOPE funding to help pay for her degree and says that with the convenience of going to school while working at Mohawk, there was no reason not to earn her degree and take those next steps in her career.



WHAT ARE LOGISTICS JOBS REALLY LIKE?



Randy Meadows

Occupation: Forklift Driver and Warehouse Stocker
at Professional Grade Products (PGP)
Location: Macon

Randy is currently a forklift driver and warehouse stocker in the Filter Stock department at PGP. He started at PGP as a filter handler and then became a part puller in PGP's FedEx department before shifting to his current role. Randy loves the fast-paced nature of the warehouse, saying it requires him to explore the entire warehouse and to be quick on his feet since many of the pulled parts typically need to be shipped out the same day.

Randy was not sure exactly what to expect when he started at PGP. However, with on-the-job training, mentors and a welcoming environment, Randy quickly learned he was great at his job, and he enjoys what he does. He appreciates that the warehouse creates a clean and wholesome environment where employees can do their work well and earn a great living wage. He would highly recommend working in a warehouse as a great place to start a career.



WHAT ARE LOGISTICS JOBS REALLY LIKE?



Raul Soto

Occupation: Veteran and Logistics Student
Location: Rock Spring

Raul Soto is military veteran and currently a student in the logistics and supply chain program at one of Georgia's many Technical College System of Georgia (TCSG) schools. Prior to the military, Raul worked in a grocery store, gaining purchasing and sourcing experience. According to Raul, this combination of military experience and previous work history made him well-suited to the logistics industry and seemed like a natural fit. Raul believes that the logistics and supply chain industry is an excellent fit for military veterans due to the broad logistics experience and learning that occurs during military service.

Raul says the supply chain program at his TCSG program gave him a strong foundation in many different areas such as purchasing, sourcing, distribution and labor relations. The program's small class sizes allowed him to get direct attention from instructors. Raul feels that the program gave him the tools needed to translate the skills and knowledge he learned from his previous experiences into the industry's current workforce needs. As part of the program, Raul is interning at Shaw Industries and is surrounded by other interns from four-year programs. However, Raul says his combination of work experience, military experience and education provided him with equal footing among his peers. After completing his associate's degree, Raul plans to move on to a four-year degree at Georgia Military College and perhaps a master's degree to learn more about logistics and supply chain.



EDUCATING FOR THE FUTURE: DATA DRIVEN SUPPLY CHAINS

“Big data can support end-to-end visibility in the supply chain and create more agile logistics/supply chain strategies”⁽¹⁸⁾.

Supply chain decisions and planning are most often carried out under conditions of uncertainty, lacking adequate information such as demand. Seeking to improve this decision-making process, supply chain analytics and big data are more frequently being integrated and used throughout the industry.

Supply chain analytics is the analysis of data, including big data, for the purposes of using information and tools to improve decision-making in and for the supply chain. The goal of this analysis is to discover trends, draw conclusions, explore new opportunities and/ or markets, gain valuable information and knowledge, increase business benefits, increase operational efficiency, and uncover patterns and relationships which may otherwise be difficult to detect.

Supply chain analytics are expected to change the way supply chains are designed and managed by improving performance, resilience, robustness and visibility, thereby enabling data-driven and complex decision-making processes. Supply chain data analytics have been applied at every step of the supply chain to:

- Enable process control
- Identify cost and performance trends
- Investigate expenditures
- Monitor inventory
- Optimize production
- Support process improvement initiatives
- Mitigate disruptions
- Improve forecasting



The question is not whether analytics and big data will be useful to the future of supply chain and logistics, but how will these industries meet the workforce demands necessary for this next step in innovation. According to a report published by McKinsey, “The U.S. alone faces a shortage of 140,000 to 190,000 people with analytical expertise and 1.5 million managers and analysts with the skills to understand and make decisions based on the analysis of big data” ⁽¹⁹⁾. Demand for analytics skills will only continue to grow. Fortunately, higher education institutions across the state of Georgia have developed data science and analytics degree programs to provide students with these skills.

Many of these highly focused and interdisciplinary programs were created within the past few years and are already highly respected and top ranked.

Institutions in Georgia leading the way in addressing these needs are: the Georgia Institute of Technology, Clayton State University, Georgia State University, Kennesaw State University, University of Georgia, University of West Georgia and Emory University.

Through these programs, students build upon their undergraduate and work experience foundations by developing skills in analytics and big data. All the aforementioned institutions offer a post-baccalaureate degree and/or certificate, except for the University of West Georgia, which offers a BBA with a major in data intelligence and business analytics, allowing students to build these analytics skills even earlier in their career development. The result of these programs is that graduates have the expertise needed to fill positions in supply chain analytics and tackle the big data challenges of the supply chain and logistics industries.

In addition to these interdisciplinary big data and analytics programs, Georgia Tech and Clayton State University both offer programs specifically designed for the supply chain industry.

Clayton State University offers a Master of Science in supply chain analytics that can be completed fully online in as little as 12 months ⁽²⁰⁾. This program combines the data-driven decision making of analytics with the problem-solving needs of supply chains.

Georgia Tech’s Supply Chain and Logistics Institute, in partnership with the Stewart School of Industrial and Systems Engineering and the Scheller College of Business’s Business Analytics Center, offer a range of opportunities for students to develop skills and expertise in supply chain analytics and big data ⁽²¹⁾. Currently, Georgia Tech offers a top three ranked Master of Science in analytics program, a Master of Science in supply chain engineering with a focus on analytic methods, and an undergraduate analytics and data science concentration. Georgia Tech also offers a supply chain analytics certification program with ORTEC, a global data analytics company. This program is taught by Georgia Tech lecturers and ORTEC experts and helps professionals develop supply chain specific analytics skills ⁽²²⁾.

The Potential and Future of Supply Chain Data

The increased growth and economic impact of logistics efforts in Georgia, in addition to the challenges faced by businesses nowadays regarding demand uncertainty, provide a promising future for people working in the areas of logistics, big data and supply chain analytics as there is a clear need for innovation.

The value of integrating supply chain analytics and big data is evident, the next step is providing the skilled talent necessary to successfully integrate these innovations throughout the industry. In addition to the expansive breadth and depth of Georgia’s supply chain and logistics educational talent pipeline, the state is also leading the way in creating programs poised to supply the growing demand for analytics and big data talent. By fostering innovation and collaboration with the development of its workforce, Georgia provides opportunities for ground-breaking projects and innovation to take place, showing that it is a state with the means to become a logistics industry leader on a nationwide scale.

CONCLUSION

The logistics and supply chain sector carries a valuable weight for Georgia's growth and future projections.

Georgia is an influential state for the logistics industry: the demand for logistics has continued to grow throughout the years as the state's economic growth highly depends on this sector, benefitting not only urban, but also rural areas to reduce local economic vulnerability. Georgia's logistics and supply chain sector outpaces many other sectors in the state with regards to economic growth and stability.

The successful execution of all the logistics operations is contingent upon having a workforce that is ready and available to fill out the future needs of Georgia's logistics employers. The growth in the demand for logistics also catapults the need for workers to fulfill the jobs required in the different areas, promising a bright and stable future for Georgia's workforce.

Educational opportunities play an intrinsic role in providing the tools needed for the workforce to efficiently perform different occupational roles. The uniqueness of training and skill requirements for the logistics industry requires educational availability. Luckily, Georgia offers multiple logistics education training programs meant to teach workers specific technical competencies in different categories such as storage of goods, logistics services, warehouse operations, supply chain logistics, technology and software.

Georgia promises to be a heavily dominant state regarding logistics and supply chain opportunities for both employment and education. Setting the groundwork required to mold successful professionals will keep logistics and supply chain as an influential sector contributing to the state's economic success and continued growth.



REFERENCES

1. **Site Selection Magazine.** 2020 Business Climate Rankings; Certainty and Predictability Are the Winning States' Hallmarks. Site Selection Magazine. [Online] November 2020. [siteselection.com](https://www.siteselection.com)
2. **Technology Association of Georgia.** 2020 State of Georgia's Supply Chain/Logistics Technology Ecosystem. [Online] 2020. tagonline.org
3. **Selig Center for Economic Growth.** In Motion: A Study of Georgia's Logistics Industry in 2018. Augusta, Georgia: Terry College of Business, University of Georgia, 2018.
4. **Board of Regents University System of Georgia.** Logistics Completes in TSCG and USG. 2019.
5. **Technical College System of Georgia.** Home. Technical College System of Georgia. [Online] 2020. tcsg.edu
6. **Bureau of Labor Statistics.** Occupational Data. Bureau of Labor Statistics. [Online] 2019.
7. **Georgia Quick Start.** Home. Georgia Quick Start. [Online] 2020. georgiaquickstart.org
8. **Georgia Tech Supply Chain and Logistics Institute.** Custom Training Programs. Supply Chain and Logistics Institute. [Online] 2020. scl.gatech.edu
9. **LEAP Employer Partnership Opportunities.** Supply Chain and Logistics Institute. [Online] 2020. scl.gatech.edu
10. **Georgia Department of Education.** Career Technical and Agricultural Education. Georgia Department of Education. [Online] 2020. gadoe.org
11. **Mayle, M. C.** You Have Given Them the Future. Savannah Morning News. May 24, 2013.
12. **Georgia Tech Professional Education.** Education for Veterans: Veterans Education Training and Transition (VET2). Georgia Tech Professional Education. [Online] 2020. pe.gatech.edu
13. **Georgia VECTR.** Georgia Veterans Education Career Transition Resource Center. About GA VECTR. [Online] 2020. gavectr.org
14. **Georgia Student Finance Commission.** GSFC Overview and HOPE Career Grant Data. Atlanta : Georgia Student Finance Commission, 2020.
15. **Atlanta CareerRise.** Overview and Background. Atlanta : Atlanta CareerRise, 2020.
16. **Bernd, David, Clark, Irvin and Hall, Serra.** Georgia Logistics Education and Workforce Development Report. [interv.] Heather Monteiro, Margaret Beckley and Ben Harris. July 13, 2020.
17. **Georgia Department of Labor.** Minimum Wage. Georgia Department of Labor. [Online] 2019. dol.georgia.gov
18. **Big Data Analytics in Supply Chain Management between 2010 and 2016: Insights to Industries.** Tiwari, S., Wee, H. and Daryanto, Y. 2017, Computers and Industrial Engineering.
19. **The McKinsey Global Institute.** Big Date: The next frontier for innovation, competition, and productivity. McKinsey & Company . [Online] 2011. mckinsey.com
20. **Clayton State University.** Clayton State University. College of Business - Master of Supply Chain Analytics. [Online] clayton.edu
21. **Georgia Institute of Technology.** About SCL. Georgia Tech Supply Chain and Logistics Institute. [Online] scl.gatech.edu
22. **ORTEC.** Georgia Tech Supply Chain Analytics Program. ORTEC. [Online] ortec.com
23. **Harrington, L., et al.** Big Data's Growing Pains. Supply Chain Quarterly. 2019, Quarter 1.
24. **National Center for Education Statistics.** Custom Data Files. IES NCES. [Online] 2017. nces.ed.gov
25. **Georgia Center of Innovation for Logistics.** Educational Institutions Providing Logistics Education in Georgia, Data Collection. 2019.
26. **Attracting Students to the Field of Logistics, Part 1. Maloni, M., et al.** 4, 2016, Transportation Journal, Vol. 55, pp. 420-442.
27. **Attracting Students to the Field of Logistics, Part 2. Maloni, M., Scherrer, C. and Mascaritolo, J.** 4, 2016, Transportation Journal, Vol. 55, pp. 442-468.
28. **US Department of Labor.** Transportation, Distribution and Logistics Competency Model. s.l. : US DOL, 2019.
29. **Georgia Department of Education.** Georgia Department of Education 2018 Four-Year Graduation Rate, All Students. s.l. : Georgia Department of Education, 2018.
30. **Projections Managing Partnership.** Projections Central. Long Term Projections (2016-2026). [Online] 2016. projectionscentral.com
31. **Georgia Governor's Office of Student Achievement.** The Governor's Office of Student Achievement. High School Graduate Outcomes Report. [Online] 2016. hsgrad.gosa.ga.gov
32. **Bureau of Labor Statistics.** Employment Status of the Civilian Noninstitutional Population by Educational Attainment, 2018 Annual Averages. Bureau of Labor Statistics Geographic Profile. [Online] 2018. bls.gov

33. **Georgia Governor's Defense Initiative.** Governor's Defense Initiative. Georgia.gov. [Online] 2020. georgia.org
34. **Technical College System of Georgia.** High Demand Career Fields. TCSG. [Online] 2020. tcsge.edu
35. **Georgia Center of Innovation for Logistics.** Data Collection Location of Logistics Education Institutions. Atlanta: Georgia Center for Innovation in Logistics, 2011.
36. **Technical College System of Georgia.** Customized Training for Employer Needs. Technical College System of Georgia: Economic Development. [Online] 2020. tcsge.edu
37. **Report, US News and World.** Best Business Analytics MBA Programs. U.S. News & World Report . [Online] 2020. usnews.com

APPENDIX 1: Salary, entry level education, and annual average openings

The following data is all at the national level and is provided by the Bureau of Labor Statistics.

Occupational code	Occupational title	Annual mean wage	BLS Required education	BLS experience
53-2021	Air traffic controllers	\$137,600.00	Associate's degree	None
53-1011	Aircraft cargo handling supervisors	\$79,650.00	High school diploma or equivalent	Less than 5 years
53-2022	Airfield operations specialists	\$57,260.00	High school diploma or equivalent	None
53-2011	Airline pilots, copilots and flight engineers	\$102,330.00	Bachelor's degree	Less than 5 years
53-6031	Automotive and watercraft service attendants	\$24,100.00	No formal educational credential	None
53-5021	Captains, mates, and pilots of water vessels	\$78,500.00	Postsecondary nondegree award	Less than 5 years
43-5011	Cargo and freight agents	\$42,830.00	High school diploma or equivalent	None
53-7061	Cleaners of vehicles and equipment	\$23,400.00	No formal educational credential	None
53-2012	Commercial pilots	\$113,720.00	High school diploma or equivalent	None
53-7011	Conveyor operators and tenders	\$29,720.00	No formal educational credential	None
43-5021	Couriers and messengers	\$26,790.00	High school diploma or equivalent	None
53-7021	Crane and tower operators	\$43,660.00	High school diploma or equivalent	Less than 5 years
43-5032	Dispatchers, except police, fire and ambulance	\$38,970.00	High school diploma or equivalent	None
53-3031	Driver/ sales workers	\$25,610.00	High school diploma or equivalent	None
53-7032	Excavating and loading machine and dragline operators	\$42,140.00	High school diploma or equivalent	Less than 5 years
53-1048	First-line supervisors of transportation and material moving workers, except aircraft cargo handling supervisors	\$53,030.00	High school diploma or equivalent	Less than 5 years
53-3032	Heavy and tractor-trailer drivers	\$42,510.00	Postsecondary nondegree award	None
53-7051	Industrial truck and tractor operators	\$33,570.00	No formal educational credential	None
53-7062	Laborers and freight, stock, and material movers, hand	\$27,190.00	No formal educational credential	None
53-3033	Light truck or delivery services drivers	\$36,280.00	High school diploma or equivalent	None
53-4011	Locomotive engineers	\$55,400.00	High school diploma or equivalent	Less than 5 years
13-1081	Logisticians	\$72,230.00	Bachelor's degree	None
53-7063	Machine feeders and offbearers	\$29,810.00	No formal educational credential	None
53-7199	Material moving workers, all other	\$44,490.00	No formal educational credential	None

Occupational code	Occupational title	Annual mean wage	BLS Required education	BLS experience
53-3099	Motor vehicle operators, all other	\$28,790.00	No formal educational credential	None
53-7064	Packers and packagers, hand	\$23,600.00	No formal educational credential	None
43-5051	Postal service clerks	\$51,340.00	High school diploma or equivalent	None
43-5052	Postal service mail carriers	\$50,110.00	High school diploma or equivalent	None
43-5053	Postal service mail sorters, processors, and processing machine operators	\$50,870.00	High school diploma or equivalent	None
53-7072	Pump operators, except wellhead pumpers	\$46,610.00	High school diploma or equivalent	None
53-4013	Rail yard engineers, dinkey operators, and hostlers	\$26,550.00	High school diploma or equivalent	None
53-4031	Railroad conductors and yardmasters	\$58,220.00	High school diploma or equivalent	None
53-7081	Refuse and recyclable material collectors	\$31,670.00	No formal educational credential	None
53-5011	Sailors and marine oilers	\$43,860.00	No formal educational credential	None
53-5031	Ship engineers	\$65,760.00	Postsecondary nondegree award	Less than 5 years
43-5071	Shipping, receiving and traffic clerks	\$32,560.00	High school diploma or equivalent	None
53-7121	Tank car, truck, and ship loaders	\$49,560.00	No formal educational credential	None
53-6041	Traffic technicians	\$39,690.00	High school diploma or equivalent	None
33-3052	Transit and railroad police	\$58,060.00	High school diploma or equivalent	None
53-6061	Transportation attendants, except flight attendants	\$18,760.00	High school diploma or equivalent	None
53-6051	Transportation inspectors	\$68,110.00	High school diploma or equivalent	None
33-9093	Transportation security screeners	\$39,940.00	High school diploma or equivalent	None
53-6099	Transportation workers, all others	\$28,760.00	High school diploma or equivalent	None
11-3071	Transportation, storage, and distribution managers	\$107,010.00	High school diploma or equivalent	5 years or more

Source: (24;6)

APPENDIX 2: Postsecondary Institutions providing logistics instruction

Table 4 aggregates institutions in TCSG, private institutions that receive funds from Georgia Student Finance Commission, and USG that offer logistics courses, certifications, majors/ concentrations, or graduate programs.

Table 4: Logistics education programs statewide

Institution	Logistics classes only, no major	Logistics certifications	Logistics major or concentration	Logistics graduate programs
Abraham Baldwin Agricultural College	X	X		
Albany State University			X	X
Albany Technical College		X	X	
Athens Technical College	X	X		
Atlanta Metropolitan State College	X			
Atlanta Technical College		X	X	
Augusta Technical College	X	X		
Augusta University	X	X		X
Central Georgia Technical College		X	X	
Chattahoochee Technical College		X	X	
Clark Atlanta University			X	X
Clayton State University		X	X	X
Coastal Pines Technical College		X		
College of Coastal Georgia	X			
Columbus State University	X			
Columbus Technical College	X	X		
Dalton State College		X	X	
DeVry University			X	X
Fort Valley State University		X	X	
Georgia College and State University		X		X
Georgia Gwinnett College			X	
Georgia Highlands College			X	
Georgia Institute of Technology		X	X	X
Georgia Military College			X	
Georgia Northwestern Technical College		X	X	

Institution	Logistics classes only, no major	Logistics certifications	Logistics major or concentration	Logistics graduate programs
Georgia Piedmont Technical College		X		
Georgia Southern University		X	X	X
Georgia Southwestern State University	X			
Georgia State University	X	X		X
Gordon State College	X			
Gwinnett Technical College	X	X		
Kennesaw State University		X	X	X
Lanier Technical College		X		
Middle Georgia State University		X	X	
North Georgia Technical College		X		
Oconee Fall Line Technical College		X		
Ogeechee Technical College		X	X	
Piedmont College			X	
Saint Leo University			X	X
Savannah State University		X	X	X
Savannah Technical College		X	X	
South Georgia State College			X	
South Georgia Technical College		X		
Southeastern Technical College		X		
Southern Crescent Technical College		X	X	
Southern Regional Technical College	X	X		
University of Georgia		X	X	X
University of North Georgia			X	X
University of West Georgia	X	X		X
Valdosta State University	X	X		X
West Georgia Technical College		X		
Wiregrass Georgia Technical College		X		

Source: (25)

APPENDIX 3: Methodology identifying logistics program completions

Logistics educational programs were identifying using CIP codes. The relevant CIP codes were identified by the Georgia Board of Regents (4). See the list of CIP codes from which education completions were derived below. In the most recent identification of CIP codes (2020), there are still no “supply chain” codes. When searching for “supply chain” in the Classification of Instruction Programs Database 2020, the CIP code “52.0203: Logistics, Materials, and Supply Chain Management” appears, which was incorporated in this study.

CIP Code	CIP Title (2010)
43.0109	Security and loss prevention services
44.0401	Public administration
49.0102	Airline/ commercial/ professional pilot and flight crew
49.0105	Air traffic controller
49.0202	Construction/heavy equipment/earthmoving equipment operation
49.0205	Truck and bus driver/commercial vehicle operator and instructor
49.0206	Mobil crane operation/operator
49.0208	Railroad and railway transportation
49.0299	Vehicle and equipment operators, other
49.0309	Marine science/merchant marine officer
49.9999	Transportation and materials moving services, other
52.0203	Logistics and materials management (in CIP 2020, named: Logistics, Materials, and Supply Chain Management)
52.0408	General office occupations and clerical services
52.041	Traffic, customs, and transportation clerk/technician
52.1804	Selling skills and sales operations
99.999	No related CIP program

Source: (4)

APPENDIX 4: Summary of program offerings by institution

Institution	Summary
Abraham Baldwin Agricultural College	Abraham Baldwin Agricultural College offers courses and certificates in Supply Chain Management as part of the Bachelor of Science in Business through the Stafford School of Business. abac.edu
Albany State University	A historically black college and university, Albany State offers a Bachelor of Science in Supply Chain and Logistics Management through their business division. This program allows students to develop their skills and understanding of the field through traditional learning and integrated learning experiences that simulate real supply chain and logistics environments. asurams.edu The school also offers a concentration in Supply Chain and Logistics through their MBA graduate program. Students in this concentration develop an advanced understanding of the supply chain and logistics industry and graduate from the program Lean Six Sigma Green Belt certified. asurams.edu
Albany Technical College	Albany Technical College is a unit of the Technical College System of Georgia that offers certificates, diplomas, and Associate degrees in Business Logistics Management, Operations Management, and Industrial Operations Technicians. Albany Technical College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award Associate of Applied Science Degrees. Through the Business Logistics Management programs, students gain the necessary skills, and knowledge to start their careers or enhance their position in logistics and supply chain. albanytech.edu Albany Technical College's Business Logistics Management program is recognize by Intelligence.com as one of the "Best Online Logistics Degree Program" in the country. We are very proud to be recognize as such. At Albany Technical College, we graduate an average of 14 students per year and 100 percent of our student work in field or a related field. The Business Logistics Management Program initially started because and in partnership with the Marine Corps Logistics Command in Albany, GA. The program has grown beyond the Command, which now include students from various organizations including Proctor & Gamble, Walmart, USPS, FedEx, Webstaurant, various transportation companies, and students from other companies. The best thing about the program is that it is an online program. This mean that students can work and be part of the program. Another highlight of the program is the Six Sigma Green Belt certification, which our students receive upon successful conclusion of the program.
Athens Technical College	Athens Technical College offers a variety of certifications and degree programs within the supply chain and logistics industry such as Business Management, Commercial Truck Driving, and Manufacturing Operations. These certificates and associate degrees prepare students for careers in supply chain and logistics by helping them develop the skills and knowledge needed to succeed. athenstech.edu
Atlanta Metropolitan State College	Through their bachelor's and associate degrees in Business Administration, Atlanta Metropolitan State College offers supply chain and logistics related courses on a term by term basis. atlm.edu
Atlanta Technical College	Located in the heart of one of the world's transportation hubs, Atlanta Technical College offers certificates, diplomas, and associate degrees through a wide variety of supply chain, logistics, and transportation programs. These programs provide students with the fundamental skills and understanding needed to succeed in the high demand positions throughout the industry. atlantatech.edu

Institution	Summary
Augusta Technical College	Augusta Technical College offers a variety of courses, certificates, diplomas, and associate degrees in the supply chain, logistics, and transportation fields. These programs prepare students for careers and a wide range of positions within the logistics and supply chain industry. augustatech.edu
Augusta University	Through the undergraduate and graduate business degree programs, Augusta University offers courses related to supply chain management and logistics. These courses help students concentrate their general business skills and knowledge to the supply chain and logistics field and helps prepare them for roles in these industries. augusta.edu
Central Georgia Technical College	Central Georgia Technical College offers certificates, a diploma, and an associate degree in Logistics Management and related fields. Through the logistics program at Central Georgia Technical College, students gain the necessary skills and knowledge to pursue careers in logistics and supply chain. Central Georgia Technical College's logistics program also works with industry partners to provide hands-on learning experiences through internships. Central Georgia Technical College offers Logistics Management training at its Macon and Warner Robins campuses, the Georgia Veterans Education Career Transition Resource (VECTR) Center, and online. centralgatech.edu
Chattahoochee Technical College	Logistics and Supply Chain Management program at Chattahoochee Technical College offers certificates and an associate degree in logistics, supply chain, and transportation. This program allows students to pursue careers in these high demand fields. chattahoocheetech.edu
Clark Atlanta University	A historically black college and university, and one of the institutions in the Atlanta University Center located in the heart of Atlanta, Clark Atlanta University offers bachelor's and Master's degree programs in Supply Chain Management. These programs allow students to develop and understanding of the logistics and supply chain field while taking advantage of some of the top industry partners located in Atlanta. cau.edu (undergraduate-programs/supply-chain-management) cau.edu (graduate-programs/Fulltime)
Clayton State University	Clayton State University offers a robust supply chain and logistics management program through the College of Business and the Center for Supply Chain Management. Through Clayton State University, students can earn undergraduate and graduate degrees in Supply Chain Management while connecting directly with industry partners through internships, site visits, and the program's industry lead Advisory Board. The Center for Supply Chain Management at Clayton State University not only prepares students for careers in this field, but it works with industry partners to provide research, workforce development, and executive education. clayton.edu
Coastal Pines Technical College	Coastal Pines Technical College offers certificates in transportation and logistics that help prepare students for careers in these fields. With locations located near the Port of Savannah, one of the world's largest transportation hubs, students with certificates from Coastal Pines Technical College are ready to take advantage of such a high demand industry. coastalpines.edu
College of Coastal Georgia	The College of Coastal Georgia offers courses in logistics as part of their Workforce Management and Leadership Bachelor's degree program. ccga.edu
Columbus State University	Columbus State University offers courses related to supply chain management and logistics as part of their undergraduate and graduate programs in the Turner College of Business. columbusstate.edu

Institution	Summary
Columbus Technical College	<p>Columbus Technical College offers course related to supply chain and logistics as part of their certificate and associate degree programs. Additionally, students who have completed their associate degree program at Columbus Technical College have the opportunity to apply this degree towards a BAS in Supply Chain Management and Logistics at Georgia Military College. columbustech.smartcatalogiq.com (Programs-of-Study) columbustech.edu (transfer-and-growth-opportunities)</p>
Dalton State College	<p>Dalton State College offers a Bachelor of Business Administration in Logistics and Supply Chain Management. Located near some of the state’s top manufacturing, logistics, and supply chain companies, this program allows students to gain the skills and understanding necessary to pursue a career in this field while also engaging with industry partners. catalog.daltonstate.edu</p>
DeVry University	<p>An online, HOPE eligible program, DeVry offers a global supply chain management specialization within many of their undergraduate and graduate business degree programs. devry.edu</p>
Fort Valley State University	<p>A historically black college and university, Fort Valley State University offers a BBA in Supply Chain and Logistics Management through the Business Administration Department. This degree provides students the skills, experience, and understanding needed to pursue a career in supply chain and logistics. fvsu.edu</p>
Georgia College and State University	<p>In addition to offering certification courses and graduate programs in supply chain and logistics, Georgia College and State University engages heavily with industry partners to develop top talent. The Institute for Logistics and Transportation Studies at Georgia College and State University connects graduate students and staff with the logistics and supply chain community. Through the Institute, students engage with industry professionals, generate research, and develop relationships with major logistics companies. gcsu.edu</p>
Georgia Gwinnett College	<p>Georgia Gwinnett College offers a BBA with a concentration in supply chain management through the School of Business. The program emphasizes an analytical approach to supply chain management. Forecasting, inventory management, materials requirement planning, transportation network optimization and warehouse design are some of the topics covered. Students partner with organizations in the region to complete an experiential learning project. They are further exposed to industry via guest speaker events and site tours.</p> <p>The School of Business sponsors a student Supply Chain Management Club that is affiliated with APICS Atlanta. This has enabled students to attend and host networking events with local SCM professionals. These meaningful interactions not only contribute to students’ career readiness but also facilitate peer group relationships critical to long-term success.</p> <p>Strong demand for qualified SCM professionals in the region has resulted in students landing internships and full time employment at organizations such as The Home Depot, WIKA, Micromeritics and Enterprise. The program will continue to incorporate feedback from internal and external stakeholders to ensure field-leading learning. As this industry continues to grow locally and globally, GGC’s supply chain management students will be well positioned to capitalize on the opportunities this growth presents. Learn more at ggc.edu.</p>

Institution	Summary
Georgia Highlands College	<p>Georgia Highlands College offers a BBA in Logistics and Supply Chain Management that offers students the foundational knowledge and practical skills that are essential for efficient logistics and supply chain operations. Students learn traditional logistics that focuses its attention on activities such as procurement, distribution, maintenance, and inventory management. Students also learn supply chain management (SCM), acknowledging all of traditional logistics while including activities such as marketing, new product development, finance, and customer service.</p> <p>The BBA in Logistics and Supply Chain Management has seen tremendous growth since its launch in Fall 2017. The program reported a 72% graduation rate in its first year, and a 77% graduation rate in year 2. With cohort 3 and cohort 4 graduating within the months to come, the program predicts an increase in the above rates. To review additional information on the GHC BBA in Logistics and Supply Chain Management, please visit bba.highlands.edu.</p>
Georgia Institute of Technology	<p>The Georgia Institute of Technology offers both undergraduate and graduate degrees and certificates in supply chain and logistics through the Scheller College of Business and the Stewart School of Industrial & Systems Engineering. This cross-departmental approach to supply chain and logistics provides students access to both the technical and business aspects of these industries. Furthermore, these programs are top ranked. According to Gartner (2020), Georgia Tech offers the largest supply chain and logistics academic program in the US, with the #3 graduate program, the #10 undergraduate program, and has the highest undergraduate starting salaries. They have also earned honors of the #8 Best Undergraduate Supply Chain Management / Logistics Programs and #11 Best Supply Chain MBA Programs (US News 2020), just to name a few. In addition to being a top rated, cross-departmental, logistics and supply chain program, the Georgia Institute of Technology houses the Georgia Tech Supply Chain and Logistics Institute (SCL). The SCL is an interdisciplinary research center that “provides global leadership for research and education in the application of scientific principles to optimize the design and integration of supply chain strategy, infrastructure, processes, and technology” scl.gatech.edu. The SCL also works significantly with the logistics and supply chain community through its innovation centers around the world, its range of major corporate partners, and LEAP (Logistics Education And Pathways), a “donor-supported fast-track certificate program to help promote increased participation from veterans, youth and unrepresented minorities to careers in supply chain and Logistics” scl.gatech.edu</p>
Georgia Military College	<p>With campuses across the state and their global online college, Georgia Military College makes earning a degree in supply chain management and logistics accessible to all, regardless of military background, by providing opportunities for in-seat as well as online learning. The Bachelor of Applied Science (BAS) in Supply Chain Management and Logistics degree program is designed to prepare students for careers in supply chain management, logistics, and related fields. The curriculum includes courses in logistics, warehousing, procurement, materials management, distribution, and other supply chain management related studies that provides a solid understanding of supply chain management and logistics applicable in today’s global business and industry environment. gmc.edu Georgia Military College also features a unique Air University Associate-to-Baccalaureate Cooperative which allows Airmen who have earned an Associate in Applied Science (AAS) degree from the Community College of the Air Force to work towards a bachelor degree in Business Management, Supervision and Management, or Supply Chain Management and Logistics. gmc.edu</p>
Georgia Northwestern Technical College	<p>Georgia Northwestern Technical College offers certificates, diplomas, and an Associate of Applied Science Degree in Logistics and Supply Chain Management. Through GNTC’s robust logistics and supply chain program, students learn the fundamentals of the industry, business foundations, and gain hands on experience with internships and capstones. Located in northwest Georgia, GNTC is in close proximity to some of largest manufacturing companies in the state and the southeast. Many students complete their education while working for these manufactures and use their new credentials to further propel their careers in the industry. gntc.smartcatalogiq.com</p>

Institution	Summary
Georgia Piedmont Technical College	Georgia Piedmont Technical College offers a variety of certifications within the transportation, logistics, and supply chain industries, such as Commercial Truck Driving. These certificates prepare students for careers in transportation, supply chain, and logistics by helping them develop the skills and knowledge needed to succeed. gptc.edu
Georgia Southern University	<p>Georgia Southern University's AACSB accredited BBA-Supply Chain Management (SCM) degree program, with emphases in either logistics and intermodal transportation or operations and supply chain management, provides students with the problem-solving skills and supply chain knowledge needed to manage and lead modern organizations. The program's focus on intermodal freight transportation, warehousing and strategic sourcing is a strong natural fit in serving the region's vital economic interests.</p> <p>Highlights of the BBA-SCM include:</p> <ul style="list-style-type: none"> • Intermodal Association of North America (IANA) Scholarship Program • ASCM/APICS Certificate Waiver Program • Highly Ranked BBA Degree by Gartner, Inc. • Faculty group ranked among the top 20 empirical research teams in the world SCMList.com • Experiential Learning and Internship Opportunities <p>Each semester the program hosts The Logistics Roundtable event bringing dozens of companies and 100+ students together for break-out discussion and career networking. With over 120 graduates each year, alumni from the BBA-SCM program begin and advance their careers with major logistics and supply chain companies.</p>
Georgia Southwestern State University	Georgia Southwestern State University offers courses related to logistics and supply chain.
Georgia State University	Through the J. Mack Robinson College of Business, Georgia State University offers a robust one-year Master of Science in Supply Chain Management. This program is designed prepare students for current trends and best practices in supply chain management and reflects current industry innovations. Additionally, through the Global Logistics Roundtable students in this program engage with some of the industry's top leaders, many of whom are located right next to campus in downtown Atlanta. Georgia State University also offers a variety of courses that can be taken in conjunction with an MBA or undergraduate degree.
Gordon State College	Gordon State College offers courses related to logistics and supply chain.
Gwinnett Technical College	Gwinnett Technical College offers a certificate and a concentration in Logistics Management through the associate degree in Business Management program. Through this program, students develop business and logistics foundations and skills that prepare them for a career in the logistics and supply chain industries. gwinnettech.edu
Kennesaw State University	Kennesaw State University has a unique, top ranked, Bachelor of Applied Science in Supply Chain Logistics (BASSCL) program that is specifically designed for individuals with an AAS (Associate of Applied Science) degree from a Technical College System of Georgia accredited 2-year technical college. engineering.kennesaw.edu Through this program, students who have earned their AAS can apply those two years towards completion of their bachelor's degree. Centrally located in the heart of metro Atlanta, students have access to some of the top supply chain and logistics companies in the region.
Middle Georgia State University	Middle Georgia State University offers a variety of certificates, associate's and bachelor's degrees within the transportation, logistics, and supply chain industries. These certificates prepare students for careers in transportation, supply chain, and logistics by helping them develop the skills and knowledge needed to succeed. mga.smartcatalogiq.com

Institution	Summary
North Georgia Technical College	North Georgia Technical College offers a variety of certificates, diplomas, and degrees within the transportation, logistics, and supply chain industries. These certificates prepare students for careers in transportation, supply chain, and logistics by helping them develop the skills and knowledge needed to succeed. northgatech.edu
Oconee Fall Line Technical College	Oconee Fall Line Technical College offers a variety of certificates, diplomas, and degrees within the transportation, logistics, and supply chain industries. These certificates prepare students for careers in transportation, supply chain, and logistics by helping them develop the skills and knowledge needed to succeed. cmt.oftc.edu
Ogeechee Technical College	Ogeechee Technical College offers a variety of certifications within the transportation, logistics, and supply chain industries, such as a certificate in Commercial Truck Driving and an associate degree in Logistics Management. These certificates prepare students for careers in transportation, supply chain, and logistics by helping them develop the skills and knowledge needed to succeed. gptc.edu
Piedmont College	Piedmont College offers both a bachelor's and a Master's business degree program with a concentration in Logistics and Global Supply Chain Management. With these concentrations, students build on the general business foundations with additional emphasis on supply chain and logistics. Through these programs, students are prepared to tackle local and global supply chain logistics problems and begin their careers in these industries. piedmont.edu (Master-of-Business-Administration) piedmont.edu (business)
Saint Leo University	An online, HOPE eligible program, Saint Leo University offers bachelor's and master's degree programs in logistics and supply chain. saintleo.edu
Savannah State University	With its proximity to the Port of Savannah, a strategic international port, Savannah State University's global logistics and international business degree and the Center for Global Logistics and International Business Research (G-LIBER Center) prepares students for careers in global logistics and supply chains. The G-LIBER Center works to "promote economic development, trade, growth and job creation by engaging SSU students and the local Savannah business community with institutions of higher education and businesses worldwide". savannahstate.edu.
Savannah Technical College	Located in close proximity to the Port of Savannah, Savannah Technical College prepares it's students for careers in supply chain and logistics while engaging with industry leaders. Through the Logistics Management program, Savannah Technical College offers certificates, diplomas, and associate's degrees in supply chain and logistics. Additionally, Savannah Technical College conducts Fast Track training courses in supply chain, logistics, material handling, quality control, workplace communication, safety and equipment operations, developed and delivered to prepare ideal workforce candidates for regional businesses. This high-quality program is a partnership effort by the Coastal Workforce Service, the Georgia Department of Economic Development, and regional warehouse and distribution industry partners. savannahtech.edu
South Georgia State College	South Georgia State College offers an associate degree in Logistics. Students who complete this program are prepared to start their career in logistics and supply chain or continue their education and earn a bachelor's degree in logistics and supply chain. sgsc.edu
South Georgia Technical College	South Georgia Technical College offers a variety of certificates, diplomas, and degrees within the transportation, logistics, and supply chain industries. These certificates prepare students for careers in transportation, supply chain, and logistics by helping them develop the skills and knowledge needed to succeed. southgatech.edu
Southeastern Technical College	Southeastern Technical College offers a variety of certificates, diplomas, and degrees within the transportation, logistics, and supply chain industries. These certificates prepare students for careers in transportation, supply chain, and logistics by helping them develop the skills and knowledge needed to succeed. southeasterntech.edu

Institution	Summary
Southern Crescent Technical College	Southern Crescent Technical College offers certificates and associate degrees within the supply chain, logistics, and transportation industry including an AAS in Logistics and Supply Chain Management and a certification in Commercial Truck Driving. Through the programs offered at Southern Crescent Technical College, students can gain the fundamental skills and knowledge needed to start their careers in logistics and supply chain. sctech.smartcatalogiq.com
Southern Regional Technical College	Southern Regional Technical College offers certificates in commercial truck driving. These certificates prepare students for careers in transportation, supply chain, and logistics by helping them develop the skills and knowledge needed to succeed. southernregional.edu
University of Georgia	The University of Georgia offers a concentration in Supply Chain Management as part of its BBA in Management offerings. Additionally, the Terry College of Business has created the Supply Chain Advisory Board. This group “serves as the primary point of contact between industry and Supply Chain professors and students”. terry.uga.edu In addition to the top performing supply chain students in the program, the Advisory Board is comprised of representatives from some of the top logistics and supply chain companies such as Georgia Pacific, Freightwaves, Shaw Industries, and many others. With this guidance, the Board works to “ensure that the supply chain curriculum meets the needs of employers, provides speakers for classes, connects employers with talented students, and more” (Ibid).
University of North Georgia	<p>The University of North Georgia offers a BBA in Management with a concentration in Supply Chain Management (SCM). SCM offers students a deep dive into the supply chain system, associated costs, performance metrics and tools to manage domestic and global supply chains and logistics. The three-course sequence for the concentration focuses on procurement processes and supply chain management; demand planning and forecasting; inventory management and warehouse operations; production and quality management; and transportation and logistics.</p> <p>Students learn SCM concepts through real-world case studies, interactive class discussions, simulation exercises, field trips, industry-related guest speakers and more. Additionally, internship opportunities are available and recommended to give students a first-hand look at supply chain management in action. Some students in this concentration are already working in SCM-related jobs or participating in internship programs offered by Hall County and other areas of North Georgia. The Mike Cottrell College of Business actively recruits companies across numerous industries to provide students with hands-on learning experiences before they launch their careers after graduation.</p>
University of West Georgia	The Richards College of Business at the University of West Georgia offers a management degree with a concentration in supply chain management. The supply chain management concentration is designed to prepare students to become leaders in the total systems approach taken by companies, suppliers, and partners to deliver manufactured products to the end customer efficiently and effectively. Students learn the capabilities that allow them to support an organization in all the necessary supply chain processes and procedures. Production schedules, procurement, transportation services, quality, and warehousing management activities are studied as individual functions as well as strategic relationships among the functions. Emphasis is placed on problem-solving, logical thinking, and the development of accurate management assessments. The program incorporates the core business knowledge appropriate to manage wider organizational processes. To enhance student development in supply chain management, supply chain management students are encouraged to join the Supply Chain Management Club at the University of West Georgia. The club is an affiliated chapter of the Association for Supply Chain Management with the Atlanta Chapter being the parent chapter. Upon completion of the management degree with concentration in supply chain management, students qualify for a variety of careers, from purchasing to materials management. Entry-level positions include buyer, materials manager, risk management analyst, logistics planner, and staff consultant.

Institution	Summary
Valdosta State University	Valdosta State University offers a minor in Logistics and Supply Chain Management as part of their BBA in Management degree. Through this minor, students can learn the foundations of supply chain management and logistics as a compliment to their business degree and prepare themselves for a career in these industries. valdosta.edu
West Georgia Technical College	West Georgia Technical College offers courses and certificates within the transportation, logistics, and supply chain industries. These certificates prepare students for careers in transportation, supply chain, and logistics by helping them develop the skills and knowledge needed to succeed. westgatech.edu
Wiregrass Georgia Technical College	Wiregrass Georgia Technical College offers courses and certificates within the transportation, logistics, and supply chain industries. These certificates prepare students for careers in transportation, supply chain, and logistics by helping them develop the skills and knowledge needed to succeed. westgatech.edu

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