



LABOR
MARKET
INFORMATION

1ST EDITION

POSTSECONDARY SUPPLY GAP OVERVIEW

PREPARED FOR THE
**COORDINATING COUNCIL
FOR WORKFORCE DEVELOPMENT**

by the Labor Market Information Division of the South Carolina
Department of Employment and Workforce (DEW).

INTRODUCTION

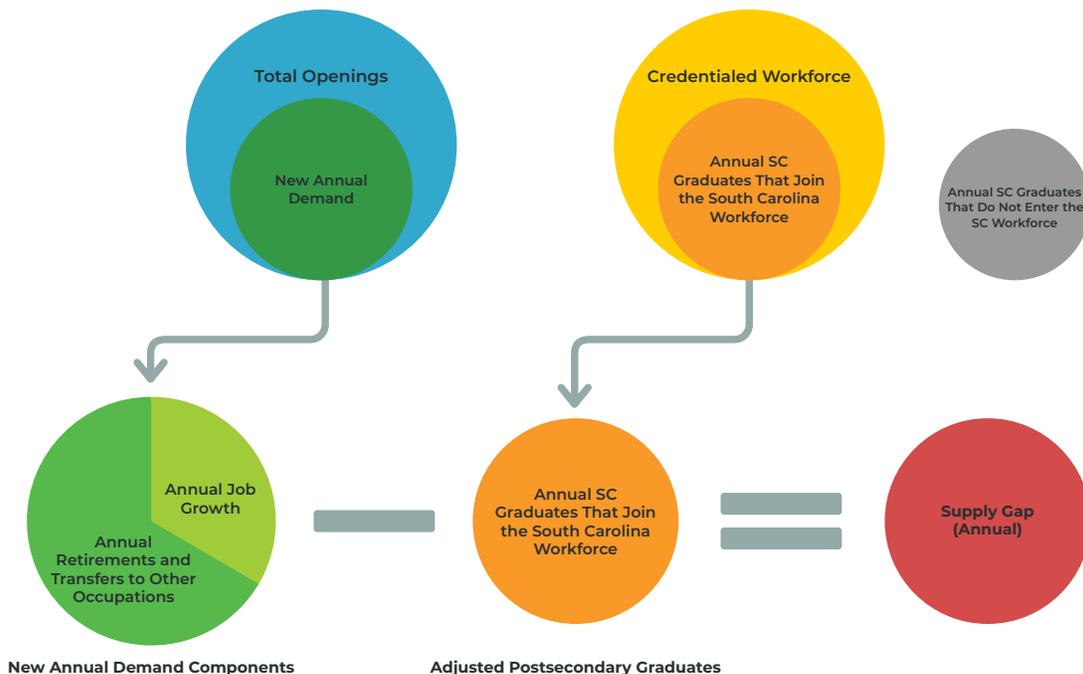
The Statewide Education and Workforce Development Act (Act No. 67 of 2023) requires the creation of a supply gap analysis each year in order to identify and adapt to the needs of South Carolina’s workforce. As part of that mandate, this document summarizes key findings of the First Edition Postsecondary Supply Gap Analysis (PSGA) by giving an overview of each career cluster and highlighting priority occupations within those clusters.

The purpose of the PSGA is to determine the extent to which postgraduate programs in South Carolina are able to meet the growing need for credentialed workers across industries. **With this in mind, the PSGA focuses on entry-level jobs that require postsecondary degrees or certificates and less than five years of work experience.**

Primary author: Daniel Lyons, Labor Supply Analyst

Jobs Included in the Supply Gap Analysis	Jobs NOT Included in the Supply Gap Analysis
Jobs that require less than five years of work experience	Jobs that require five years or more of work experience
Jobs that require a certificate, two-year degree, four-year degree, or graduate degree	Jobs that do not require a postsecondary degree

The supply gap is defined as the difference between the number of graduates who are qualified for a given occupation and new annual demand within the occupation. Graduates are defined by the number of completions from South Carolina universities and colleges that receive federal funding, adjusted based on the estimated likelihood of workforce participation in South Carolina. **New annual demand refers to newly created jobs resulting from occupation growth plus jobs that were formerly filled by individuals who exited the labor force or transferred to a new occupation. New annual demand is therefore not equivalent to the total number of current job openings or job postings. If the supply gap is met, that does not mean total job openings will fall to zero. The supply gap is the number of graduates needed to keep the total number of job openings stable.**



The Supply Gap is...

The Supply Gap is **NOT**...

<ul style="list-style-type: none"> › The number of qualified graduates needed to keep the number of job openings in an occupation stable 	<ul style="list-style-type: none"> › The number of graduates needed to fill every open position in an occupation › A measure of the value or importance to the state of a given industry or occupation
---	--

Within this document, occupations are grouped into career clusters based on the occupation group they fall under.¹ **Industry and occupation groups are not equivalent. Industry classification is based on business activities, while occupation classification is based on job duties.**² As such, an occupation may be concentrated in one industry but not included in a similarly named career cluster (if one exists). Industrial Engineers, for example, fall under the Science, Technology, Engineering, and Math cluster, not the Manufacturing career cluster. **Furthermore, we know that manufacturing activities (and those of many industries) are supported by an array of critical roles, such as accountants, computer systems analysts, and logisticians, that are categorized under seemingly unaffiliated career clusters.** Additionally, some occupations officially fall under multiple career clusters but are sorted into a single cluster for the purposes of this analysis. See below for a list of those occupations.

Occupation	Primary Career Cluster	Secondary Career Cluster (Occupation does not appear in the analysis under its secondary cluster)
Project Management Specialists	Business Management & Administration	Information Technology
Loan Officers	Finance	Human Services
Bioengineers and Biomedical Engineers	Health Science	Science, Technology, Engineering & Mathematics
Urban and Regional Planners	Government & Public Administration	Science, Technology, Engineering & Mathematics
Securities, Commodities, and Financial Services Sales Agents	Finance	Marketing

Each cluster is given a rating based on the size of its supply gap—narrow, moderate, or wide. A supply gap is present in nearly every career cluster, but some supply gaps are larger than others, which this rating system reflects. The rating compares across career clusters, and it accounts for both the supply gap, which measures overall need for qualified graduates, and the demand supply ratio, which measures need relative to output. **A narrow gap does not imply that there are few openings or a limited need for those jobs; in many cases it is a reflection of strong alignment between the state’s postsecondary educational system and the labor market.**

The supply gap is not a measure of an industry’s or career cluster’s value or importance to the state. Career clusters with no supply gap or relatively lower supply gaps are still critical to South Carolina’s economy. The Tourism and Hospitality career cluster, for example, does not have any occupations that require a postsecondary degree, and relatively few occupations under Manufacturing require a postsecondary degree,³ but both of these occupation groups are vital to the state. Additionally, we recognize that workers and employers in these sectors face challenges that are beyond the scope of this report and therefore are not addressed here.

¹There are 16 total career clusters; however, Hospitality and Tourism is not included in this analysis because occupations within this cluster typically do not require a postsecondary credential.

²For a list of all job titles designated under the Standard Occupational Classification (SOC) system, visit <https://www.onetonline.org/find/all>

³A number of certificate programs exist for Manufacturing occupations; however, most of them are not required for entry-level employment in those occupations, according to the Bureau of Labor Statistics: <https://www.bls.gov/emp/tables/education-and-training-by-occupation.htm>.

A description of each career cluster from the Department of Labor is included in this document. In addition, priority occupations included in the PSGA are listed for each cluster. As part of the [Unified State Plan](#), the Coordinating Council for Workforce Development has identified a total of 168 “priority occupations” for the state of South Carolina, and they are characterized by their high demand, high growth, sustainable wages, and high retention.⁴

Data-driven collaboration between key stakeholders is vital for ensuring the state’s workforce remains responsive to evolving industry needs, advances in technology, and continued growth. This document provides an overview of some of the most relevant data, which can inform education decisions in order to align the supply of graduates with demand from employers. For a more comprehensive assessment of postsecondary supply gaps in the state, please see the full report.

Which occupations are included in this report?

The PSGA report only includes occupations that require postsecondary degrees and less than five years of work experience. These occupations are highlighted in **yellow**. Priority occupations are **bolded**. The only occupations being analyzed in the report are those that meet both of these criteria. Occupations within the Marketing career cluster are listed as an example below.

All Marketing Occupations:

Public Relations Specialists	Driver/Sales Workers
Advertising and Promotions Managers	First-Line Supervisors of Non-Retail Sales Workers
Fundraising Managers	First-Line Supervisors of Retail Sales Workers
Marketing Managers	Parts Salespersons
Property, Real Estate, and Community Association Managers	Real Estate Brokers
Public Relations Managers	Real Estate Sales Agents
Sales Managers	Retail Salespersons
Market Research Analysts and Marketing Specialists	Sales and Related Workers, All Other
Merchandise Displayers and Window Trimmers	Sales Engineers
Models	Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel
Wholesale and Retail Buyers, Except Farm Products	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products
Advertising Sales Agents	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products
Cashiers	Securities, Commodities, and Financial Services Sales Agents
Counter and Rental Clerks	Solar Sales Representatives and Assessors
Demonstrators and Product Promoters	Telemarketers
Door-to-Door Sales Workers, News and Street Vendors, and Related Workers	

⁴Priority occupations which do not require a postsecondary credential and/or require five or more years of work experience are not listed in this report.

Occupations requiring a postsecondary degree and less than 5 years of work experience:

Public Relations Specialists	Market Research Analysts and Marketing Specialists
Advertising and Promotions Managers	Sales Engineers
Sales Managers	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products

Priority occupations requiring a postsecondary degree and less than 5 years of work experience:

Sales Managers	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products
----------------	---

A full list of all occupations within each career cluster can be found at onetonline.org/find/career.

NOTE: Educational credentials described within the federal data as “postsecondary nondegree awards” are known as “certificates” in South Carolina and are labeled as such in this document.

CAREER CLUSTER 1: AGRICULTURE, FOOD, AND NATURAL RESOURCES



Workers in the **Agriculture, Food, and Natural Resources** cluster produce products and processes—from raising food and textile crops to breeding livestock and hunting wild game, from mining ore below the earth’s surface, to hazardous waste removal and wildlife conservation. Historic trends are giving way to new developments in this cluster.

Occupation Spotlight: Pest Control Workers

Pest Control Workers apply or release chemical solutions or toxic gases and set traps to kill or remove pests and vermin that infest buildings and surrounding areas.⁵

CAREER CLUSTER 2: ARCHITECTURE AND CONSTRUCTION

The purpose of the **Architecture and Construction** industry is to build and maintain all kinds of structures, including homes, manufacturing plants, office buildings, streets and highways, sewers, irrigation projects, and more. The industry also includes related activities such as painting, electrical work, and plumbing.



Civil Engineer

Occupation Spotlight: Civil Engineers

Civil engineers perform engineering duties in planning, designing, and overseeing construction and maintenance of building structures and facilities, such as roads, railroads, airports, bridges, harbors, channels, dams, irrigation projects, pipelines, power plants, and water and sewage systems.



Priority Occupation	Required Education
Civil Engineers	Bachelor’s degree
Construction Managers	Bachelor’s degree
Cost Estimators	Bachelor’s degree
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	Certificate

CAREER CLUSTER 3: ARTS, AUDIO/VIDEO TECHNOLOGY, AND COMMUNICATIONS



Careers in the **Arts, Audio/Video Technology, and Communications** cluster focus on designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.

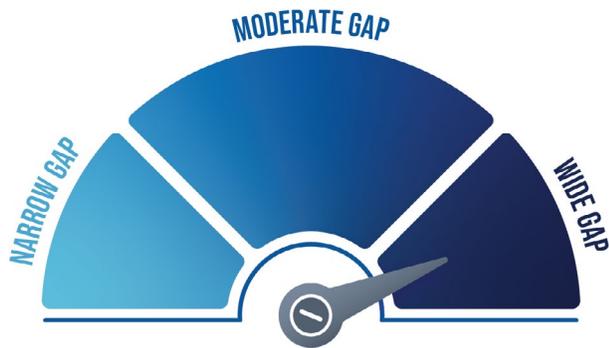
Occupation Spotlight: Graphic Designers

Graphic designers design or create graphics to meet specific commercial or promotional needs, such as packaging, displays, or logos. They may use a variety of mediums to achieve artistic or decorative effects.

Priority Occupation	Required Education
Graphic Designers	Bachelor’s degree

⁵There are no priority occupations that require a postsecondary degree and less than five years of work experience under the Agriculture, Food, and Natural Resources career cluster, so we have highlighted a priority occupation that does not require a postsecondary degree.

CAREER CLUSTER 4: BUSINESS MANAGEMENT AND ADMINISTRATION



Careers in the **Business Management and Administration** cluster relate to planning, organizing, directing and evaluating business functions essential to efficient and productive business operations. Careers in leadership, management, and support roles are needed by all types of organizations to operate successfully.

Occupation Spotlight: Management Analysts

Management Analysts conduct organizational studies and evaluations, design systems and procedures, conduct work simplification and measurement studies, and prepare operations and procedures manuals to assist management in operating more efficiently and effectively.

Priority Occupation	Required Education
Business Operations Specialists, All Other	Bachelor's degree
Human Resources Specialist	Bachelor's degree
Management Analysts	Bachelor's degree
Meeting, Convention, and Event Planners	Bachelor's degree
Training and Development Specialists	Bachelor's degree

CAREER CLUSTER 5: EDUCATION AND TRAINING



Elementary School Teacher



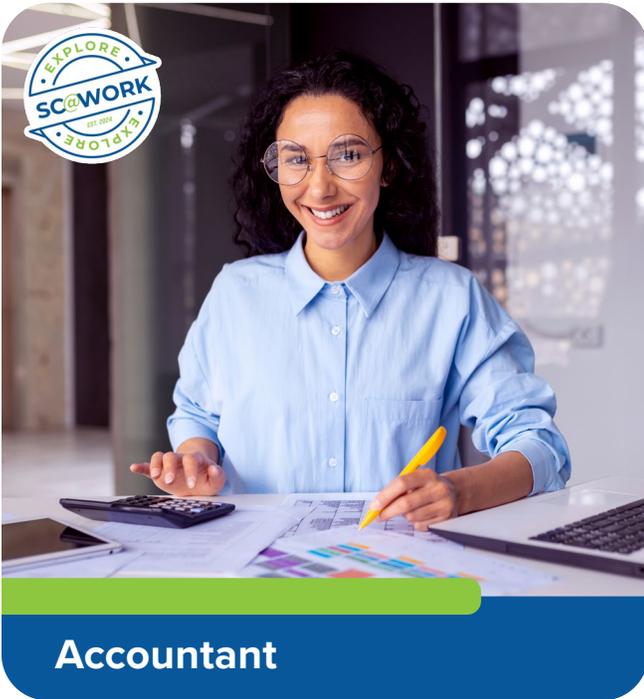
The **Education and Training** career cluster focuses on the activities, resources, and locations that provide all kinds of learning services. It includes careers at public and private schools at every level—pre-K through high school—as well as colleges and universities. Occupations at libraries, museums and corporate training services are also part of this cluster.

Occupation Spotlight: Elementary School Teachers

Elementary School Teachers teach academic and social skills to students at the elementary school level.

Priority Occupation	Required Education
Elementary School Teachers, Except Special Education	Bachelor's degree
Middle School Teachers, Except Special and Career/Technical Education	Bachelor's degree
Preschool Teachers, Except Special Education	Associate degree
Secondary School Teachers, Except Special and Career/Technical Education	Bachelor's degree
Teachers and Instructors, All Other	Bachelor's degree

CAREER CLUSTER 6: FINANCE



Accountant



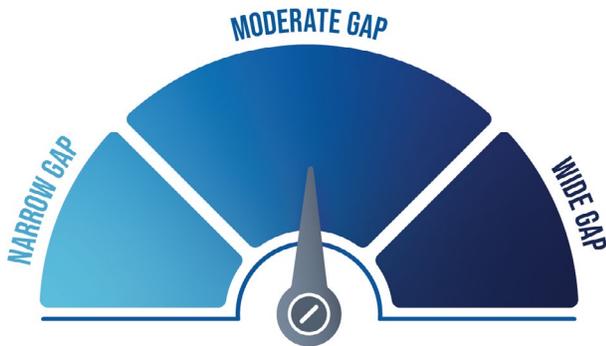
Finance relates to the services involved in financial and investment planning, banking, insurance, and business financial management. The finance and insurance industry is all about managing money and making financial transactions—from a child’s first savings account to multimillion-dollar corporate loans.

Occupation Spotlight: Accountants and Auditors

Accountants and auditors examine, analyze, and interpret accounting records to prepare financial statements, give advice, or audit and evaluate statements prepared by others. They also install or advise on systems of recording costs or other financial and budgetary data.

Priority Occupation	Required Education
Accountants and Auditors	Bachelor’s degree
Financial and Investment Analysts	Bachelor’s degree
Insurance Underwriters	Bachelor’s degree
Loan Officers	Bachelor’s degree
Personal Financial Advisors	Bachelor’s degree
Securities, Commodities, and Financial Services Sales Agents	Bachelor’s degree

CAREER CLUSTER 7: GOVERNMENT AND PUBLIC ADMINISTRATION

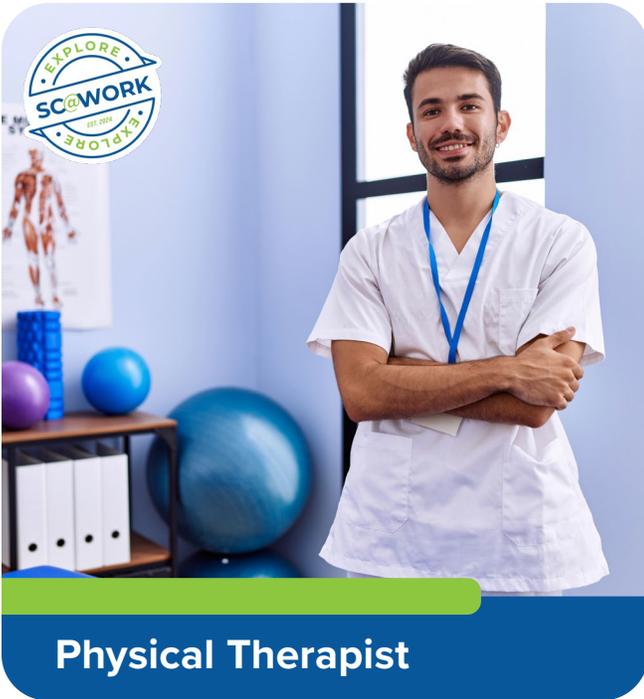


Careers in **Government and Public Administration** relate to planning and performing government functions at the local, state and federal levels, including governance, national security, foreign service, planning, revenue and taxation, and regulations. A primary goal of virtually all careers in public service is to help improve the quality of life and livelihood for the citizens represented, while supporting the betterment of the overall community.

Occupation Spotlight: Occupational Health and Safety Specialists

Occupational Health and Safety Specialists review, evaluate, and analyze work environments and design programs and procedures to control, eliminate, and prevent disease or injury caused by chemical, physical, and biological agents or ergonomic factors. They may conduct inspections and enforce adherence to laws and regulations governing the health and safety of individuals. They may be employed in the public or private sector.

Priority Occupation	Required Education
Occupational Health and Safety Specialists	Bachelor’s degree



Physical Therapist



The primary work of careers in the **Health Science** cluster is to treat patients facing illness or injury—whether to cure or rehabilitate from a condition, to maintain wellness, or to provide comfort or palliative care to persons dealing with incurable conditions. The health care industry is booming, and experts predict health care careers will continue to grow rapidly for at least the next decade.

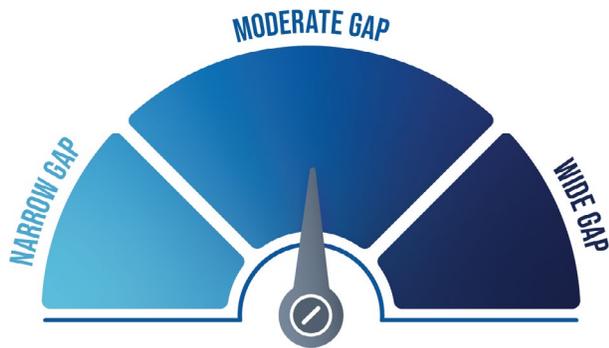
Occupation Spotlight: Physical Therapists

Physical Therapists assess, plan, organize, and participate in rehabilitative programs that improve mobility, relieve pain, increase strength, and improve or correct disabling conditions resulting from disease or injury.

Priority Occupation	Required Education
Dental Assistants	Certificate
Dental Hygienists	Associate degree
Dentists, General	Doctoral or professional degree
Licensed Practical and Licensed Vocational Nurses	Certificate
Medical and Health Services Managers	Bachelor's degree
Medical Assistants	Certificate
Medical Records Specialists	Certificate
Nurse Practitioners	Master's degree
Nursing Assistants	Certificate
Occupational Therapists	Master's degree
Pharmacists	Doctoral or professional degree
Phlebotomists	Certificate
Physical Therapists	Doctoral or professional degree
Physical Therapist Assistants	Associate degree
Physicians, All Other	Doctoral or professional degree
Radiologic Technologists and Technicians	Associate degree
Registered Nurses	Bachelor's degree ⁶
Veterinarians	Doctoral or professional degree

⁶Federal data from the Occupational Requirements Survey shows that, on average, the minimum education requirement for nursing is a bachelor's degree. Although we acknowledge that there are other degree paths to this occupation, the report's model calculates the credentialed workforce using bachelor's degree holders.

CAREER CLUSTER 9: HUMAN SERVICES



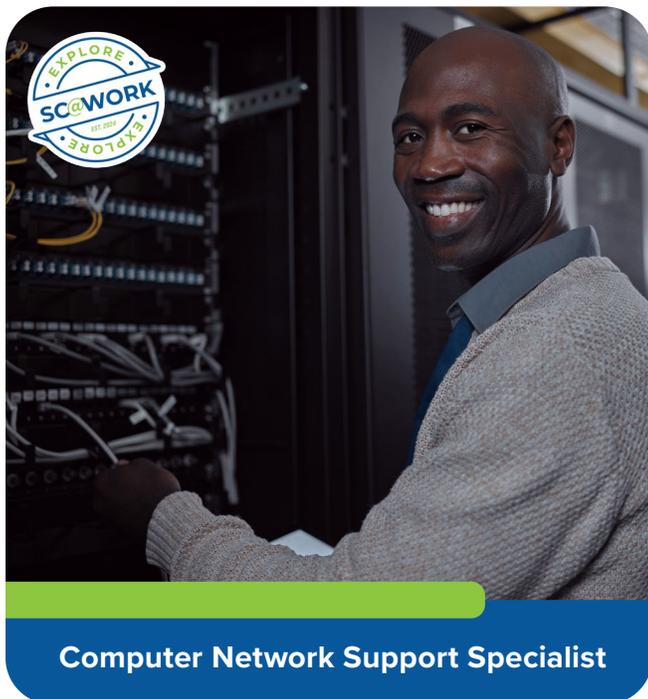
The **Human Services** career cluster relates to meeting human needs through activities such as counseling and mental health services, family and community services, personal care and consumer services.

Occupation Spotlight: Child, Family, and School Social Workers

Child, Family, and School Social Workers provide social services and assistance to improve the social and psychological functioning of children and their families and to maximize the family well-being and the academic functioning of children. They may assist parents, arrange adoptions, and find foster homes for abandoned or abused children. In schools, they address such problems as teenage pregnancy, misbehavior, and truancy.

Priority Occupation	Required Education
Child, Family, and School Social Workers	Bachelor's degree
Clergy	Bachelor's degree
Massage Therapists	Certificate
Substance Abuse, Behavioral Disorder, and Mental Health Counselors	Bachelor's degree

CAREER CLUSTER 10: INFORMATION TECHNOLOGY



Information Technology relates to the design, development, support and management of hardware, software, multimedia and systems integration services. The United States is the world's largest technology market, and the IT industry is a major contributor to our overall economy.

Occupation Spotlight: Computer Network Support Specialists

Computer Network Support Specialists analyze, test, troubleshoot, and evaluate existing network systems, such as local area networks (LAN), wide area networks (WAN), cloud networks, servers, and other data communications networks. They also perform network maintenance to ensure that networks operate correctly and with minimal interruption.

Priority Occupation	Required Education
Computer Network Support Specialists	Associate degree
Computer Systems Analysts	Bachelor's degree
Network and Computer Systems Administrators	Bachelor's degree
Software Developers	Bachelor's degree
Software Quality Assurance Analysts and Testers	Bachelor's degree
Web Developers	Bachelor's degree

CAREER CLUSTER 11: LAW, PUBLIC SAFETY, CORRECTIONS, AND SECURITY



Firefighter



The **Law, Public Safety, Corrections, and Security** career cluster is all about protecting and serving the public. People working in this sector deal with protecting life and property, enforcing laws, providing legal counsel, sentencing defendants, and rehabilitating offenders.

Occupation Spotlight: Firefighters

Firefighters control and extinguish fires or respond to emergency situations where life, property, or the environment is at risk. Duties may include fire prevention, emergency medical service, hazardous material response, search and rescue, and disaster assistance.

Priority Occupation	Required Education
Firefighters	Certificate
Lawyers	Doctoral or professional degree
Paralegals and Legal Assistants	Associate degree

CAREER CLUSTER 12: MANUFACTURING



Workers in the **Manufacturing** career cluster produce nearly all the products and equipment used in daily life. Manufacturing is the transformation of raw materials or parts into a new product.

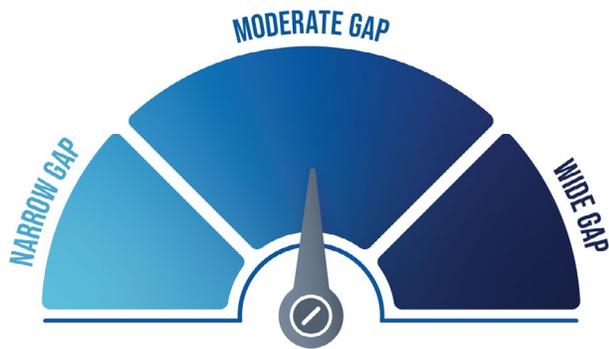
Occupation Spotlight: Machinists

Machinists set up and operate a variety of machine tools to produce precision parts and instruments out of metal. Machinists includes precision instrument makers who fabricate, modify, or repair mechanical instruments. They may also fabricate and modify parts to make or repair machine tools or maintain industrial machines, applying knowledge of mechanics, mathematics, metal properties, layout, and machining procedures.⁷

As previously noted on [page 3](#), however, Manufacturing does rely on occupations in other career clusters for which there are wide supply gaps. Moreover, there are frequent job openings at South Carolina manufacturers for positions that do not require a postsecondary credential, but those fall outside the PSGA's postsecondary scope. For example, South Carolina employers often identify mechatronics roles as being critically in-demand; however, based on analysis by the US Bureau of Labor Statistics, postsecondary credentials are not a prerequisite for many mechatronics jobs.

⁷There are no priority occupations that require a postsecondary degree and less than five years of work experience under the Manufacturing career cluster, so we have highlighted a priority occupation that does not require a postsecondary degree.

CAREER CLUSTER 13: MARKETING



The **Marketing** career cluster includes sales and advertising, and focuses on influencing consumers' buying behavior and generating sales for products and services. Just about every type of organization, from your corner grocer to regional banks, public universities to multinational corporations, participates in marketing in some way.

Occupation Spotlight: Sales Managers

Sales Managers plan, direct, or coordinate the actual distribution or movement of a product or service to the customer. They coordinate sales distribution by establishing sales territories, quotas, and goals and establish training programs for sales representatives. They also analyze sales statistics gathered by staff to determine sales potential and inventory requirements and monitor the preferences of customers.

Priority Occupation	Required Education
Sales Managers	Bachelor's degree
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	Bachelor's degree

CAREER CLUSTER 14: SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS



Careers in the **Science Technology Engineering and Math** cluster relate to planning, managing and providing scientific research and professional and technical services such as laboratory and testing services, and research and development services.

Occupation Spotlight: Industrial Engineer

Industrial Engineers design, develop, test, and evaluate integrated systems for managing industrial production processes, including human work factors, quality control, inventory control, logistics and material flow, cost analysis, and production coordination.

The narrow gap for Science, Technology, Engineering, and Mathematics (STEM) careers may seem counterintuitive to some readers. However, the report deals with jobs requiring less than five years of experience, so only entry-level engineering jobs are being analyzed. The relatively lower gap shows that the state is producing qualified graduates at close to the rate needed to stabilize annual job openings in these positions. This result also signals the effectiveness of the state's policy interventions meant to increase access to and interest in STEM fields.

Priority Occupation	Required Education
Electrical Engineers	Bachelor's degree
Industrial Engineers	Bachelor's degree
Life, Physical, and Social Science Technicians, All Other	Associate degree



The **Transportation, Distribution, and Logistics** cluster is all about moving people and things from one location to another quickly, safely, and at a low cost. Workers in this industry design transportation systems, operate or repair equipment, plan how to move materials, and take care of storing products. Transportation systems included in this cluster include aircraft, railroad, waterways, over the road, and pipelines.

Occupation Spotlight: Logisticians

Logisticians analyze and coordinate the ongoing logistical functions of a firm or organization. They are responsible for the entire life cycle of a product, including acquisition, distribution, internal allocation, delivery, and final disposal of resources.

Priority Occupation	Required Education
Aircraft Mechanics and Service Technicians	Certificate
Automotive Service Technicians and Mechanics	Certificate
Logisticians	Bachelor's degree

CONCLUSION

In this document, we have given an overview of the size of the supply gap in each career cluster and listed priority occupations under each cluster. The supply gap is a useful metric for understanding the need for qualified graduates within occupations that require postsecondary credentials; however, it does not identify supply relative to need for workers in occupations that do not require postsecondary credentials.

In the future, this analysis can be expanded as data become available to include other areas of coverage, such as career and technical education programs at the high school level, dual enrollment programs, apprenticeship programs, and non-credit technical college programs, which will help to identify supply gaps in occupations that do not require postsecondary degrees. Recently, South Carolina employers began reporting SOC code data about their workforce. As that data set grows and is validated, it will provide highly relevant information about the composition and future needs of the labor force.



SOUTH CAROLINA DEPARTMENT OF
Employment and Workforce

POSTSECONDARY SUPPLY GAP OVERVIEW



1ST EDITION