FAST FACTS

OIL AND GAS PROGRAMS

UA GRADUATES

The University of Alaska has identified 50 programs whose graduates are important to the oil and gas 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

Working in Alaska within One Year of Graduating

(Total Graduates | % Working in Alaska)

WELDING

384 | 82.3%

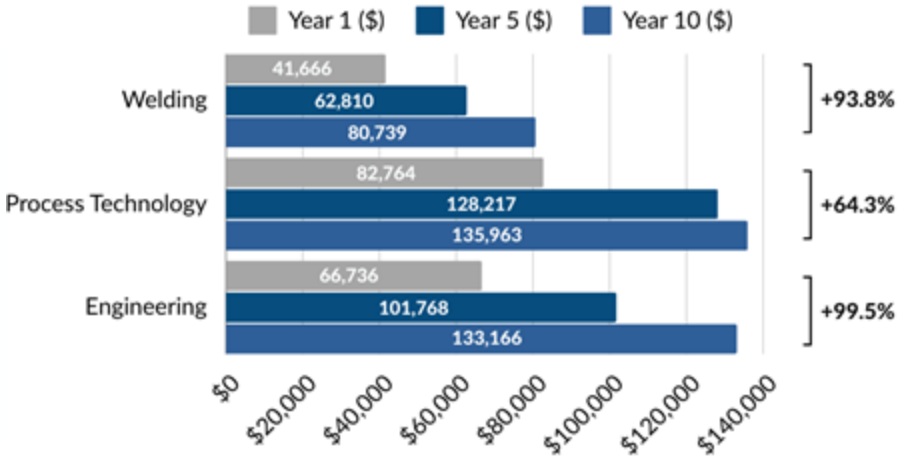
PROCESS TECHNOLOGY

732 | 86.6%

ENGINEERING

1,387 | 66.7%

Wage Growth

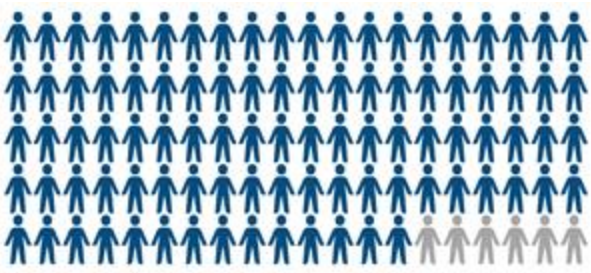


Note: Data reflects the actual employment and wage data of all graduates and is not limited to those employed in oil and gas.

UA Programs Boost Alaska's Hire Rate

93.7%

Of Working Graduates are Alaska Residents

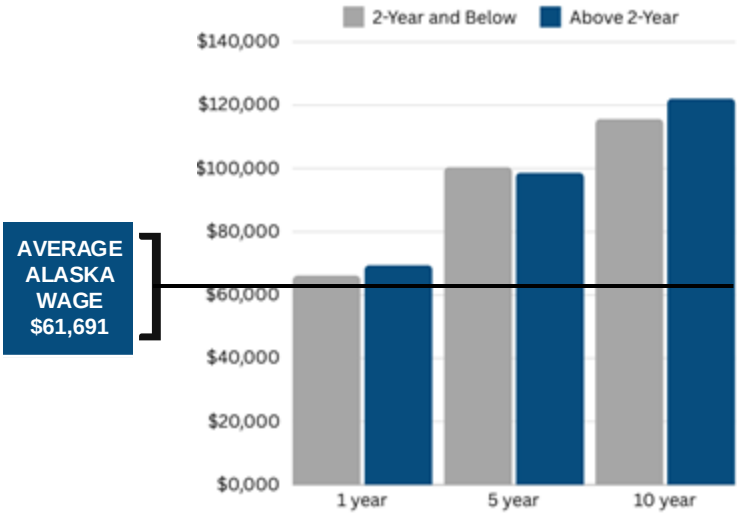


For comparison, residency is...

77.5% for all Alaska Workers

62.6% for all Oil and Gas Workers

Program Graduates' Average Wage



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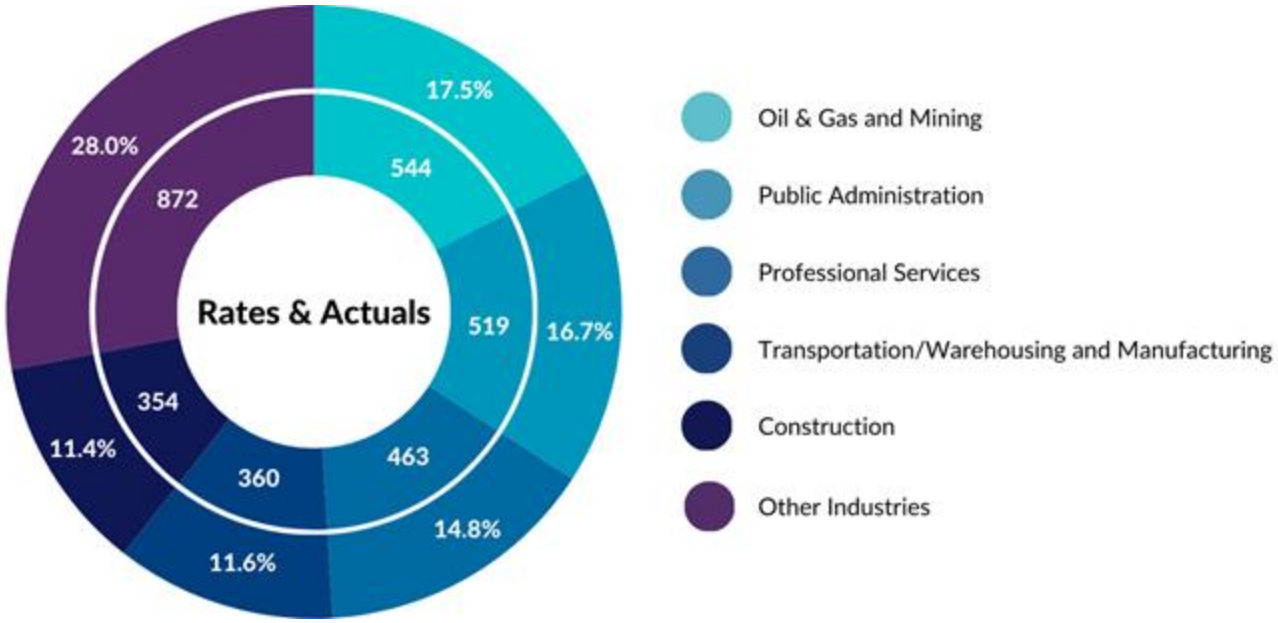
OIL AND GAS PROGRAMS

UA GRADUATES

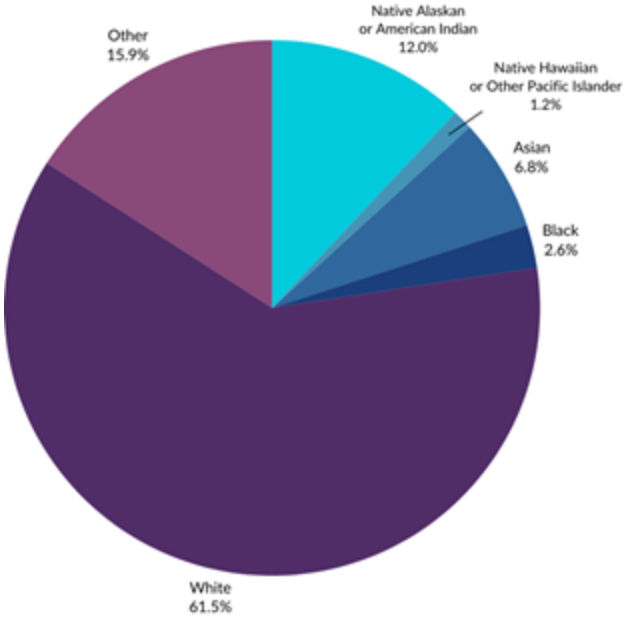
First-Year Employment and Demographic Profile

Industries Where UA Oil & Gas Program Graduates Work

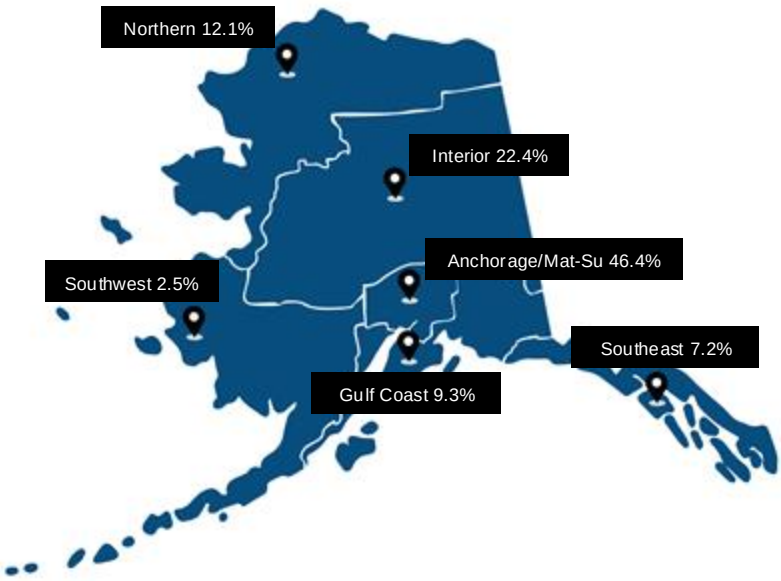


Demographics of UA Oil & Gas Program Graduates

Female 21% | Male 79%



Regions Where UA Oil & Gas Program Graduates Work



FAST FACTS

OIL AND GAS PROGRAMS

UA GRADUATES

Programs and the Industry Connection

Education pays — people working jobs in Alaska that require a high school degree earn an average of $49,525 annually, which jumps to $71,709 for jobs that require associate degrees, $91,735 for those that require bachelor degrees, and $108,113 for jobs in Alaska that require graduate or professional degrees.

The oil and gas industry has been an important economic driver for Alaska since the Trans-Alaska Pipeline System was constructed in the 1970s. Wages in the industry are among the highest in the state, and the training and education required for many oil and gas jobs also make those workers valuable to mining, construction, and transportation employers, among others.

The Department of Labor and Workforce Development's recently released long-term projections show a disproportionate number of oil and gas occupations among those expected to grow the most over the next decade. Some of that strong growth reflects the ongoing rebound from dramatic job losses during the pandemic, but some of it is driven by the large new Willow and Pikka projects on the North Slope, the first major new oil projects in Alaska in decades.

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.

Since 2013, 4,151 people have graduated from programs relevant to the state's oil and gas industry, producing the following outcomes:

Degree Type*	Graduates	% Employed in Alaska within 1 Year	Average First-Year Wage ($)	Average Fifth-Year Wage ($)	Average Tenth-Year Wage ($)
Certificate	800	84.0%	$52,299	$73,368	$88,987
Associate	1,103	84.9%	$75,596	$112,956	$126,212
Bachelor and above	2,248	68.4%	$69,415	$98,735	$122,153

*Certificates (1-2 yrs); Associate Degrees (2 yrs); Bachelor Degrees and Above (4-4+ yrs).

FAST FACTS

OIL AND GAS PROGRAMS

UA GRADUATES

Questions and Answers

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 work together each year to identify where university graduates are working in the state and what their wages are.

The detailed employment and wage information comes from quarterly reports that nearly all Alaska employers are required to file under state unemployment insurance law. Those records do not include federal workers or the self-employed, so university program graduates in those categories are not shown here.

Wages have been annualized and have been inflation adjusted to 2023 wages to make them comparable across the ten-year window of this report. Annualizing wages is a method used to calculate what the wages would be if all workers worked all four quarters in the year.

How were programs & target occupations selected?

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

Do graduates work only in the oil and gas industry?

No, they work in a variety of industries. Graduates being hired and paid well by employers in any industry indicate successful outcomes for both the program graduates and the Alaska economy.

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 is 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 is also important to consider the most recent developments in the economy that cannot yet be measured.

How long does it take to earn a certificate, associate degree, or bachelor degree?

If a student is attending classes full-time, certificate programs take less than 2 years (often 1 year or less); associate degrees are generally 2 years; bachelor degrees are four years; and advanced degrees are more than 4 years.

Why do associate degree graduates on page 3 earn more than graduates with bachelor's degrees and above?

This is a good example of the importance of the more detailed data on page 5, which show that a large number and percentage of the associate degree graduates included in the page 3 data completed process technology programs at either UAA or UAF. Those graduates had higher than average first year wages and much higher than average fifth year wages. That program has proven remarkably successful at placing graduates with Alaska employers partly because it was designed for Alaska employers.

The process technology programs are also unusual for how specifically useful they are to the oil and gas industry, where wages are especially high. Engineering graduates, for example, are employed in a wider variety of industries and are also more likely to work for federal or state governments, where wages are still relatively high, but not nearly as high as in oil and gas.

What do we know about graduates working in other states?

Over roughly the last two years, nearly 30% of oil and gas program graduates worked in other states, although they may have worked in Alaska as well. Graduates from engineering programs were especially likely to have worked in other states, often at higher salaries. UAA mechanical engineering graduates who worked out of state, for example, earned an average of $97,000 a year, while those who worked in Alaska earned an average of $82,000.

Petroleum engineering graduates, on the other hand, earned noticeably more in Alaska than they did in other states: UAF master's degree graduates in petroleum engineering, for example, earned an average of $194,000 in Alaska and $154,000 when working in other states.

FAST FACTS

Oil & Gas

UA GRADUATES

UNIVERSITY of ALASKA

50 Programs Linked to Oil & Gas

Target Occupations	University	Major	Degree	Graduates	% Employed in AK within a year	1st-year average wage	5th-year average wage
Welders (51-4121, 51-4122)	UAA	Advanced Welding	Occupational Endorsement Cert	39	76.9%	$44,787	$75,036
	UAA	Nondestructive Testing Tech	Occupational Endorsement Cert	122	85.2%	$57,753	$78,973
	UAA	Welding	Occupational Endorsement Cert	86	83.7%	$47,682	$67,890
	UAF	Entry Level Welder	Occupational Endorsement Cert	104	82.7%	$41,733	$71,872
	UAS	Welding	Occupational Endorsement Cert	168	81.5%	$34,842	$46,663
	UAA	Welding Technology	Certificate	31	83.9%	$46,440	$64,421
Engineering Technicians (17-3023, 17-3029, 17-3027, 17-3026, 17-3022)	UAF	Drafting Technology	Certificate	52	76.9%	$37,564	$62,783
	UAS	Drafting Technology	Certificate	14	78.6%	$46,674	$57,177
	UAA	Architectural & Engineering Technology	Associate of Applied Science	80	77.5%	$45,141	$63,706
Industrial & Mobile Machinery Mechanics (49-9041, 49-3042)	UAA	Millwright	Occupational Endorsement Cert	45	71.1%	$71,152	$104,007
	UAS	Power Technology	Occupational Endorsement Cert	58	84.5%	$56,364	$78,182
	UAA	Diesel Power Technology	Certificate	21	95.2%	$59,595	*
	UAF	Diesel/Heavy Equipment	Certificate	171	89.5%	$54,804	$78,032
	UAA	Diesel Power Technology	Associate of Applied Science	74	90.5%	$57,753	$93,837
	UAS	Power Technology	Associate of Applied Science	54	83.3%	$56,547	$90,670
Geological & Petroleum Technicians and Related Occupations (19-4041, 47-5013, 47-5071, 51-8093, 47-5012, 47-5099)	UAA	Petroleum Technology	Certificate	61	88.5%	$79,181	$133,268
	UAF	Instrumentation Technology	Certificate	70	88.6%	$77,139	$103,464
	UAA	Industrial Proc Instrumentation	Associate of Applied Science	65	84.6%	$80,272	$123,060
	UAA	Process Technology	Associate of Applied Science	489	88.1%	$84,238	$133,879
	UAF	Process Technology	Associate of Applied Science	196	83.7%	$74,252	$118,660
Geoscientists, Except Hydrologists/Geographers (19-2042)	UAA	Geological Sciences	Bachelor of Science	124	77.4%	$42,821	$69,512
	UAF	Geoscience	Bachelor of Science	92	75.0%	$44,013	$74,950
	UAA	Applied Geological Sciences	Master of Science	15	60.0%	$96,600	*
	UAF	Geophysics	Master of Science	26	46.2%	$37,413	$58,110
	UAF	Geoscience	Master of Science	53	62.3%	$64,165	$95,533
	UAF	Geophysics	Doctor of Philosophy	39	41.0%	$54,006	*
	UAF	Geoscience	Doctor of Philosophy	16	37.5%	$60,169	*
Architectural & Engineering Managers (11-9041)	UAA	Apprenticeship Technology	Associate of Applied Science	30	86.7%	$86,477	$100,833
	UAA	Construction Management	Associate of Applied Science	30	80.0%	$71,868	$90,604
	UAF	Apprenticeship Technology	Associate of Applied Science	11	72.7%	$90,211	*
	UAF	Construction Management	Associate of Applied Science	51	86.3%	$72,714	$76,857
	UAA	Construction Management	Bachelor of Science	180	80.0%	$81,434	$103,634
	UAA	Project Management	Master of Science	179	68.2%	$105,692	$125,101
Engineers, All Other (17-2199)	UAA	Electrical Engineering	Bachelor of Science	187	79.7%	$64,684	$90,711
	UAF	Electrical Engineering	Bachelor of Science	127	71.7%	$55,010	$93,100
	UAF	Geological Engineering	Bachelor of Science	73	78.1%	$57,947	$77,849
	UAF	Geological Engineering	Master of Science	13	61.5%	$65,106	$83,656
	UAF	Electrical Engineering	Master of Science	43	37.2%	$75,402	*
	UAF	Engineering	Doctor of Philosophy	39	43.6%	$75,525	$109,407
Mechanical Engineers (17-2141)	UAA	Mechanical Engineering	Bachelor of Science	391	70.1%	$60,851	$99,533
	UAF	Mechanical Engineering	Bachelor of Science	316	70.3%	$60,050	$91,844
	UAA	Mechanical Engineering	Master of Science	14	57.1%	$60,176	*
	UAF	Mechanical Engineering	Master of Science	37	54.1%	$55,716	$95,940
Petroleum Engineers (17-2171)	UAF	Petroleum Engineering	Bachelor of Science	149	63.8%	$88,389	$126,217
	UAF	Petroleum Engineering	Master of Science	64	35.9%	$160,956	$231,547
Surveyors and GIS Specialists (17-1022, 17-1021, 17-3031, 15-1299)	UAA	Geographic Information Systems	Occupational Endorsement Cert	8	75.0%	$55,018	*
	UAA	Geomatics	Associate of Applied Science	29	79.3%	$72,294	$86,305
	UAA	Geomatics	Bachelor of Science	117	77.8%	$66,754	$84,816
Occupational Safety & Health Specialists & Technicians (19-5011 and 19-5012)	UAA	Occupational Safety & Health	Associate of Applied Science	153	84.3%	$67,200	$75,845
	UAA	Occupational Safety & Health	Bachelor of Science	32	84.4%	$77,976	*

*Data unavailable. Program has been offered for a limited period of time, or wages are suppressed when fewer than 5 graduates are employed in Alaska.
Note: Graduate numbers are from 2013 through 2023.

This report is a collaboration among UA Workforce Development, UA Data Strategy and Institutional Research, and the Alaska Department of Labor and Workforce Development's Research and Analysis Section. For more information, visit alaska.edu/research/wd/.