

THE AVIATION INDUSTRY AND UA GRADUATES FAST FACTS



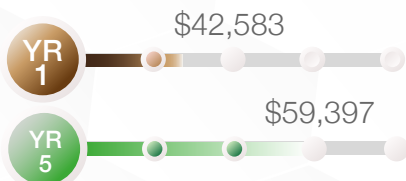
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The University of Alaska has identified 11 programs whose graduates are important to the aviation industry in Alaska. Detailed below are their employment and wage outcomes, plus other information that can be used to assess UA programs and their usefulness to one of the state's key industries.

Graduates from key UA programs

AVIATION MAINTENANCE

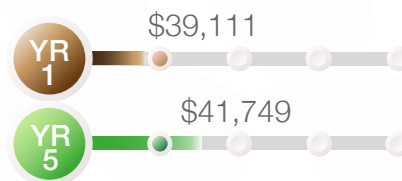
74.4% working in AK
within a year
of graduating



39.5% wage growth

PILOTING

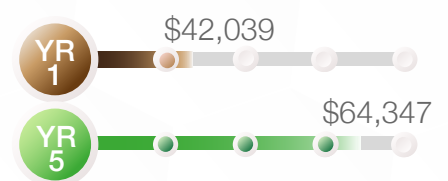
66.7% working in AK
within a year
of graduating



6.7% wage growth

AVIATION ADMINISTRATION

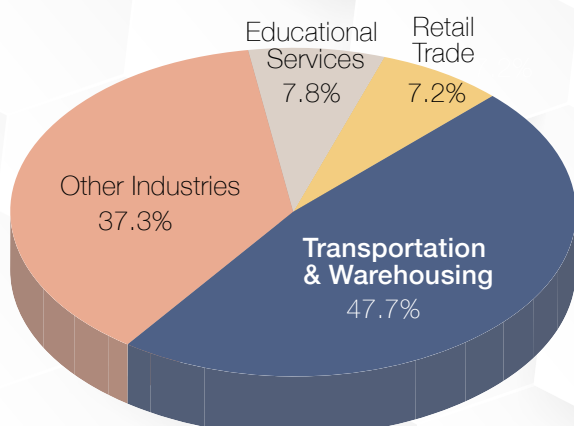
72.1% working in AK
within a year
of graduating



53.1 % wage growth

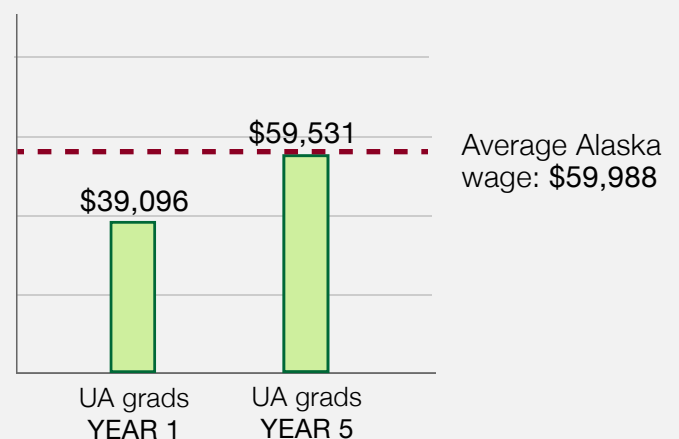
Note: Data reflects the actual employment and wage data of all graduates, and is not limited to those employed in aviation

The industries where first-year graduates work



Note: Graduates of all 11 key UA aviation programs

Program grads' average wages



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Do these programs boost the Alaska hire rate?

94.6%
of working graduates
are Alaska residents



For comparison, residency is ...

- 79.3% for all Alaska workers
- 79.6% for all aviation services workers

Over the last three years, the aviation industry hired ...

1,485 Airline Pilots, Copilots, and flight engineers

862 Aircraft Mechanics and Service Technicians

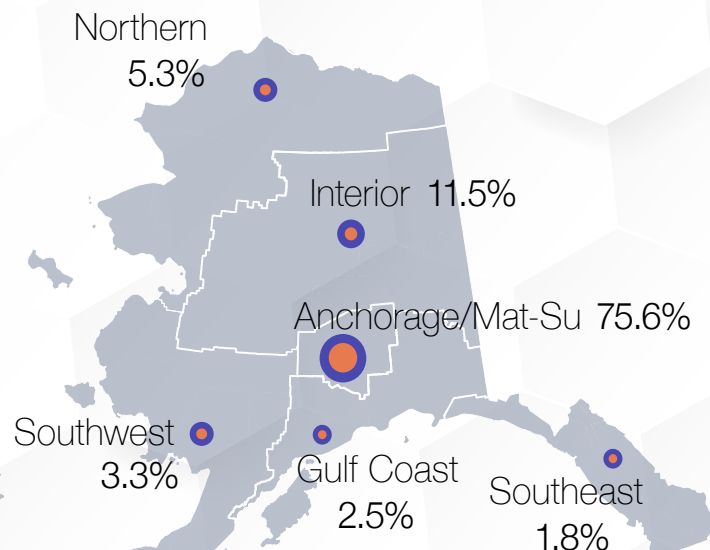
72 General and Operations Managers

44 Automotive Service Techs and Mechanics

38 Chief Executives

32 Managers, All Other

Where do UA's aviation program grads work?



Notes: These occupations have had the most hires in the past three years among occupations that require postsecondary education. Hires include all hires, not just UA grads, to identify where demand is greatest.

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More information on programs and the industry connection

The economic value of training and education is abundantly clear in the relevant data. Median earnings, for example, jump from \$35,328 for high school graduates to \$44,619 for Alaskans with an associate degree, \$57,708 for those with a bachelor's degree, and \$77,402 for holders of graduate or professional degrees. More education and training also correlate strongly with lower unemployment rates.

The University of Alaska, in an effort to highlight and enhance the relationship between its programs and key Alaska industries, has prepared data on the 11 programs that are particularly relevant to the state's air transportation industry. These include three that result in a certificate, six that result in an associate degree, and two that result in a bachelor's degree.

Over the last 10 years, 1,240 people have graduated in those programs with the following degree type:

- **Licenses and Certificates:** 327 graduates, 251 employed in Alaska within a year of their last enrollment or graduation date with average first-year wages of \$42,512 and average fifth-year wages of \$64,845
- **Associate Degrees:** 523 graduates, 392 employed in Alaska within a year of their last enrollment or graduation date with average first-year wages of \$35,193 and average fifth-year wages of \$52,301
- **Bachelor's Degrees and Above:** 390 graduates, 265 employed in Alaska within a year of their last enrollment or graduation date with average first-year wages of \$41,527 and average fifth-year wages of \$65,617

Three types of programs account for the largest share (58 percent) of graduates and warrant special mention:

- **Aviation Maintenance** (two certificates and one associate at UAA, one certificate and one associate at UAF): 355 graduates, 264 employed in Alaska within a year of their last enrollment or graduation date with average first-year wages of \$42,583 and average fifth-year wages of \$59,397
- **Piloting** (one associate at UAA and UAF): 36 graduates, 24 employed in Alaska within a year of their last enrollment or graduation date with average first-year wages of \$39,111 and average fifth-year wages of \$41,749
- **Aviation Administration** (one associate and two bachelor programs at UAA): 556 graduates, 401 employed in Alaska within a year of their last enrollment or graduation date with average first-year wages of \$42,039 and average fifth-year wages of \$64,347

The relationship between UA programs and hiring in aviation

Air transportation is critical to connecting all of the outlying villages in Alaska together, and the state to the rest of the world. Air transportation and its support services account for over a third of all transportation jobs in Alaska. Over a third of the University of Alaska aviation students found employment in the transportation and warehousing industry, which employs most of Alaska's aviation workers such as pilots and aircraft maintenance.

Attempts to precisely match the supply of graduates with the demand for certain workers by industry would be misguided, but the data shown here are appropriate for general conclusions about the benefits of certain UA programs. More importantly, this information can help facilitate conversations with key industries about how programs could be expanded, changed, or developed to provide them with more and better trained workers.

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Related questions and answers

Q: Where do the employment numbers come from?

The University of Alaska and the Alaska Department of Labor and Workforce Development's Research and Analysis Section have worked together for years to identify where university graduates are working in the state. The detailed employment and wage information comes from quarterly reports that nearly all Alaska employers are required to file under state employment insurance law. Those records do not include federal workers or the self-employed, so university program graduates in those categories are not shown here.

Q: How were the programs and target occupations selected?

The University of Alaska analyzed labor market information to determine the largest and fastest-growing occupations in the aviation industry, then linked 11 programs based on occupations' titles and characteristics. While other UA programs also provide some preparation for aviation jobs, this report excludes general administrative training programs that are useful for all sectors, such as accountants and human resource professionals.

Q: What percentage of aviation hires are UA grads?

Those types of questions can be answered only for specific program graduates or specific industry occupations, based on the long-running collaboration between the University of Alaska and the Department of Labor and Workforce Development. It's less useful to lump all the programs and degree types together.

Q: Why are more students not graduating from the professional piloting programs?

Although this report only shows 36 graduates over the past 10 years, the professional piloting programs have trained an additional 331 students during the same amount of time. Nearly 62% of these students obtained employment in Alaska within a year of training. Many students obtain the proficiencies employers need or want prior to completing their degree program.

Q: Why are the wages shown lower than other published average starting aviation salaries?

Data showing average starting salaries for certain occupations can inform prospective students about how much they can make if they find and take a job in that occupation. The wage data shown here, however, comprehensively quantify the wages actually earned by the graduates who worked all four quarters in their full first and fifth year after graduation, irrespective of what kind of job they took and whether they worked full-time, part-time, or intermittent. Both types of wage data have valid purposes and encourage additional research when they diverge.

Q: Why should students consider continuing their education to earn an associate or bachelor degree in aviation?

Wage progression tends to be higher over the long-term for associate and bachelor degree programs than for certificate programs. It's also important for potential students to consider factors besides wages when choosing a degree or training program.

Q: Are there emphasis areas embedded within degree programs that provide targeted training?

Yes, degree programs can provide options for students to specialize in an emphasis area that can enhance their education and employability. For example, the UAA Bachelor of Science in Aviation Technology has three areas of emphasis, Professional Piloting, Aviation Management, and Aeronautical Studies that provide pathways to different aviation careers.

Q: Can this information be used for program evaluation?

It can inform those types of decisions, as well as decisions about which programs to expand, but there's far more to consider than which programs have the highest earnings or best employment outcomes. Other data such as short-term and long-term industry and occupational projections, enrollment numbers, and tuition and program costs are important, and so are less formal insights and information gathered from industry and other key stakeholders. When making key decisions about university programs, it will also be important to consider the most recent developments in the economy that can't yet be measured.

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The 11 programs linked to aviation

| Target occupations | University | Major | Degree | Graduates | Employed in AK within a year | 1st-year avg wage | 5th-year avg wage |
|--|------------|-------------------------------|------------------------------|-----------|------------------------------|-------------------|-------------------|
| Airline/Commercial Pilots, Copilots, and Flight Engineers (53-2011, 53-2012) | UAA | Professional Piloting | Associate of Applied Science | 19 | 14 | \$34,442 | \$56,271 |
| | UAF | Professional Piloting | Associate of Applied Science | 17* | 10 | \$44,946 | - |
| Aircraft Mechanics & Service and Avionics Technicians (49-3011, 49-2091) | UAA | Aviation Maint - Airframe | Certificate | 83* | 62 | \$39,522 | \$58,145 |
| | UAA | Aviation Maint - Powerplant | Certificate | 67* | 52 | \$38,987 | \$60,893 |
| | UAF | Airframe and Powerplant | Certificate | 111 | 83 | \$45,465 | \$62,769 |
| | UAA | Aviation Maint Technology | Associate of Applied Science | 52 | 37 | \$42,098 | \$56,525 |
| | UAF | Aviation Maintenance | Associate of Applied Science | 42 | 30 | \$48,849 | \$56,073 |
| Airfield Operations Specialists & Transportation, Storage, and Distribution Managers (53-2022, 11-3071) | UAA | Global Log & Supply Chain Mgt | Bachelor of Business Admin. | 62* | 49 | \$55,231 | \$73,685 |
| | UAA | Aviation Administration | Associate of Applied Science | 58 | 47 | \$38,639 | \$48,544 |
| | UAA | Aviation Technology | Bachelor of Science | 275 | 187 | \$35,512 | \$64,381 |
| Air Traffic Controllers (53-2021) | UAA | Air Traffic Control | Associate of Applied Science | 293 | 219 | \$28,500 | \$52,364 |

*Program had not yet existed for 10 years

Note: Graduate numbers are for 2009 through 2018. When wages aren't shown for a program, it's because it had too few graduates.