

FISHERIES & MARINE SCIENCE

UA GRADUATES



The University of Alaska has identified 19 programs whose graduates are important to fisheries and marine science 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

(Rate | Actual)

MARINE BIOLOGY

73.7% | 101

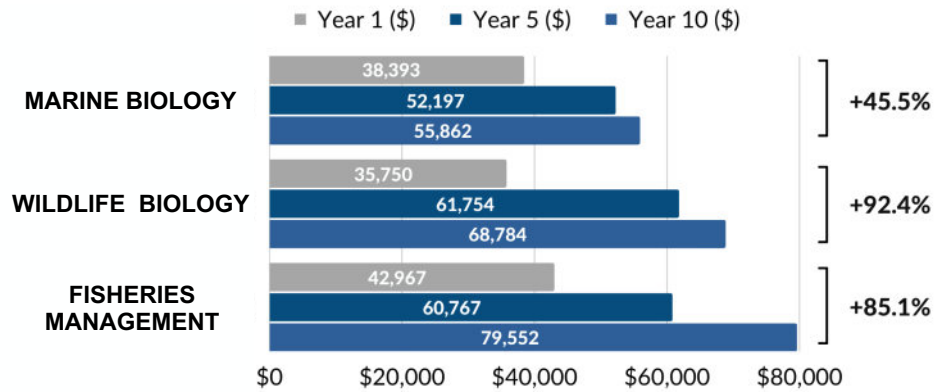
WILDLIFE BIOLOGY

74.5% | 397

FISHERIES MANAGEMENT

68.5% | 202

Wage Growth

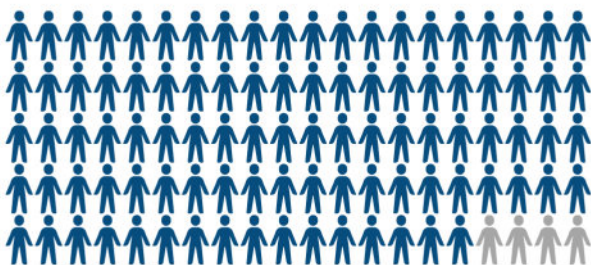


Note: Data reflects the actual employment and wage data of all graduates, and is not limited to those employed in fisheries & marine science

UA Programs Boost Alaska's Hire Rate

95.5%

Of Working Graduates are Alaska Residents

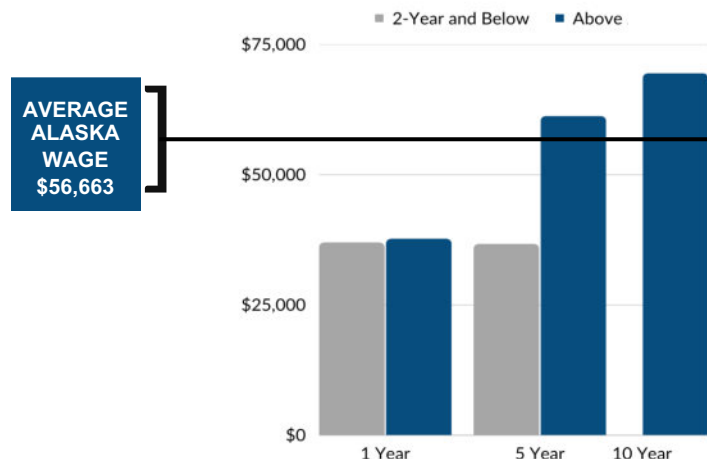


For comparison, residency is...

79.8% for all Alaska Workers

39.8% for all Fisheries and Marine Science workers

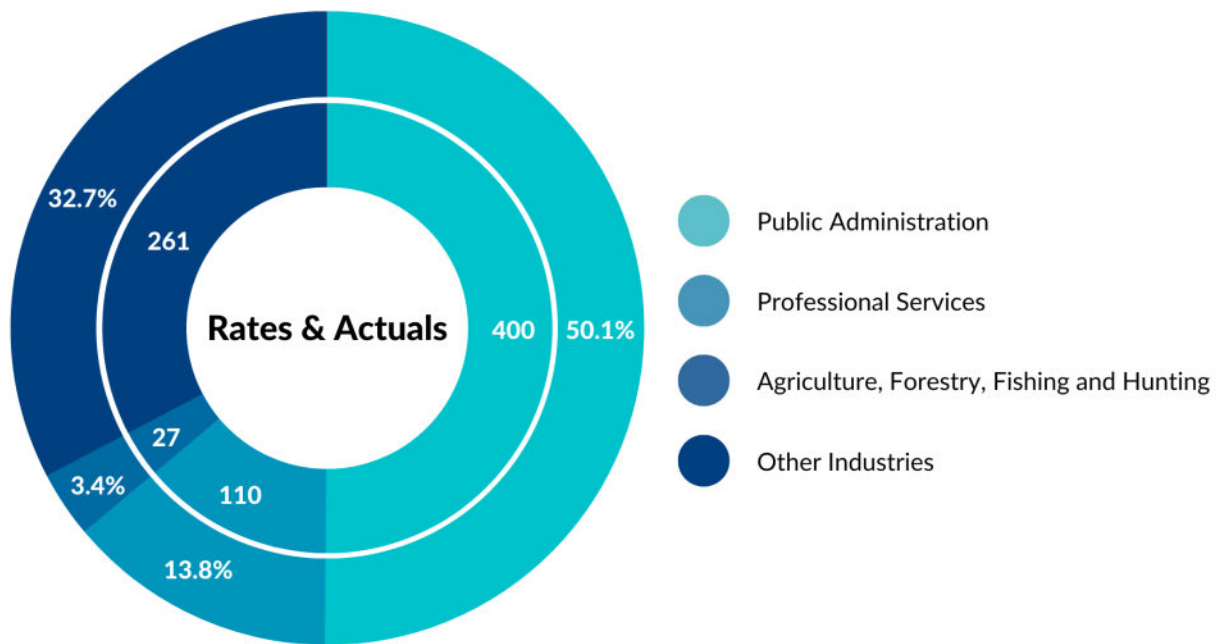
Program Graduates' Average Wage*



*10-year wage growth is unavailable for 2-year and below. See more information on page 5.



Industries Where First-Year Graduates Work

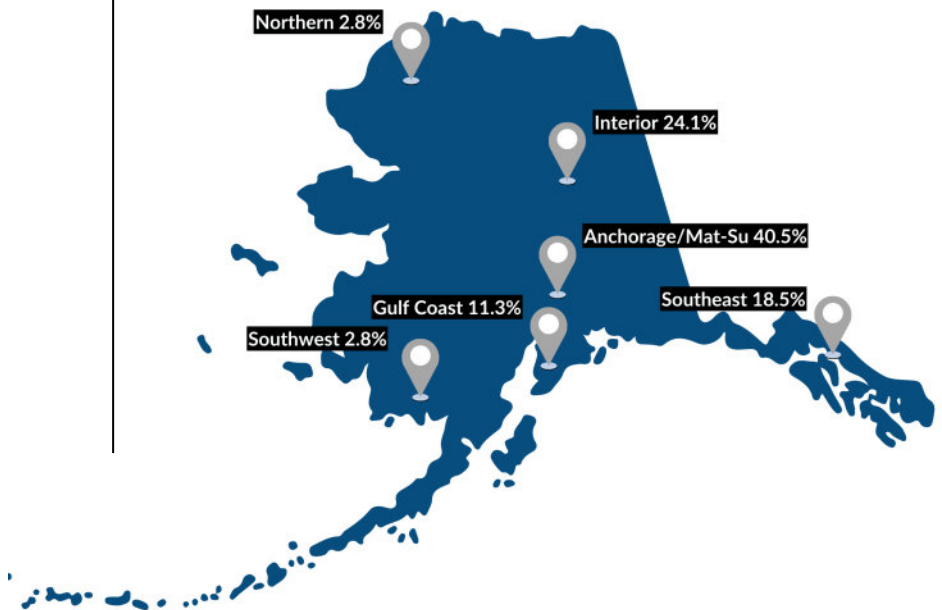


Over the last three years, the fisheries and marine science industry hired...



Note: These occupations require postsecondary education and include all hires, not just UA grads, to identify greatest demand.

Regions where UA fisheries and marine science program graduates work



Programs and the Industry Connection

Education pays — people working jobs in Alaska that require a high school degree earn an average of \$44,679 annually, which jumps to \$63,883 for jobs that require associate degrees, \$86,140 for those that require bachelor degrees, and \$102,511 for jobs in Alaska that require graduate or professional degrees.

Alaska's fisheries are a major economic force in the state, and University of Alaska programs focus on everything from fisheries management to marine biology and oceanography.

The number of job openings in Alaska has jumped by 40 percent from 2019 to 2022, and spending from the 2021 Infrastructure Act— nearly \$3 billion has already been announced so far for Alaska — will make filling high-wage jobs, most of which require postsecondary training or education, even more difficult. The state's ten consecutive years of negative net migration (more people moving out of the state than moving in) creates an additional challenge for Alaska employers looking to fill open positions. These challenges, however, create unprecedented opportunities for Alaska workers, especially those with sought-after education and training credentials.

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 2011, 1,110 people have graduated from programs relevant to the state's fisheries and marine science 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	39	74.4%	\$36,222	\$36,447	**
Associate	25	68.0%	\$37,944	**	**
Bachelor and Above	1,046	72.0%	\$37,677	\$61,189	\$69,336

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

**Wages are suppressed when fewer than 5 graduates are employed in Alaska.

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 numbers have been annualized and have been inflation adjusted to 2022 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.

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 were programs & target occupations selected?

The University of Alaska analyzed labor market information to determine the largest and fastest-growing occupations in the fisheries and marine science industry, then linked programs based on occupations' titles and characteristics. While other UA programs also provide some preparation for fisheries and marine science 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 Fisheries and Marine Science 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.

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.

19 Programs Linked to Fisheries, Seafood & Maritime

Target Occupations	University	Major	Degree	Graduates	% Employed in AK within a year	1st-year average wage	5th-year average wage
Fisheries Technology and Management: Zoologists, Wildlife Biologists, Fish/Game Wardens (19-1023, 33-3031, 19-40210)	UAS	Fisheries Management	Occupational Endorsement Cert	6	100.00%	25,671	*
	UAS	Applied Fisheries	Certificate	91	71.40%	35,484	41,804
	UAS	Applied Fisheries	Associate of Applied Science	40	70.00%	35,852	34,268
	UAF	Fisheries	Bachelor of Arts	21	81.00%	37,163	46,472
	UAF	Fisheries & Marine Sciences	Bachelor of Science	61	90.20%	33,084	48,569
	UAF	Fisheries	Master of Science	114	65.80%	46,733	66,296
Marine Biology: Zoologists, Wildlife Biologists, Fish/Game Wardens (19-1023, 33-3031, 19-4021)	UAS	Marine Biology	Bachelor of Science	74	86.50%	32,414	52,845
	UAF	Marine Biology	Master of Science	40	62.50%	41,261	50,447
	UAF	Marine Biology	Doctor of Philosophy	26	57.70%	59,209	50,569
Natural Sciences: Zoologists, Wildlife Biologists, Fish/Game Wardens (19-1023, 33-3031, 19-4021)	UAA	Natural Sciences	Bachelor of Science	364	76.90%	34,376	65,582
	UAF	Natural Resources Environment	Bachelor of Science	90	75.60%	33,029	49,789
	UAF	Natural Resources Environment	Master of Natural Resource Enviro	21	66.70%	57,644	69,721
	UAF	Natural Resources Environment	Master of Science	44	56.80%	41,549	55,273
	UAF	Natural Res. & Sustainability	Doctor of Philosophy	17	76.50%	44,114	44,251
Oceanography: Zoologists, Wildlife Biologists, Fish/Game Wardens (19-1023, 33-3031, 19-4021)	UAF	Oceanography	Master of Science	17	76.50%	38,779	*
	UAF	Oceanography	Doctor of Philosophy	13	53.80%	65,573	109,287
Conservation Scientists (19-1031)	UAF	Wildlife Biology & Conservation	Bachelor of Science	82	74.40%	25,275	53,940
	UAF	Wildlife Biology & Conservation	Master of Science	35	57.10%	36,235	59,667



*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 2011 through 2021.

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/.