

Career Pathways Annual Report – HB15-1274: Aerospace, Public Safety, and Public Health

Career Pathways 2023 - 2024

Thomas Hartman, Ph.D., Senior Consultant, Colorado Workforce Development Council

Melissa Martin, Director of Workforce Development, Colorado Community College System

Scott Fast, Director, Innovate + Educate

Caitlin McKinnie, Former Talent Pipeline Economist, Colorado Workforce Development Council & Colorado Department of Higher Education

Table of Contents

Table of Contents	1
Career Pathways Overview	3
Executive Summary	3
Aerospace Industry	4
Occupation Snapshot: Aerospace Engineering	4
Figure 1: Colorado Institutions of Higher Education Offering this Program	5
Figure 2: Colorado Institutions of Higher Education Offering this Program	6
Figure 3: Colorado Institutions of Higher Education Offering this Program	7
Figure 4: Colorado Institutions of Higher Education Offering this Program	8
Aerospace Pathways	8
Aerospace Occupations	10
Aerospace Competencies	11
Aerospace Work Experience, Education, and Certifications	12
Public Safety	14
Occupation Snapshot: Ambulance Services; Emergency and Other Relief Services	14
Figure 5: Colorado Institutions of Higher Education Offering this Program	15
Public Safety Pathways	16
Public Safety Occupations	18
Public Safety Competencies	21
Public Safety Work Experience, Education, and Certifications	22
Public Health	24
Industry Snapshot: Healthcare and Social Assistance	24
Education Pipeline	24
Figure 6: Colorado Institutions of Higher Education Offering this Program	25
Public Health Pathways	25
Public Health Occupations, Competencies, Work Experience, Education and Certifications	26
Summary and Opportunities	28

Career Pathways Overview

In Colorado, industry-driven, competency-based career pathways ensure that education, training, and workforce systems stay attuned and responsive to the needs of the labor market to:

- Ensure businesses have access to an appropriately skilled talent pipeline.
- Prepare students and workers with the skills and credentials they need for jobs and careers.

For additional information on career pathways as a strategy, please refer to this webpage: <https://cwdc.colorado.gov/strategies/career-pathways>. Our industry career pathways are published on a free statewide resource, [My Colorado Journey](#).

Executive Summary

The Career Pathways Annual Report for 2023-2024 focuses on three major industries in Colorado: Aerospace, Public Safety, and Public Health. The report outlines career pathways informed by labor market data and driven by industry experts to equip students and workers with the skills and credentials they need to succeed in the state's labor market.

The report highlights key themes from discussions with industry experts (employers) and public partners from education and workforce systems. It details competencies, certifications, and critical occupations derived from our quantitative and qualitative analysis. Overall, the report is meant to guide and inform the development of career pathways systems in Colorado.

Aerospace Industry

In 2023-2024, we created new industry pathways in Aerospace. The following overview information was identified by employers, public partners, the Colorado Workforce Development Council, the Colorado Community College System, Career and Technical Education partners, and the Office of Economic Development & International Trade. These new industry pathways are published on [My Colorado Journey](#) for students and job seekers to encourage a deeper exploration of occupations in the industry. Information on My Colorado Journey is based on data and discussions with industry employers and public partners from July 2023 to June 2024.

Occupation Snapshot: Aerospace Engineering

We compared statewide versus national average employment, which helps to understand if the supply of Aerospace Engineers is currently a strength or weakness for Colorado's workforce and how it is changing relative to the nation. An average area of this size would have 1,389¹ employees, while there are 3,911 here. This higher-than-expected supply may make finding candidates easier. The gap between expected and actual employment will remain roughly the same over the next five years. **Source:** Lightcast Econometric Modeling, September 2024.

This industry grew by **56%** in Colorado between 2018 and 2023 and is expected to grow by **6%** between 2023 and 2028, adding an estimated **235** new jobs.

Four higher educational programs lead to this occupation in Colorado. These include:

¹ National average values are derived by taking the national value for Aerospace Product and Parts Manufacturing and scaling it down to account for the difference in overall workforce size between the nation and Colorado. In other words, the values represent the national average adjusted for region size.

1) **Mechanical Engineering Degree.** Which is offered at eight higher education institutions in Colorado. Enrollment has increased by **14%** between 2019 and 2023. There were **1,175** graduates completing this degree in Colorado between 2019 and 2023. **78.6%** of these graduates received bachelor's degrees, and **17.4%** received master's degrees. There are currently **24,662** full- and part-time jobs offered for these types of competitors in Colorado - this level is **29%** above the national average - and has **1,838** openings per year. Figure 2 displays the completions by institution.

Figure 1: Colorado Institutions of Higher Education Offering this Program



Institution	Completions (2023)	Growth % YOY (2023)	Market Share (2023) 	IPEDS Tuition & Fees (2022)	Completions Trend (2019-2023)
 University of Colorado Boulder	396	16.1%	33.7%	\$12,590	
 Colorado School of Mines	383	6.4%	32.6%	\$20,040	
 Colorado State University-Fort Collins	192	-9.9%	16.3%	\$12,559	
 University of Colorado Colorado Springs	92	4.5%	7.8%	\$12,380	
 University of Colorado Denver/Anschutz Medical Campus	64	-13.5%	5.4%	\$9,634	
 University of Denver	37	-9.8%	3.1%	\$56,439	
 United States Air Force Academy	9	-71.0%	0.8%	N/A	
 Front Range Community College	2	Insf. Data	0.2%	\$4,126	

Source: Lightcast Econometric Modeling, September 2024.

2) **Aerospace, Aeronautical, and Astronautical/Space Engineering, General Degree.** Which is offered at two higher education institutions in Colorado. There were **535** graduates completing this degree in Colorado between 2019 and 2023, growing by **65%**. **67%** of these graduates received bachelor's degrees, and **29%** received master's degrees. There are currently **22,657** full- and part-time jobs offered for these types of competitors in Colorado - this

level is **67%** above the national average - and has **1,584** openings per year. Figure 3 displays the completions by institution.

Figure 2: Colorado Institutions of Higher Education Offering this Program

Institution	Completions (2023)	Growth % YOY (2023)	Market Share (2023) ⓘ	IPEDS Tuition & Fees (2022)	Completions Trend (2019-2023)
⊕ University of Colorado Boulder	397	6.1%	74.2%	\$12,590	
⊕ United States Air Force Academy	138	43.8%	25.8%	N/A	

Source: Lightcast Econometric Modeling, September 2024.

3) Electrical and Electronics Engineering Degree. Which is offered at seven higher education institutions in Colorado. There were **534** graduates completing this degree in Colorado between 2019 and 2023. **43%** of these graduates received bachelor’s degrees, and **51%** received master’s degrees. There are currently **25,151** full- and part-time jobs offered for these types of competitors in Colorado - this level is **53%** above the national average - and has **1,716** openings per year. Figure 4 displays the completions by institution.

Figure 3: Colorado Institutions of Higher Education Offering this Program

Institution	Completions (2023)	Growth % YOY (2023)	Market Share (2023)	IPEDS Tuition & Fees (2022)	Completions Trend (2019-2023)
☒ University of Colorado Boulder	236	65.0%	44.2%	\$12,590	
☒ Colorado School of Mines	101	-13.7%	18.9%	\$20,040	
☒ Colorado State University-Fort Collins	73	-31.1%	13.7%	\$12,559	
☒ University of Colorado Denver/Anschutz Medical Campus	62	-15.1%	11.6%	\$9,634	
☒ University of Colorado Colorado Springs	33	13.8%	6.2%	\$12,380	
☒ University of Denver	22	4.8%	4.1%	\$56,439	
☒ Colorado Technical University-Colorado Springs	7	0.0%	1.3%	\$12,696	

Source: Lightcast Econometric Modeling, September 2024.

4) Engineering, General Degree. Which is offered at nine higher education institutions in Colorado, growing by 29% between 2019 and 2023. There were **225** graduates completing this degree in Colorado between 2019 and 2023. **33%** of these graduates received bachelor’s degrees, and **56%** received master’s degrees. There are currently **57,513** full- and part-time jobs offered for these types of competitors in Colorado - this level is **45%** above the national average - and has **4,081** openings per year. Figure 5 displays the completions by institution.

Figure 4: Colorado Institutions of Higher Education Offering this Program

Institution	Completions (2023)	Growth % YOY (2023)	Market Share (2023) ⓘ	IPEDS Tuition & Fees (2022)	Completions Trend (2019-2023)
⊕ Colorado State University-Fort Collins	69	3.0%	30.7%	\$12,559	
⊕ Colorado School of Mines	40	90.5%	17.8%	\$20,040	
⊕ University of Colorado Colorado Springs	31	-32.6%	13.8%	\$12,380	
⊕ University of Colorado Boulder	26	-23.5%	11.6%	\$12,590	
⊕ Fort Lewis College	26	-10.3%	11.6%	\$9,212	
⊕ University of Colorado Denver/Anschutz Medical Campus	21	162.5%	9.3%	\$9,634	
⊕ Red Rocks Community College	5	Insf. Data	2.2%	\$4,471	
⊕ United States Air Force Academy	5	Insf. Data	2.2%	N/A	
⊕ Front Range Community College	2	Insf. Data	0.9%	\$4,126	

Source: Lightcast Econometric Modeling, September 2024.

Aerospace Pathways

The published career pathways present quantitative data updated every year for each occupation, including median annual salary, estimated average annual job openings, and estimated annual growth rate for the state and by zip code. Career pathways also provide qualitative data collected from industry experts and presented to students and job seekers. This information is intended to encourage a deeper exploration of occupations in the industry. The following high-level qualitative statements are presented on My Colorado Journey based on discussions with industry employers and public partners from July 2023 to June 2024.

- **Launchpad for Innovation:** From designing cutting-edge spacecraft to pioneering Mars exploration missions, Colorado's aerospace sector is a launchpad for innovation that pushes the boundaries of human exploration.
- **What is created here?:** Colorado's aerospace companies provide research and development, design, and manufacturing of space vehicles, satellites for communications, navigation and detection, and planetary spacecraft and launch systems.
- **Extensive Aerospace ecosystem:** Colorado has four military commands, renowned research labs, and universities, the National Center for Atmospheric Research, a spaceport (<https://coloradoairandspaceport.com/>), and hosts the annual Space Symposium (<https://www.spacesymposium.org/>).
- **Protecting our planet:** Colorado's aerospace industry isn't just about reaching into space; it's also about protecting our planet and people, with companies developing technologies to monitor weather, climate change, and natural disasters from above.
- **About this Pathway:** Colorado has a large Aerospace industry with over 240,000 employees and an average wage of \$143,000.
- **What's the big buzz in this pathway?** *Learning to fly and maintain your own drone is a fun way to learn more about aeronautics and explore potential careers. Many high schools have programs for you to do just that. If you want to understand how to get Your Future in Aerospace Off the Ground and are in the Denver area, check out Wings Over the Rockies (<https://wingsmuseum.org/education/>) programs.*
- **What types of organizations do you work for?** *America's biggest aerospace companies, like Lockheed Martin and Boeing, operate in Colorado, and many small businesses design or build specific aerospace components.*

- **Who likes to work in this industry?** *Innovators and problem solvers who thrive on the challenge of designing and developing cutting-edge technology and tackling complex projects as a collaborative team.*

Aerospace Occupations

The published occupations present information collected and edited as “occupational summaries” to students and job seekers. The following “occupational summaries” are presented on My Colorado Journey based on discussions with industry employers and public partners from July 2023 to June 2024.

- **Drone Pilot/Technician:** A drone pilot and technician is responsible for operating and maintaining unmanned aerial vehicles (UAVs), using their skills to capture aerial footage, collect data for various industries, and even assist in search and rescue missions. Some technicians build or manufacture drones. Many high schools have programs that teach you to fly and maintain your drone, potentially participating in competitions. It is a fun way to learn about aeronautics and explore potential careers. Drones are used in different industries in many ways: Construction, surveying building sites, and taking pictures of properties for sale; in agriculture, drones gather crop data to increase yields. Drones are starting to be used in delivering goods, aerial photography and filmmaking, inspecting the creation or operation of products in many industries, completing remote safety inspections, in the military obtaining video from different vantage points, and fighting fires or searching for missing persons.
- **Aerospace Technicians:** Aerospace Technicians operate, install, adjust, and maintain integrated computer/communications systems, consoles, simulators, and other data acquisition. They test and measure instruments and equipment used to launch, track, position, and evaluate air and space vehicles. They may record and interpret test data. Most companies have

multiple levels of Technicians, creating opportunities for promotions and salary increases. Employers value the critical thinking, problem-solving, and hands-on skills developed by participating in robotics competitions. There is also a need for knowledge of additive manufacturing and rapid prototyping.

- **Aerospace Engineers:** These jobs are in high demand in the Aerospace Industry. Aerospace Engineers perform engineering duties in designing, constructing, and testing aircraft, missiles, and spacecraft. They may conduct basic and applied research to evaluate the adaptability of materials and equipment to aircraft design and manufacture. They may recommend improvements in testing equipment and techniques. Employers value the critical thinking, problem-solving, and hands-on skills developed through experiences like robotics competitions. There is also a need for knowledge of additive manufacturing and rapid prototyping.

Aerospace Competencies

A competency is the capability to successfully apply related knowledge, skills, and abilities to perform functions or tasks in a defined work setting. My Colorado Journey presents competency information to students and job seekers to help them prepare for career success.

For **aerospace technicians and engineers**, employers have identified the ability to think creatively and in terms of systems-wide solutions as an essential skill.

Additional knowledge, skills, and abilities employers look for include: engineering, technology, mathematics, design, physics, computers, electronics, science, reading comprehension, operations analysis, mathematics, critical thinking, written comprehension, oral comprehension, oral expression, and deductive reasoning.

For **drone technicians**, competencies include design Thinking, Proficiency in the operation, maintenance, and repair of drone systems, electronics, mechanics,

computer systems, proficiency in CAD Design/Programming, troubleshooting skills, problem-solving techniques, safety protocols, software, and communication skills.

Aerospace Work Experience, Education, and Certifications

The following work experience and/or education were identified as valued by employers:

- Becoming an FAA-Certified **Drone Pilot**, known as a Part 107 certification, and registering your drone is an essential first step, with more advanced certifications, such as a UAS Design and Fabrication Certificate and UAS Professional Operator Certificate valued for some jobs. Many high schools have programs that teach you to fly and maintain your drone, potentially participating in competitions. Also, if you are in the Denver Metro area and want to understand how to get Your Future in Aerospace Off the Ground, check out Wings Over the Rockies programs.
- **Aerospace Technicians** can be entry-level roles, so no experience is required. However, an apprenticeship or full—or part-time work experience developing the listed knowledge, skills, and abilities is valued. Some employers expect an Associate's degree, while others expect a High school (GED) diploma, plus completion of an apprenticeship or similar work experience.
- **Aerospace Engineers** can be an entry-level role, so no experience is required. However, some employers value previous work experience as a Technician. Most employers expect a Bachelor's degree. However, some employers have a path from Technician to Engineer's Aide to Engineer. Aerospace Engineers: A Professional Engineer license (<https://dpo.colorado.gov/AES/EngineerApplications>) is highly valued by some employers.

Public Safety

In 2023-2024, we created new industry pathways in Public Safety. The following overview information was identified by employers, public partners, the Colorado Workforce Development Council, the Colorado Community College System, Career and Technical Education partners, and the Office of Economic Development & International Trade. These new industry pathways are published on [My Colorado Journey](#) for students and job seekers to encourage a deeper exploration of occupations in the industry. Information on My Colorado Journey is based on data and discussions with industry employers and public partners from July 2023 to June 2024.

Occupation Snapshot: Ambulance Services; Emergency and Other Relief Services

We reviewed statewide versus national average employment, which helps to understand if the supply of Ambulance Services and Emergency and Other Relief Services in Colorado is currently a strength or weakness for Colorado's workforce and how it is changing relative to the nation. An average area of this size would have 4,169² employees, while are 625 here. This lower-than-expected supply may make it more difficult to find candidates. The gap between expected and actual employment is expected to narrow over the next five years.

Source: Lightcast Econometric Modeling, September 2024.

² National average values are derived by taking the national value for Aerospace Product and Parts Manufacturing and scaling it down to account for the difference in overall workforce size between the nation and Colorado. In other words, the values represent the national average adjusted for region size.

This industry grew by **29%** in Colorado between 2018 and 2023 and is expected to grow by **16%** between 2023 and 2028.

Figure 5: Colorado Institutions of Higher Education Offering this Program

Institution	Completions (2023)	Growth % YOY (2023)	Market Share (2023)	IPEDS Tuition & Fees (2022)	Completions Trend (2019-2023)
⊕ Pikes Peak State College	355	-1.7%	16.2%	\$4,065	
⊕ Red Rocks Community College	283	-4.1%	12.9%	\$4,471	
⊕ Colorado Mountain College	226	-3.4%	10.3%	\$4,980	
⊕ Pueblo Community College	212	87.6%	9.7%	\$4,626	
⊕ Aims Community College	197	82.4%	9.0%	\$2,954	
⊕ University of Colorado Colorado Springs	149	5.7%	6.8%	\$12,380	
⊕ Arapahoe Community College	129	25.2%	5.9%	\$4,080	
⊕ Front Range Community College	124	-41.8%	5.7%	\$4,126	
⊕ University of Colorado Denver/Anschutz Medical Campus	102	-6.4%	4.6%	\$9,634	
⊕ Colorado State University Global	96	-17.9%	4.4%	\$8,400	

Source: Lightcast Econometric Modeling, September 2024.

There are **138** programs at **19** Colorado higher education institutions offering programs related to:

- **Criminal Justice/Law Enforcement Administration;**
- **Fire-Science/Fire-Fighting;**
- **Emergency Care Attendant (EMT Ambulance); and**
- **Emergency Medical Technology/Technician.**

Enrollment declined by **14%** between 2019 and 2023. **Between 2019 and 2023, 2,194** graduates completed these degrees in Colorado. **69.9%** of these graduates received a postsecondary award of less than one academic year, and **13.5%**

received a bachelor's degree. These types of competitors fill **147,456** full—and part-time jobs in Colorado—this level is **42%** above the national average—and have **14,621** openings annually. Figure 7 displays the leading completion rates by institution.

Public Safety Pathways

The published career pathways present quantitative data updated every year for each occupation, including median annual salary, estimated average annual job openings, and estimated annual growth rate for the state and by zip code. Career pathways also provide qualitative data collected from industry experts and presented to students and job seekers. This information is intended to encourage a deeper exploration of occupations in the industry. The following high-level qualitative statements are presented on My Colorado Journey based on discussions with industry employers and public partners from July 2023 to June 2024.

- **Safe Communities:** Public Safety includes the people who protect our neighborhoods (fire, police, and corrections) and those who work in the legal system.
- **What do they do?:** Public Safety personnel protect people and property, ensure safety and security in times of crises, save lives, and interact with both a team and members of their community.
- **Protective Services Hub:** Fremont County is a hub for correctional facilities, with four federal and six state facilities. Two federal correctional facilities are also in Englewood.
- **The next phase of service:** Having served in the military is highly valued by most Public Safety organizations.

Protective Services Pathway Specific:

- **About this Pathway:** Colorado offers diverse Protective Services career paths ranging from firefighting and emergency medical services to law enforcement, empowering individuals to make a tangible difference in their communities daily.
- **What's the big buzz in this pathway?** Protective Services jobs have many opportunities for advancement, don't require bachelor's degrees, and often have flexible work hours.
- **What types of organizations do you work for?** Most Protective Service workers work for local, state, or federal governments, though there are also jobs providing security for businesses or running your own detective agency. While we focus on state and local government jobs in this pathway, there are also jobs with Federal agencies such as the [Transportation Security Administration](#), [Department of Homeland Security](#), [Federal Bureau of Investigation](#), [Internal Revenue Service](#), the [Drug Enforcement Administration](#), etc.
- **Who likes to work in this industry?** Do you wish to use your physical and mental abilities to protect and serve your neighbors? Do you enjoy working with a team? If so, a career in Protective Services may be right for you.

Legal Pathway specific:

- **About this Pathway:** These jobs are filled with justice advocates who work tirelessly to uphold constitutional rights, fight for equality, and ensure fair representation for all Coloradans.
- **What's the big buzz in this pathway?** There are many areas of specialization in law: business and finance, defending or prosecuting criminal cases, personal rights, and many others. Which is most interesting to you?

- **What types of organizations do you work for?** Legal services are provided by corporations, large firms, and small businesses, while the court systems are run by local, state, and federal governments.
- **Who likes to work in this industry?** People who love the legal profession are investigative, curious, and enjoy debating what is right and wrong.

Public Safety Occupations

The published Public Safety occupations present information collected and edited as “occupational summaries” to students and job seekers. The following “occupational summaries” are presented on [My Colorado Journey](#) based on discussions with industry employers and public partners from July 2022 to June 2023.

Protective Services

- **Police and Sheriff’s Patrol Officers:** maintain order and protect life and property by enforcing local, tribal, state, or federal laws and ordinances. Perform a combination of the following duties: patrol a specific area, direct traffic, issue traffic summonses, investigate accidents, apprehend and arrest suspects, or serve legal processes of courts. Includes police officers working at educational institutions. Some departments run their academies (and pay those going through them), and public or private educational organizations also run them. They range in length from six months to two years. Previous experience in a Police or Sheriff’s Department is highly valued by Public Health employers when hiring an Emergency Preparedness Specialist. In the Transportation Freight pathway, this job is a feeder role into a Transportation Inspector job.
- **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. Whether you want to serve your community as a volunteer or make a career out of the fire service, working as a volunteer firefighter is a common place to start. Previous experience as a Firefighter is highly valued by Public Health employers when hiring an Emergency Preparedness Specialist. Information about wildland firefighting, including opportunities to explore jobs and gain experience, are “Green Pathways” under Forestry.

- **Detectives and Investigators:** conduct investigations of suspected violations of federal, state, or local laws to prevent or solve crimes. Detectives and Investigators can be employed by various people or organizations, including individuals, companies, lawyers, and police departments.
- **Fire Chiefs** manage and coordinate the activities of a fire department, including leading Supervisors. The fire chief has a say in various department functions, such as fire safety education, fire protection, emergency medical services, and disaster preparedness. The fire chief may provide technical assistance to the city manager or mayor and represent the fire service's interests when planning fire coverage.

Legal

- **Court, municipal, and license clerks:** perform clerical duties for courts of law, municipalities, or governmental licensing agencies and bureaus. May prepare docket of cases to be called; secure information for judges and court; prepare draft agendas or bylaws for town or city council; answer official correspondence; keep fiscal records and accounts; issue licenses or permits; and record data, administer tests, or collect fees. The [Colorado County Clerks Association](#) supports clerks who serve communities across Colorado and provides information about the various roles that county clerks fill.

- **Paralegal and Legal Assistants:** assist lawyers by investigating facts, preparing legal documents, or researching legal precedent. They research to support a legal proceeding, formulate a defense, or initiate legal action. The [Rocky Mountain Paralegal Association](#) provides a forum to gather with other paralegals.
- **Lawyers:** represent clients in criminal and civil litigation and other legal proceedings, draw up legal documents, and advise clients on legal transactions. They may specialize in a single area or may practice broadly in many areas of law. If you like speech, writing, and reading courses — law could be for you. The American Bar Association provides a list of practice specialties (<https://www.americanbar.org/topics/>) that show the breadth of potential areas of interest.
- **Law Teachers, Postsecondary:** teach law courses within a higher education environment. This includes teachers primarily engaged in teaching and those who have a combination of teaching and research skills. Career and Technical Education (CTE) faculty are also responsible for meeting postsecondary CTE program assurance requirements. Faculty may be classified as adjuncts, lecturers, professors, researchers, or tenure-track professors, depending on the institution type. Each classification has specific structures and requirements. It is best to speak with someone at the institution to understand how your interests and career goals match their faculty positions. There are a wide variety of subject areas taught by the Higher Education Faculty, and each has different salary and demand information. Select the jobs that match your subjects of interest to explore which are in demand in your region. For more information about the industries and employment covered in CTE courses, visit the [Colorado-Career-Cluster-Model page](#).

- **Judicial Law Clerks:** assist judges in court or by conducting research or preparing legal documents.
- **Judges / Magistrates** arbitrate, advise, adjudicate, or administer justice in a court of law. They may sentence defendants in criminal cases according to government statutes or sentencing guidelines, determine the liability of defendants in civil cases, and perform wedding ceremonies. A good overview of how to become a judge is at <https://www.courts.state.co.us/userfiles/file/Media/Education/38%20Takes%20to%20become%20a%20judge.pdf>. Judges must appear before the voters regularly so the voters can decide whether a judge should continue to serve.

Public Safety Competencies

A competency is the capability to successfully apply related knowledge, skills, and abilities to perform functions or tasks in a defined work setting. My Colorado Journey presents competency information to students and job seekers to help them prepare for career success. Specific knowledge, skills, and abilities are listed for each occupation in the “What Does It Take?” section of the career pathways on My Colorado Journey.

For **Police and Sheriff’s Patrol Officers and firefighters**, employers have identified public safety, security, active listening, critical thinking, operation monitoring, teamwork, community service, a strong work ethic, and physical fitness as important for success.

For **Paralegals, Legal Assistants, Clerks**, law and government, computers and electronics, reading comprehension, active listening, critical thinking, oral and written comprehension, and expression are essential for success.

For **Lawyers and Judges**, law and government, administration and management, critical thinking, active listening, oral and written comprehension and expression are essential for success.

Public Safety Work Experience, Education, and Certifications

The following work experience and/or education and certifications were identified as valued by employers:

Police and Sheriff's Patrol Officers are considered entry-level roles in law enforcement, so experience isn't required, though a candidate usually must be at least 21 years old. The required level of education and training is high school (GED) plus completion of a Police Academy. Certification requires completion of an approved training academy, passing the Colorado Peace Officer Standards Test (POST) (<https://post.colorado.gov/certification/certification-types/basic-certification>), and completing a background investigation. State law also requires the completion of a physical examination and psychological evaluation.

Firefighters previous work experience is not required, though most jobs expect you to be at least 21 years old. A high school diploma or (GED) is required. In Colorado, most candidates complete the Candidate Physical Ability Test (CPAT) to ensure they can meet the physical demands of the job and receive a passing score on the National Testing Network (NTN) FireTEAM test. Other requirements include having a valid driver's license with an acceptable driving record and passing a drug test, a background check, and a psychological exam. Some fire departments, particularly urban ones, require the completion of EMT training and certification (EMT-B). This can help you respond to medical calls and medical emergencies.

Correctional Officer/Jailer: No previous work experience is required, though most jobs expect you to be at least 20 or 21. A high school (GED) diploma is expected. Some positions expect a Bachelor's degree or related experience. No credential is

required, but for a Federal Corrections job, you must complete a background investigation and pass a physical exam.

Detectives and Investigators typically require 2-5 years of work experience as a Police Officer or related experience. This can be an entry-level job. However, you must be 21 years of age to obtain a license, and a Level 2 license requires 4,000 hours of experience, with education being able to count for some of those hours. A high school (GED) diploma is expected. However, Associate's and Bachelor's degrees are often expected and can count for part of the experience needed to advance to a Level 2 Private Investigator.

Paralegals and Legal Assistants are entry-level occupations that don't require previous work experience. While no formal education beyond High School (GED) is required, employers often expect an Associate's or bachelor's degree from an American Bar Association (ABA)- approved program or a paralegal certificate.

Lawyer: Graduation from law school, which is usually three years of school after receiving a Bachelor's degree, is expected.

Judge/Magistrate: Judges are recommended by a nominating committee and approved by the Governor. They are expected to have considerable skill, knowledge, or experience in the judicial system.

Public Health

Public Health career pathways and occupations were initially published in 2021, during the height of the COVID-19 pandemic. Post-pandemic, industry partners requested that we update the qualitative information to reflect the industry's current state. These career pathway maps are published and publicly available on [My Colorado Journey](#).

Industry Snapshot: Healthcare and Social Assistance

We compared the statewide versus national average employment, which helps to understand if the supply of Healthcare and Social Assistance in Colorado is currently a strength or weakness for Colorado's workforce and how it is changing relative to the nation. An average area of this size would have 429,052 employees, while there are 30, here. This lower-than-expected supply may make it more difficult to find candidates. The gap between expected and actual employment is expected to narrow over the next five years.

Source: Lightcast Econometric Modeling, September 2024.

This industry grew by **8%** in Colorado between 2018 and 2023 and is expected to continue growing by **9%** between 2023 and 2028.

Education Pipeline

There are **286** programs at **6** Colorado higher education institutions offering programs related to Public Health in 2023.

Enrollment for this type of program increased by **50%** between 2019 and 2023. Between 2019 and 2023, **286** graduates completed these degrees in Colorado. **85.3%** of these graduates received a master's degree, and **14%** received a bachelor's degree. These types of competitors currently fill **197,679** full—and part-time jobs in

Colorado—this level is **8%** above the national average—and have **20,328** openings per year. Figure 10 displays the leading completion rates by institution.

Figure 6: Colorado Institutions of Higher Education Offering this Program

Institution	Completions (2023)	Growth % YOY (2023)	Market Share (2023)	IPEDS Tuition & Fees (2022)	Completions Trend (2019-2023)
⊕ University of Colorado Denver/Anschutz Medical Campus	236	24.2%	82.5%	\$9,634	
⊕ Colorado State University-Fort Collins	25	25.0%	8.7%	\$12,559	
⊕ Fort Lewis College	18	12.5%	6.3%	\$9,212	
⊕ Metropolitan State University of Denver	4	Insf. Data	1.4%	\$10,260	
⊕ Western Colorado University	2	Insf. Data	0.7%	\$10,813	
⊕ Regis University	1	0.0%	0.3%	\$42,220	

Source: Lightcast Econometric Modeling, September 2024.

Public Health Pathways

The published career pathways present quantitative data updated every year for each occupation, including median annual salary, estimated average annual job openings, and estimated annual growth rate for the state and by zip code. Career pathways also provide qualitative data collected from industry experts and presented to students and job seekers. This information is intended to encourage a deeper exploration of occupations in the industry. The following high-level qualitative statements are presented on My Colorado Journey based on discussions with industry employers and public partners from July 2023 to June 2024.

- **Healthy Communities:** Public Health provides a foundation for healthier communities for everyone, everywhere. This is achieved by promoting

healthy lifestyles, reducing disease and injury risk through community-based prevention, and responding to disasters and outbreaks.

- **Generalists and Specialists:** Colorado has a wide variety of specialist and generalist positions. Some professionals are devoted to a single area or program, such as infectious disease or maternal-child health. Others may work across multiple program areas. Generalist positions are more common in smaller agencies and at leadership levels.
- **Diverse Solutions:** Healthy communities require solutions that fit the diversity of the people and environments in those communities. People from diverse backgrounds who speak multiple languages are highly valued in public health. Additionally, public health agencies often seek to hire people rooted in the communities those agencies serve. Sometimes, lived experience in priority communities can be as valuable as educational achievement.
- **A Variety of Jobs:** More information about the industry is available at the [American Public Health Association website](#) or in [a Guide to Public Health Careers](#). Find public health jobs in Colorado through the [Colorado Association of Local Public Health Officials](#) (CALPHO).

Public Health Occupations, Competencies, Work Experience, Education and Certifications

Public Health Occupations for this pathway refresh focused primarily on qualitative updates and did not significantly change the careers presented, the competencies, experience, or education and certification required. For a detailed description, please refer to the career pathways on MyColoradoJourney (<https://www.mycoloradojourney.com/customer-portal/industries/public-health>).

Summary and Opportunities

Aerospace and Public Safety are two essential industries in Colorado, and we are pleased to add these new pathways to MyColoradoJourney. Additional pathways work completed in 2023-2024 served to update Public Health pathway information previously published on MyColoradoJourney. Current quantitative data can be found in the latest [Talent Pipeline Report](#).

Pathway mapping in Aerospace identified one new pathway but highlighted a significant overlap with existing pathways in Advanced Manufacturing, Information Technology, Cybersecurity, and Business Operations. Industry feedback was clear that while Aerospace presents many great career opportunities, it also shares many occupations with these other industries.

The Aerospace industry has a higher-than-expected supply of talent, which may make finding candidates easier. The gap between expected and actual employment will remain roughly the same over the next five years. The estimated annual job openings for aerospace engineers in Colorado was 208, with a 1% yearly growth rate. In 2023, there were over 500 graduates in Colorado from aerospace engineering programs. The number of positions and the number of graduates are both higher than the national average. Aerospace companies described the demand for aerospace engineers as a high priority for relatively fewer open positions concerning the demand for aerospace technicians, depending on the size and scope of the company. Larger aerospace companies often rely on smaller manufacturing companies for specialized components and services.

Pathway mapping in Public Safety identified two new pathways and led to the addition of several new occupations within MyColoradoJourney. It also highlighted an overlap with meaningful occupations within the Public Health industry. Figures 6 and 7 show that the growth rate in this industry is leveling off and that there is a

healthy supply of program graduates. Both supply and demand are higher than the national average.

Both of these industries highlighted significant synergies between their workforce and the military and defense industries in the state, providing the opportunity to strengthen the workforce in both sectors and the career opportunities for veterans.

Stakeholder feedback was essential in accurately representing career pathways, in-demand occupations, competencies, certifications, work experience, and education in a qualitative and meaningful way for students and job seekers. Employers in these industries identify opportunities to improve the talent pipeline, including promoting career pathways to students, employers, counselors, job coaches, educators, and job seekers; building connections between funding, legislation, and employer demand for talent, such as the opportunity to enhance the military to private sector job pipeline; and mapping top job hiring demand to education and training program availability.

We thank our public and private sector stakeholders for their invaluable contributions to creating these Colorado, industry-driven, competency-based career pathways. Together, we are enabling our education, training, and workforce systems to be attuned and responsive to the labor market's needs, ensuring businesses have access to an appropriately skilled talent pipeline and preparing students and workers with the skills and credentials they need for meaningful careers.