



## OVERVIEW *of* UAF

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A visitor to the Fairbanks campus pauses  
before a view of the Alaska Range.

# UAF Facts and Figures

- Originally founded in 1917 when Alaska was still a territory, today UAF is America's northernmost Land, Sea and Space Grant institution.
- UAF encompasses the central campus in Fairbanks; Bristol Bay Campus in Dillingham; Chukchi Campus in Kotzebue; Interior-Aleutians Campus, covering the Interior and the Aleutian Islands; Kuskokwim Campus in Bethel; Northwest Campus in Nome; and Community and Technical College in Fairbanks.
- UAF's geographically diverse student body represents all 50 states and 48 foreign countries.
- UAF offers 170 degrees and 34 certificates in 129 disciplines.

## Degrees Conferred, Spring 2011

- 54 occupational endorsements
- 35 recommendations for education licensure
- 854 certificates and associate or baccalaureate degrees
- 245 master's and doctoral degrees

## Student Profile, Fall 2011

### ENROLLMENT

Fairbanks Campus .....	5,936
Community and Technical College .....	3,729
Bristol Bay Campus .....	889
Chukchi Campus .....	335
Interior-Aleutians Campus .....	512
Kuskokwim Campus.....	354
Northwest Campus .....	320
E-Learning and Distance Education.....	2,088
University of Alaska Fairbanks (total*) ..	11,149
* Some students attend more than one campus and are not counted twice in the total.	

• Female	59%
• Male	41%
• Alaska Native/American Indian	21%
• Undergraduate	89%
• Graduate	11%
• Median age	25

- As America's arctic university, UAF offers a number of unique programs and degrees particularly focused on the biology, climate, natural resources and peoples of northern latitudes, the circumpolar North and the Pacific rim.
- The UAF mascot is the Nanook, a derivation of "nanuq," the Inupiaq Eskimo word for polar bear. Up until the mid-70s, the men's basketball team was known as the "Flying Nanooks" because of the regular, and long, airplane rides they took in order to compete with other college teams. Since 1963 all University of Alaska Fairbanks sports teams have been called Nanooks.

## Estimated 2012 – 2013 UAF Annual Costs

	ALASKA RESIDENT	NON- RESIDENT	WUE*
<b>FRESHMEN AND SOPHOMORES</b>			
Tuition and fees** (30 credits, 100-200-level classes)	\$5,907	\$18,606	\$8,432
Room and board (double room & 19 meals/week on campus)	7,200	7,200	7,200
ANNUAL TOTAL	\$13,107	\$25,806	\$15,632
<b>JUNIORS AND SENIORS</b>			
Tuition and fees** (30 credits, 300-400-level classes)	\$6,978	\$19,677	\$10,038
Room and board (double room & 19 meals/week on campus)	7,200	7,200	7,200
ANNUAL TOTAL	\$14,178	\$26,877	\$17,238
<b>GRADUATE STUDENTS</b>			
Tuition and fees** (18 credits, 600-level classes)	\$7,842	\$15,186	
Room and board (double room & 19 meals/week on campus)	7,200	7,200	
ANNUAL TOTAL	\$15,042	\$22,386	

\* Western Undergraduate Exchange (see page 65)

\*\* Includes Wood Center student life, student government, technology, transportation, UA network, athletics, Student Recreation Center and health center fees. Does not include health insurance, books, supplies, parking, sustainability, travel, miscellaneous expenses or special costs associated with international or exchange students. Costs are subject to change.

# The UAF Experience

## UAF — Then and Now

UAF's Fairbanks campus is located four miles west of downtown Fairbanks on a low ridge overlooking the Chena and Tanana river floodplains. Artifacts found on the bluff tell us tribal groups used the hill beginning perhaps 3,500 years ago. It offered a wide view of the flats below and probably served as a base camp for hunting and gathering.

### THE EARLY YEARS

Gold discoveries in the early 1900s brought sudden changes to the Tanana Valley. In 1906 the hill where UAF now stands became part of a federal Agricultural Experiment Station, and in 1915 the U.S. Congress approved money and transferred a piece of land from this station to establish a school of higher education. The institution began as the Alaska Agricultural College and School of Mines, focusing on research and teaching in support of agriculture and mining. Two years later the Alaska Territorial Legislature added funding, and in 1922, when the first building was completed, the college opened its doors to students. In the first semester, a faculty of six offered 16 classes to a student body of 12. Commencement in 1923 consisted of a single graduate.

The institution quickly began to grow. In 1931 the federal government transferred the entire Agricultural Experiment Station to the college. In 1935 the Alaska Territorial Legislature changed the institution's name to the University of Alaska to reflect the school's expanding role in research, teaching and public service for all Alaska. By then, faculty and course offerings had grown to include liberal arts, science and engineering.

World War II brought a rapid influx of population and development to the territory. Wartime national awareness of the need for scientific polar research in the interests of defense and communications led to the establishment in 1946 of the Geophysical Institute. Since its inception, the GI has earned an international reputation for studies of the Earth and the physical environment at high latitudes. The university awarded its first Ph.D. degree to a geophysics student in 1955.

### STATEHOOD AND BEYOND

The University of Alaska had a significant role in the statehood movement of the 1950s, when the Constitutional Convention was held on campus. The Alaska Constitution was drafted in what is now Constitution Hall and signed in stately Signers' Hall, now the home of UAF student service and administrative offices. Alaska became the nation's 49th state in 1959.

Research expanded broadly in the decade of the 1960s with the establishment of institutes in several disciplines. The Alaska Legislature created the Institute of Marine

Science in 1960 and the Institute of Arctic Biology two years later. Since 1969 the Geophysical Institute has operated Poker Flat Research Range, providing launch facilities for NASA and the Department of Defense. Poker Flat is the only university-owned rocket range in the world.

In 1970 the university was designated a federal Sea Grant institution for marine research. Alaska Sea Grant develops and supports research, education, and outreach programs and partnerships to help sustain economic development, traditional cultural uses, and conservation of Alaska's marine, estuarine and coastal watershed resources. Stations in Kodiak and Juneau are also actively involved in marine and fisheries research.

In 1972 the Alaska Legislature established the Alaska Native Language Center and provided operating funds. Since then the university has supported research, documentation and teaching of the state's 20 Native languages.

To meet the need for expanding services for all Alaskans, the University of Alaska statewide system was created in 1975. Campuses in Anchorage and Juneau were assigned their own chancellors and central staffs, with the statewide administration and overall university president remaining in Fairbanks.

Meanwhile, the main campus in Fairbanks continued to expand. The University of Alaska Museum of the North, one of the state's most popular visitor attractions, moved into the Otto Geist Building in 1980. An expansion completed in 2006 nearly doubled the museum's size, and added a research center, a learning center and an Alaska art gallery. The museum's unique collection offers the public a view of the rich and varied cultures of the North.

In 1981, UAF enrollment topped 5,000 students for the first time. The university also began to emphasize its shared scholarship and global education efforts in a series of agreements with schools in Japan, Denmark, Canada, India, People's Republic of China, Russia and other countries. The institution branched out to include campuses in Bethel, Dillingham, Kotzebue, Nome and the Interior. Learning centers in other communities such as Fort Yukon, Galena, McGrath, Nenana, Tok and Unalaska provide additional education services to rural Alaskans.

UAF's public service role is filled in part by the statewide Cooperative Extension Service with its 13 district offices. Public broadcasting stations KUAC FM and AlaskaONE TV, the first public stations in the state, are headquartered at UAF.

In 1991 NASA named UAF a Space Grant institution for aerospace research, making it a Land, Sea and Space Grant institution, one of only a handful of triple-crown universities in the country.

## TODAY

UAF's colleges and schools offer degrees and certificates in 129 disciplines with a variety of vocational and technical programs. Graduate degrees are available in a wide range of academic study. UAF is internationally known for its Pacific Rim and circumpolar North research. It is consistently among the top 100 universities in the nation for funding from the National Science Foundation. UAF is the only doctoral degree-granting institution in Alaska, offering Ph.D. degrees in anthropology, indigenous studies, several of the physical and natural sciences, psychology, mathematics and engineering. Master's degrees are offered in almost 60 fields in the humanities, social sciences, northern studies, physical and natural sciences, and in professional fields such as engineering, justice, education and business administration. Interdisciplinary programs are possible for students who have a research focus in areas where UAF has faculty expertise and research facilities available.

In 2009 Alaska celebrated 50 years of statehood. The university on the hill has made important contributions to the state throughout that half-century, helping find solutions to the state's unique challenges in areas like arctic engineering, wildlife biology, health care and education. UAF helps power Alaska's economy by turning students into professionals for Alaska's workforce.

## Students

Individualism and diversity are Alaska traditions. At UAF, students find not only a broad mix of cultures and ages, but also a climate of respect for individual rights and preferences. A student from a rural Alaska village can share knowledge and insights with others from places as distant as Tallahassee or Tokyo. UAF's enrollment in the fall of 2011 was 11,149 students. Of those, 59 percent are female and 41 percent male; 89 percent are undergraduate and 11 percent are graduate students. UAF students hail from all 50 states and 48 foreign countries.

Many UAF students are "nontraditional." They study at night or after work and balance schoolwork with family responsibilities. The university offers a wide variety of evening and weekend classes. A number of students live in remote areas of the state and attend classes through distance delivery. Using computers, telephones and the latest Internet technology, students can work toward their degrees without leaving home.

Many students take advantage of UAF exchange programs to study in colleges and universities around the world, or through the National Student Exchange program, which offers studies at universities throughout the United States. There are 160 different student organizations on campus, with that number going up all the time. Students produce the weekly *Sun Star* newspaper, run KSUA, the campus radio and television station, and participate in scores of special interest groups.

## Faculty

At UAF you find faculty members who are among the best in the country, and because of the low 12 – 1 student/faculty ratio, you receive more personal attention here than you would at almost any other public university in the nation. Once you have chosen a major, you will be assigned a faculty advisor from your academic department. Your advisor will help you choose classes each semester and will explain programs and requirements. You will get to know the faculty not just as professors, but as friends, advisors and mentors. Education is an individual process, different for each person. At UAF, you will be treated as an individual, not just a face in the crowd.

## UAF's Mission

*The University of Alaska Fairbanks is a Land, Sea, and Space Grant university and an international center for research, education, and the arts, emphasizing the circumpolar North and its diverse peoples. UAF integrates teaching, research, and public service as it educates students for active citizenship and prepares them for lifelong learning and careers.*

### CORE THEMES

- **Educate:** Undergraduate and graduate students and lifelong learners
- **Research:** Create and disseminate new knowledge, insight, technology, artistic and scholarly works
- **Prepare:** Alaska's career, technical and professional workforce
- **Connect:** Alaska's Native, rural and urban communities by sharing ways of knowing
- **Engage:** Alaskans through responsive outreach for continuing education and community and economic development

## Commitment to Quality

UAF has been accredited since 1934 by the Northwest Association of Schools and Colleges. UAF acts continuously to assess and improve the educational experience for its students. Students evaluate their teachers at the end of each semester; those student opinion reports are available for review at Rasmuson Library. Faculty and administrators evaluate courses in the core curriculum every year. Each degree program and certificate is assessed at least every five years. Results are used to change and improve the education provided by UAF. The learning outcomes expected for each degree program can be viewed at [www.uaf.edu/provost/assessment-review/assessment/](http://www.uaf.edu/provost/assessment-review/assessment/).



# Campuses

## Fairbanks Campus

The 2,250-acre Fairbanks campus offers limitless opportunities for activity and recreation. The main campus has two lakes and miles of trails as well as a major student recreation complex for indoor sports. Facilities are available for basketball, volleyball, badminton, tennis, calisthenics, dance, gymnastics, judo and karate. There are rifle and pistol ranges; courts for handball, racquetball and squash; a jogging track; a swimming pool; weight training and modern fitness equipment areas; an ice arena for recreational skating and hockey; a special aerobics area; and a two-story climbing wall. UAF sponsors intercollegiate athletic teams in men's and women's basketball, men's and women's cross country running and skiing, coed rifle, men's ice hockey and women's volleyball and swimming.

The Wood Center is the focus of many extracurricular activities. With a pub, snack bar, food court, bowling lanes, conference rooms, lounge and games area, the Wood Center is a gathering place for the entire university community.

UAF has some of the best facilities in the state. Performances are scheduled almost every weekend during the academic year in Davis Concert Hall or Salisbury Theatre. The Rasmuson Library, Alaska's largest, offers extensive resource materials in print and online. An array of computer databases provides access to hundreds of academic journals, and Internet connections allow students at remote rural sites to use library resources. The UA Museum of the North is not only one of the top visitor attractions in the state but also a resource for students. Its vast collections are used for demonstration and comparative studies in classrooms and labs.

The Fairbanks campus is the statewide university system's principal research center. Internationally respected institutes provide students with an opportunity to see science in action and participate in research activities.

### FAIRBANKS AREA

Fairbanks, Alaska's second largest city, sits on the banks of the Chena River in the heart of Alaska. From the UAF campus, the downtown district is easily accessible via the local bus system and a network of bike trails. The city is steeped in a history of riverboat captains and gold seekers. Its character has been shaped by a large military presence, construction of the Trans-Alaska Pipeline and the continuing oil economy, and a thriving university. It is a city where old quietly blends with new. Striking modern buildings sit side-by-side with log cabins built in the early part of the last century.

With a population of more than 97,500, Fairbanks offers the conveniences of a big city, yet millions of acres of rolling hills and spectacular Alaska panoramas are only minutes

away. Mount McKinley or Denali (Koyukon Athabascan for "The High One"), the highest mountain in North America, is often visible from many UAF residence hall windows. Whether the sport is canoeing, climbing, running, dog mushing, skiing or fishing, nowhere else compares with Alaska.

### TRANSPORTATION TO FAIRBANKS

Fairbanks is easily accessible by land or air. Anchorage is 365 miles away via the Parks Highway or the Alaska Railroad, and Seattle is 2,300 miles away via the Alaska Highway. Major airlines offer several daily flights between Fairbanks and Anchorage, Seattle and many other destinations.

The Alaska Railroad provides a special one-way fare between Anchorage and Fairbanks for all full-time UAF students in summer or regular sessions. Students must ask for the special rate when making reservations and present their student ID to the ticket agent at check-in. For reservations, contact the Alaska Railroad at 907-458-6025 or 800-544-0552.

## Community Campuses

In addition to its main Fairbanks campus, UAF has community and rural campuses in downtown Fairbanks, Bethel, Dillingham, Kotzebue and Nome, and maintains six community centers through its Interior-Aleutians Campus in Fairbanks. These branches, part of the College of Rural and Community Development, are central to fulfilling the UAF mission of providing educational opportunities throughout the state. Credits earned at any UAF campus or center are recognized at all UAF campuses, meaning that students may change campuses and transfer all UA credits.

For more information about the College of Rural and Community Development, visit [www.uaf.edu/rural/](http://www.uaf.edu/rural/).

### BRISTOL BAY CAMPUS IN DILLINGHAM

The Bristol Bay Campus is situated in a 55,000-square-mile region bounded by Bristol Bay, the Bering Sea and the Pacific Ocean. The administrative center is located in Dillingham (about 322 air miles from Anchorage and 570 air miles from Fairbanks) with centers in King Salmon, Togiak and New Stuyahok. The Bristol Bay Campus serves 32 rural communities as far south as Ivanoff Bay, into the north at Port Alsworth, and west to Togiak.

Enrollment at Bristol Bay Campus ranges from 500 to 800 students. The campus offers an associate of arts degree in general studies and associate of applied science degrees in applied business, community health, early childhood education, human services, information technology, interdisciplinary studies, office management and technology and renewable resources. Bachelor's degrees are offered

## Troth Yeddha'

The land now occupied by the University of Alaska Fairbanks campus was called Troth Yeddha' (wild potato hill) by the Tanana Athabascans. The late Traditional Chief Peter John of Tanana Chiefs Conference of Interior Alaska said, "Our people used to come to this hill to pick Troth. They would paddle up the creek, Troth Yeddha' No, and camp by the lake, Troth Yeddha' Mena. Troth Yeddha' was important, a meeting place. The grandfathers used to come to talk and give advice to one another about what they were going to do. When they learned this place would be used for a school, the university, they came here one last time, to decide what they should do. They decided that the school would be good and would carry on a very similar traditional use of this hill—a place where good thinking and working together would happen. They placed an eagle feather on a pole. This was to let all the people know that the Dena would no longer be using the ridge for a meeting place or to pick wild potatoes. They were also giving a blessing to their grandchildren who would be part of the new school." Chief Peter John described himself and explained the gesture as "I am Bedzeyh te xwt'ana, caribou clan. My wife is Taneedzo ghetseel na, middle clan. I am proud of it. I am an Indian. What does it mean to put an eagle feather with the United States flag? The eagle feather is connected with the clan. It is a symbol of us. We are part of this new nation. People from all over the world come to the university to go to school and teach. We have something in common. Something all American people can share in. Be proud of it. Make it all the way, not just part way."

in elementary education, interdisciplinary studies, rural development and social work. Master's degrees are offered in rural development and education.

The Bristol Bay Campus also provides educational opportunities for the communities within its service area, including vocational-technical, community interest and graduate courses. Classes are offered by distance delivery (audio-conference, video-teleconference, correspondence or Internet) and by instructors using traditional methods. For more information, visit [www.uaf.edu/bbc/](http://www.uaf.edu/bbc/).

### CHUKCHI CAMPUS IN KOTZEBUE

The Chukchi Campus is located 26 miles north of the Arctic Circle on the shores of the Chukchi Sea. The campus serves Kotzebue and 10 villages in a region of more than 36,000 square miles. Chukchi offers associate of arts as well as associate of applied science degrees, and courses leading to baccalaureate degrees in education, rural development and social work. Courses are offered by local instructors and through the College of Rural and Community Development audio-conferencing and live Internet instructional systems. For more information, visit [www.uaf.edu/chukchi/](http://www.uaf.edu/chukchi/).

### COMMUNITY AND TECHNICAL COLLEGE CAMPUS IN FAIRBANKS

The Community and Technical College fulfills UAF's community college mission in the greater Fairbanks area by offering quality certificate, degree and specialized training programs. Its core purpose is to provide community-driven education to meet needs for workforce development, academic preparation and lifelong learning. CTC helps prepare Alaskans for Alaska's jobs.

CTC offers more than 40 certificate and degree programs such as allied health and nursing, process technology, applied business and accounting, paramedic and law enforcement academies, information technology, fire science, aviation, and early childhood education.

CTC benefits from strong partnerships with local employers in business, industry and organized labor. Many CTC faculty come from active workplace settings, ensuring that CTC students learn from people at the forefront of their professions.

Many CTC classes are held during evenings or weekends; the campus also offers a growing array of courses online. CTC specializes in meeting the needs of non-traditional students who have been away from college or whose work and family obligations make full-time student status challenging as well as traditional students entering college for the first time.

CTC's main campus is located at 604 Barnette Street in downtown Fairbanks. At the Student Advising and Registration Center, students can receive academic advising, register and pay for classes, and take placement tests.

Additional CTC locations in Fairbanks and other communities include:

- Automotive Technology Center: 3202 Industrial Ave.
- Bunnell House Early Childhood Lab School: 703 Chatanika Dr.
- Fairbanks Pipeline Training Center: 3600 Cartwright Ct.
- Hutchison Institute of Technology: 3750 Geist Rd.
- University Park Building: 1000 University Ave.
- Offices on Fort Wainwright and Eielson Air Force Base
- Partnership office at Delta Career Advancement Center in Delta Junction

For more information contact CTC at 907-455-2800 or visit [www.ctc.uaf.edu](http://www.ctc.uaf.edu).

### INTERIOR-ALEUTIANS CAMPUS

The Interior-Aleutians Campus in Fairbanks serves 61 towns and villages within the Doyon region and the Aleutians/Pribilof Islands, an area of about 200,000 square miles. The Interior-Aleutians Campus is the most decentralized of the UAF campuses. Although the director's office and some faculty are located in Fairbanks, there are Interior-Aleutians Campus centers in Fort Yukon, Galena, McGrath, Nenana, Tok and Unalaska. Courses are offered throughout the region via distance delivery, on site by local or visiting instructors, and by correspondence. The campus offers a range of degree programs, including associate of arts and associate of applied science in construction trades technology, educator: para-professional, rural human services, tribal management and veterinary science. Programs for math success and support for future teachers are also available. For more information, visit [www.uaf.edu/iac/](http://www.uaf.edu/iac/).

### KUSKOKWIM CAMPUS IN BETHEL

The Kuskokwim Campus is located in Bethel, and serves approximately 25,000 people in the Yukon-Kuskokwim Delta region of the state, which includes 47 remote Alaska Native Yup'ik and Cup'ik Eskimo and Athabaskan villages with 56 tribes in a 57,000 square-mile-area the size of Illinois. Bethel is a community of about 6,000 people 80 miles inland on the Kuskokwim River. The Kuskokwim Campus offers academic, vocational and community interest courses, as well as courses leading to associate, baccalaureate and master's degrees, including a bachelor's degree in Yup'ik language and culture. The Emerging Scholars Program is designed to assist all full-time freshmen in the transition to college, both academically and socially, and in the completion of certificates and degrees. Students may attend classes on campus and through distance delivery. Housing on campus is available in Sackett Hall, which provides suites with space for four students in each. For more information, visit [www.bethel.uaf.edu](http://www.bethel.uaf.edu).

### NORTHWEST CAMPUS IN NOME

Northwest Campus is located in Nome, a community of 3,500 that is the service hub for the 15 villages of the Bering Strait region. This 44,000-square-mile region extends from Shishmaref on the northern edge of the Seward Peninsula to Stebbins on the southern rim of Norton Sound. It includes communities on St. Lawrence and Little Diomed islands. The area contains 570 miles of coastline, which includes all of Norton Sound and portions of the Bering Sea and Arctic Ocean.

The Northwest Campus serves a total population of nearly 10,000. Certificates and associate, bachelor's and master's degrees are offered to the region's residents, with courses taught both traditionally and by distance delivery. Affiliated learning centers are located in the communities of Shishmaref and Unalakleet. The campus responds to vocational, business development, cultural preservation and academic needs of the Bering Strait region. Many courses, programs and degrees are offered in cooperation with regional health and tribal organizations, school districts and corporations. For more information, visit [www.nwc.uaf.edu](http://www.nwc.uaf.edu).

### E-LEARNING AND DISTANCE EDUCATION

UAF has been a leader since 1963 in offering courses and programs for students throughout Alaska and the world. UAF e-Learning and Distance Education offers more than 180 courses in 43 disciplines. About 90 percent of the courses are offered online — often called e-learning — and a small selection are offered as print-based courses. Internet-based e-learning provides an opportunity for students to further their education without the constraint of classroom attendance. EDE courses are academically rigorous and will count toward degree programs.

For more information contact e-Learning and Distance Education at 2175 University Avenue South in Fairbanks, by phone at 800-277-8060 or 907-479-3444, via email at [distance@uaf.edu](mailto:distance@uaf.edu) or at <http://distance.uaf.edu>.

# Colleges and Schools

UAF colleges and schools offer programs leading to occupational endorsements, certificates and associate, bachelor's and master's degrees in the arts, sciences and professions. Doctoral programs are available in areas of particular strength, such as sciences and mathematics.

## EDUCATION

The School of Education prepares professional educators for Alaska's unique geographic, cultural and linguistic conditions. Course work and fieldwork in a broad range of undergraduate and graduate programs are available to students on the Fairbanks campus and by distance delivery to rural areas. Programs offered respond to recent standards developed by the National Council of Accreditation of Teacher Education and the Alaska Teacher, Student and Cultural Standards.

Undergraduate degree programs and post-baccalaureate endorsement programs lead to state of Alaska teaching certificates in elementary and secondary education. Our guidance and counseling program leads to a master's degree and a state of Alaska "Type C" certificate. Professional development programs leading to master of education degrees include counseling, cross-cultural education, elementary, secondary, special education, and curriculum and instruction.

School of Education staff and faculty work closely with colleagues at the CRCD campuses and school districts across the state to prepare well-qualified pre-service educators and offer professional development opportunities to practitioners. Faculty research focuses on issues of formal and non-formal education related to Alaska Native people and communities, cross-cultural contexts, distance education, indigenous populations and rural issues.

The School of Education Advising Office offers experienced, full-time personnel who provide advice about SOE programs on a drop-in or appointment basis and provide appropriate referrals for financial aid and other information that students and interns need. School of Education rural grants, in partnership with rural school districts and UAF community campuses, provide various types of support for rural and Alaska Native students seeking to become teachers, counselors and school leaders. For more information, call 907-474-7341 or visit [www.uaf.edu/educ/](http://www.uaf.edu/educ/).

## ENGINEERING AND MINES

The College of Engineering and Mines includes the academic departments of civil and environmental engineering, computer science, electrical and computer engineering, mechanical engineering, mining and geological engineering, petroleum engineering and the research arm of the unit, the Institute of Northern Engineering. INE houses the Advanced Materials Group, the Alaska Center for Energy and Power, the Alaska University Transportation Center,

the Mineral Industry Research Laboratory, the Petroleum Development Laboratory and the Water and Environmental Research Center.

CEM offers students a challenging academic experience that will allow them to contribute, compete and succeed in today's global economy. The college offers programs leading to undergraduate and graduate degrees in civil engineering, computer engineering, computer science, electrical engineering, arctic engineering, engineering management, environmental quality engineering, environmental quality science, geological engineering, mechanical engineering, science management, mining engineering, mineral preparation engineering and petroleum engineering. An engineering Ph.D. program is also offered.

The baccalaureate degree programs in civil, electrical, geological, mechanical, mining and petroleum engineering, and computer science are accredited by ABET.

CEM's academic programs provide a basis for advanced study or specialized careers. CEM students benefit from small class sizes through increased interactions with faculty and other students and excellent access to instructional laboratories. The college provides opportunities for undergraduate and graduate students to participate in research. Theoretical and practical hands-on knowledge, in tandem with discipline-related research, provides CEM students with the expertise and training they need for their chosen career path.

CEM departments are active in outreach activities such as Engineering Week, the Alaska Summer Research Academy, the Alaska Native Science and Engineering Program, educational workshops, the fundamentals of engineering examination review course and a range of short courses for the professional engineering community. Visit [www.uaf.edu/cem/](http://www.uaf.edu/cem/) or call 907-474-7730 for more information.

## FISHERIES AND OCEAN SCIENCES

The School of Fisheries and Ocean Sciences is responsible for statewide academic, research and service programs relating to Alaska's marine and freshwater environments and fisheries.

SFOS offers a minor, bachelor of science and bachelor of arts in fisheries, and a minor in marine sciences. Fieldwork opportunities are available to undergraduate students through cooperating state and federal agencies and internships are available with non-profit and industry fishery partners. Fisheries majors are prepared for graduate study or to enter management, private industry or other fields.

SFOS offers master of science and doctoral degrees in oceanography, marine biology and fisheries. Students can also pursue studies in seafood science through the fisheries program. Graduate students prepare for careers in university research and education, or research or management



with state and federal agencies and private industry. As part of their degree programs, graduate students conduct research in collaboration with faculty, often in remote locations around Alaska and beyond.

Marine education, research and extension work are conducted through departments that make up SFOS. The Institute of Marine Science, with major laboratory facilities in Fairbanks, focuses on oceanographic and marine biological research and graduate education. The Kasitsna Bay laboratory near Homer is the site for coastal research on intertidal and subtidal communities. The Global Undersea Research Unit in Fairbanks emphasizes the use of submersibles, remotely operated vehicles and other undersea observing systems. The Juneau Center, located adjacent to the NOAA Fisheries Auke Bay laboratory, focuses on fisheries research and education. The Kodiak Seafood and Marine Science Center is focused on research and extension work in seafood science and sustainable harvest technology. The Marine Advisory Program offers statewide public education and outreach from its offices in Anchorage and coastal communities. SFOS will also operate the oceanographic vessel *Sikuliaq*, which will be the only research ship in the United States capable of working in the ice-laden waters of polar regions. *Sikuliaq* is scheduled to begin operations in 2014 and will be based in Seward, Alaska.

For more information, visit [www.sfos.uaf.edu](http://www.sfos.uaf.edu) or call 907-474-7824.

### GRADUATE SCHOOL

UAF offers professional licenses, graduate certificates, master's degrees and the doctor of philosophy degree in a number of areas. The Graduate School also manages UAF's unique interdisciplinary program where students can work on individualized degrees related to current issues. See the graduate degree requirements and specifics on programs offered.

The Office of the Graduate School provides information and assistance for prospective and current graduate students, including orientation, teaching assistant training and several scholarship and fellowship programs. Information can be found at [www.uaf.edu/gradsch/](http://www.uaf.edu/gradsch/) or by calling 907-474-7464.

### LIBERAL ARTS

As one of the largest colleges at Alaska's research university, UAF's College of Liberal Arts supports scholarship that furthers understanding of Alaska and the circumpolar region in a changing global context. Extensive research and creative work informs our teaching to provide students with opportunities to become knowledgeable in and across the arts and humanities, social and behavioral sciences; to develop expertise in specific areas of concentration; and to participate in exciting research both as a graduate student and as an undergraduate. The college provides learning opportunities beyond the classroom that foster responsibility, understanding of vital issues and commitment to place. Core curriculum courses provide breadth to the general education of all UAF undergraduates, while liberal arts undergraduate and graduate programs ground

students in their disciplines. More information is available at [www.uaf.edu/cia/](http://www.uaf.edu/cia/) or by calling 907-474-7231.

### MANAGEMENT

School of Management undergraduate programs in accounting, business administration, economics and emergency management provide the foundation for professional careers in private and public organizations of all sizes. The school's objective is to prepare literate, articulate and broadly educated business generalists with special knowledge about Alaska, the Pacific Rim and the circumpolar North. Three degree programs — the bachelor of business administration, the B.B.A. concentration in accounting and the master of business administration — are nationally accredited by the Association to Advance Collegiate Schools of Business. Only 175 of 607 accredited member institutions of the AACSB have additional specialized accreditation for their accounting programs. All degree programs cover problems and circumstances appropriate to Alaska. These include entrepreneurship, human resource management, international business, regulation, financial institutions and markets, natural resource economics, and a comprehensive professional program in accounting. Additional information is available at [www.uaf.edu/som/](http://www.uaf.edu/som/) or by calling 907-474-7461.

### NATURAL RESOURCES AND AGRICULTURAL SCIENCES

Graduates of the School of Natural Resources and Agricultural Sciences use their academic training to facilitate the wise management of renewable resources. Undergraduate programs lead to bachelor's degrees in geography with options in circumpolar North and Pacific Rim studies, environmental studies, landscape analysis and climate change studies, and geospatial sciences, or in natural resources management with options in humans and the environment, high-latitude agriculture and forest sciences. The forest sciences option is accredited by the Society of American Foresters, which is recognized by the Commission on Recognition of Postsecondary Accreditation as the specialized accrediting agency for forestry in the United States.

Graduate students may earn master of science degrees in natural resources management or natural resources management and geography. A doctorate in natural resources and sustainability is also available.

Faculty and students conduct research at the Agricultural and Forestry Experiment Station, which includes research centers and experiment farms in Fairbanks and Palmer, the Forest Soils Laboratory in Fairbanks, and field sites around the state. SNRAS developed its courses and programs in close cooperation with many university units, private industry, and local, state and federal agencies. These cooperative arrangements provide students with opportunities for fieldwork and internships in the degree options listed above, as well as in outdoor recreation, water resources management, park and wilderness management, geographic information systems and research planning and administration. For more information visit [www.uaf.edu/snras/](http://www.uaf.edu/snras/) or call 907-474-5276.

## NATURAL SCIENCE AND MATHEMATICS

The College of Natural Science and Mathematics offers undergraduate and graduate degrees in the physical and life sciences, statistics and mathematics. CNSM provides most UAF undergraduate courses in science and mathematics, including the baccalaureate core science curriculum and a variety of outreach programs. The college is known for use of modern teaching technologies, access to professors and quality undergraduate student advising. CNSM also offers minors in each of its major disciplines.

Academic programs are designed to provide a foundation for professional careers or advanced study. CNSM majors enjoy close working relationships with faculty and other students. The college provides opportunities for undergraduate and graduate students to work with faculty on research projects. Unique opportunities are available through UAF research centers and institutes, including the Engineering, Science and Technology Experiment Station, the Geophysical Institute, the Institute of Arctic Biology, the UA Museum of the North and the International Arctic Research Center.

CNSM also hosts the Alaska Summer Research Academy, the Alaska Native Science and Engineering Program and Girls on Ice. In these and other programs, high school and university students work with CNSM faculty on original research projects aimed at improving the quality of life in Alaska. The fundamental knowledge gained through courses and working on practical, discipline-related projects provides CNSM graduates with the skills and experience they need to enter the job market or continue their education.

At the graduate level, CNSM offers master of science and master of arts in teaching degrees in the natural sciences and mathematics. These advanced programs provide students with research opportunities in laboratory and field settings throughout Alaska. Doctoral programs offered by CNSM departments provide opportunities for advanced study leading to academic and professional positions. For more information, visit [www.uaf.edu/cnsm/](http://www.uaf.edu/cnsm/) or call 907-474-7608.

## RURAL AND COMMUNITY DEVELOPMENT

The College of Rural and Community Development focuses on the needs of non-traditional students, including students who seek skills and degrees suited to the economy and well-being of rural communities. CRCDD promotes workforce preparation, economic development, lifelong learning and community development. CRCDD campuses provide general and vocational/technical education at the certificate and associate degree levels, baccalaureate and graduate degrees in rural development, and, in cooperation with the College of Liberal Arts and the School of Education, baccalaureate and graduate degrees in cross-cultural studies, education and social work. In addition, CRCDD offers workshops, continuing education and short-term courses, developmental studies, credit for prior learning and other non-degree-oriented services.

CRCDD community campuses include Northwest (Nome), Kuskokwim (Bethel), Bristol Bay (Dillingham), Chukchi (Kotzebue), Interior-Aleutians (Fairbanks, which administers six centers throughout the Interior and the Aleutian Islands), and the Community and Technical College (downtown Fairbanks).

CRCDD serves nearly two-thirds of Alaska, encompassing 160 primarily Alaska Native arctic, subarctic and coastal communities. At least 16 indigenous languages are spoken in the region served by CRCDD, and the economy spans subsistence hunting and fishing, small-scale village development and cooperatives, and large-scale international corporate development. The College of Rural and Community Development focuses on responding to students and partners to develop the economic and social well-being of Alaska Native communities and beyond. For more information, visit [www.uaf.edu/rural/](http://www.uaf.edu/rural/) or call 907-474-7143.

# Research Institutes, Centers and Consortia

UAF's location in Interior Alaska provides easy access to glaciers, permafrost, the Pacific and Arctic oceans, and other elements of a subarctic climate. Accordingly, several research centers and academic departments focus their scholarly work on issues particular to the North. These include the environmental impact of human activities, development of renewable and nonrenewable resources and energy sources, and the understanding and preservation of indigenous northern peoples and cultures.

The vice chancellor for research oversees all university research activities, with primary responsibility for overseeing the university's research mission. The Center for Research Services directs the development of university research policies and oversees sponsored programs, research integrity, and intellectual property and licensing.

Assistantships are available for graduate students working on research with faculty in many research institutes and centers. Each researcher has a joint appointment with an academic department. Any student interested in specific faculty research projects and the availability of assistantships should contact the appropriate academic department.

## AGRICULTURAL AND FORESTRY EXPERIMENT STATION

The Agricultural and Forestry Experiment Station conducts research to enhance the quality of life in Alaska through development of natural, economic and human resources. Research emphasizes factors typical of high latitudes and is designed to provide the information and technology needed to manage renewable resources for the economic and social well-being of Alaskans. This work includes studies of natural and manipulated ecosystems, sustainable soil productivity, food security, genetics for improved plant and animal productivity and enhanced livestock production. Additional research involves economic and legal aspects of resource use, silviculture and forest management, resource use for tourism and recreation, and education and communications in resources management. UAF soil scientists are part of an international team studying the carbon flux in arctic tundra soils as it affects global change.

AFES, in cooperation with state and federal agencies, conducts research at centers in Fairbanks, Palmer, Delta Junction and Nome. AFES faculty have a leadership role in the Long-Term Ecological Research program funded by the National Science Foundation. This research, which is determining the structure and function of northern boreal forest ecosystems, forms the basis for sustainable forest management practices.

AFES faculty at the Fairbanks research center represent the disciplines of agronomy, animal science, economics, food science, forestry, horticulture, land use planning, outdoor recreation, plant pathology, resource policy and law, and soil science. The Palmer research center supports faculty in agronomy, horticulture, range

science and soil science. For more information, visit [www.uaf.edu/snras/afes/](http://www.uaf.edu/snras/afes/) or call 907-474-7083.

## ALASKA COOPERATIVE FISH AND WILDLIFE RESEARCH UNIT

The Cooperative Fish and Wildlife Research Unit is jointly sponsored and financed by UAF, the U.S. Geological Survey, the Alaska Department of Fish and Game, the U.S. Fish and Wildlife Service and the Wildlife Management Institute. The unit supports and guides graduate training in fishery and wildlife biology and management.

Fisheries research focuses on the ecology and fisheries of Alaska fresh water ecosystems, and evaluation and development of cold-water fisheries techniques. Wildlife research is directed toward habitat relationships, avian ecology, wildlife population dynamics, and the impact of northern development on wild animals and their habitats. For more information, visit [www.akcfwru.uaf.edu](http://www.akcfwru.uaf.edu) or call 907-474-7661.

## ALASKA NATIVE LANGUAGE CENTER

The Alaska Native Language Center was established by state legislation in 1972 to document and preserve the 20 Indian, Aleut and Eskimo languages in Alaska. It is the major center in the United States for the study of Eskimo and Northern Athabaskan languages. ANLC publishes its findings in dictionaries, grammars, story collections and research papers. The center's library houses a valuable collection of manuscript materials in and on Alaska Native languages, including word lists and documentation dating to the late 1700s. The ANLC library is available for use by scholars and students.

As part of the College of Liberal Arts, ANLC's teaching program offers a B.A. in Yup'ik or Inupiaq Eskimo, an A.A.S. degree or certificate in Native language education and special classes in language literacy. A career ladder program trains current and future bilingual educators to teach Native languages in the public schools. For more information, visit [www.uaf.edu/anlc/](http://www.uaf.edu/anlc/) or call 907-474-7874.

## ALASKA QUATERNARY CENTER

The Alaska Quaternary Center, established in 1982, is a focal point for interdisciplinary Quaternary studies and research at UAF. The Quaternary period spans the past two million years, a time of glacial-interglacial climate oscillations, floral and fauna migrations, mammalian extinctions and human evolution. Quaternary studies thus encompass scientific investigations of geologic, climatic, biologic and human systems of the past and present. The AQC comprises researchers in the anthropology, biology and wildlife, and geology and geophysics departments, the School of Natural Resources and Agricultural Sciences, the Institute of Marine Science, the Institute of Arctic Biology and the Geophysical Institute.

The AQC is housed within the Department of Geology and Geophysics and the College of Natural Science and Mathematics. The center sponsors seminars and workshops and hosts visiting speakers from countries throughout the world. Quaternary scholars from UAF regularly collaborate with Canadian, Russian and European colleagues conducting research in Alaska, Siberia and the Yukon, as well as Africa, Mongolia and western Europe. The AQC plays an important role in northern science during this time of increasing interest in studies of global change, biodiversity and other aspects of arctic climates and ecosystems. For more information, call 907-474-5033 or visit [www.uaf.edu/aqc/](http://www.uaf.edu/aqc/).

### **ALASKA SEA GRANT**

Alaska Sea Grant supports coastal communities through research, education, and extension. ASG is funded by UAF and the National Oceanic and Atmospheric Administration with support from Alaska partners. We fund marine and coastal research, provide education and extension services to communities around the state, and distribute information about Alaska's seas and coasts through our online bookstore and regional offices. ASG is housed in the UAF School of Fisheries and Ocean Sciences, with headquarters in Fairbanks.

The ASG Marine Advisory Program provides outreach and technical assistance services to coastal communities statewide. MAP agents and specialists located in nine coastal communities provide a direct link between UAF and coastal residents, helping people learn about, wisely use and conserve Alaska's marine and coastal resources.

ASG communication specialists, located at ASG headquarters in Fairbanks, annually produce and distribute thousands of educational products about Alaska's seas and coasts, aimed at everyone from children to scientists and policy makers.

ASG conducts meetings to facilitate information sharing among scientists, policy makers, and constituents, including the international Lowell Wakefield Fisheries Symposium Series. ASG also recruits students to compete for career-building national fellowships. For more information, visit [www.alaskaseagrant.org](http://www.alaskaseagrant.org) or call 907-474-7086.

### **INSTITUTE OF ARCTIC BIOLOGY**

The Institute of Arctic Biology is Alaska's principal research and educational unit for investigating high-latitude biological systems and providing policy makers necessary knowledge to interpret, predict and manage biological systems through integration of research, student education and service to Alaska and the nation.

Scientific research by IAB faculty, postdoctoral fellows and graduate students focuses on wildlife, including caribou, moose, waterfowl, game birds and polar bears; conservation biology addressing shorebirds; ecology, biogeochemistry, ecosystems and modeling of boreal, stream and arctic landscapes; climate change; physiology including hibernation and thermogenesis; evolutionary biology; human, plant and animal genetics; toxicology and infectious diseases; plant-animal interactions; biomedicine

and human health disparities in a community-based and participatory paradigm, nutrition and physical activity.

IAB, established by the Alaska Legislature and the UA Board of Regents in 1962, is a world leader in arctic research and is an academic gateway to study of the circum-polar Arctic. IAB administers several specialized research programs and facilities. The Toolik Field Station is an internationally recognized arctic research station hosting hundreds of scientists from around the world each year. The Resilience and Adaptation Program prepares graduate students, scholars, policy-makers and managers to address issues of regional sustainability. The Center for Alaska Native Health Research investigates weight, nutrition and health in Alaska Natives. The Alaska Cooperative Fish and Wildlife Research Unit promotes research and graduate student training in the ecology and management of fish and wildlife. The Bonanza Creek Long-Term Ecological Research program focuses on the long-term consequences of climate change and disturbance in Alaska boreal forests. The Alaska Geobotany Center is dedicated to understanding northern ecosystems through the use of GIS, remote sensing and field experiments.

The Large Animal Research Station maintains colonies of muskoxen, caribou and reindeer for research and public education. The Alaska Basic Neuroscience Program studies mechanisms of neuroprotective adaptations. The Spatial Ecology Lab provides state-of-the-art spatial analysis of ecological data and development, testing and application of spatially explicit ecological models. IAB's research greenhouse provides a year-round environment for research and education. The Core DNA Lab keeps UAF at the cutting edge of molecular analysis. IAB animal quarters provide holding and experiment facilities for small animals. For more information, call 907-474-7412 or visit [www.iab.uaf.edu](http://www.iab.uaf.edu).

### **ARCTIC REGION SUPERCOMPUTING CENTER**

The Arctic Region Supercomputing Center is the university's high-performance computing and massive data storage facility, providing the advanced tools scientists and engineers need for computationally based problem-solving. ARSC provides web-based interfaces to scientific data. The center's petabyte-scale storage facilities and supercomputers are capable of performing trillions of calculations per second and are open to use by any UAF affiliate. ARSC is funded through a variety of university sources.

Cyberinfrastructure provided by ARSC supports computational research in science and engineering with an emphasis on high latitudes and the Arctic. ARSC is an active collaborator with users and parallel computing experts worldwide to provide early adoption and assessment of next generation technologies. ARSC actively partners with UAF research institutes for grant-seeking and publication, mentoring graduate and undergraduate students and providing internships. Scientific specialists and technical staff at ARSC provide in-depth assistance and training for new and existing HPC users, tailored consulting and support for successful use of ARSC resources to address



problems requiring solutions beyond the capabilities of conventional computers.

ARSC supports university courses in computer art, computational science and other disciplines with hardware, software and ARSC-affiliated faculty. For information, call 907-450-8600 or visit [www.arsc.edu](http://www.arsc.edu).

### **CENTER FOR CROSS-CULTURAL STUDIES**

Established in 1971, the Center for Cross-Cultural Studies is a teaching, research and development unit administered through the UAF College of Liberal Arts. It promotes programs that concentrate on the needs of Alaska's indigenous societies, with particular regard to education and rural issues.

The center offers academic degree programs and course work in cross-cultural studies. It designs and conducts basic and applied research projects, develops and evaluates alternative educational strategies for Alaska schools and disseminates findings on current research in education and rural community development.

The center gives technical support and information to school districts, social service agencies, Native corporations, tribal governments, community colleges and state and federal agencies in rural Alaska. It provides direction for improving educational, professional and community development opportunities for rural Alaskans, and it is a forum for examining those issues. Curricula incorporating indigenous knowledge and Native ways of knowing are available through the Alaska Native Knowledge Network on the web at [www.ankn.uaf.edu](http://www.ankn.uaf.edu). For more information, telephone 907-474-1902 or email [rjbarnhardt@alaska.edu](mailto:rjbarnhardt@alaska.edu).

### **SCHOOL OF FISHERIES AND OCEAN SCIENCES JUNEAU CENTER**

The Juneau Center is home to 10 UAF fisheries faculty members and about 60 graduate students enrolled in the MS and PhD fisheries and marine biology programs. Four UAS biology and marine biology faculty hold joint appointments in the SFOS fisheries division and supervise UAF graduate students based at the Juneau Center.

Faculty supervise students' research on a broad array of biological problems in laboratories that specialize in quantitative stock assessment, biology and ecology of marine and freshwater species, molecular genetics, behavioral ecology, marine policy and other fields of study. Laboratories at the Juneau Center include specialized facilities for seawater culture of marine animals and plants, quantitative (computer) analysis and fisheries stock assessment, geographic information systems, molecular genetics, salmon culture and marine ecology. Juneau Center students also work in laboratories and facilities of other agencies in Juneau such as NOAA Fisheries' Auke Bay Laboratory and Ted Stevens Marine Research Institute, U.S. Geological Survey's Glacier Bay Field Station, and the Alaska Department of Fish and Game's Mark, Tag and Age Lab. The center is located adjacent to the Ted Stevens Marine Research Institute in Auke Bay. For more information, visit [www.sfos.uaf.edu/fishdiv/](http://www.sfos.uaf.edu/fishdiv/) or call 907-796-6441.

### **GEOPHYSICAL INSTITUTE**

Founded in 1948, the Geophysical Institute is a world-renowned center for the study of geophysics from the Sun to the center of the Earth.

Proximity to the Arctic provides excellent opportunities for high-latitude geosciences. Major research programs are underway in space physics, atmospheric science, seismology, volcanology, satellite remote sensing, tectonics and sedimentation. The institute operates a rocket range for space research and a satellite ground station with processing and archiving capabilities for earth science support. In addition, the Alaska Volcano Observatory, the Alaska Earthquake Information Center and the Alaska Climate Research Center are located at the institute. More than 75,000 books, 350 journals and other specialized media are maintained at the Keith B. Mather Library which is shared with the International Arctic Research Center.

GI faculty and students benefit from the coupled activities of education and research. Undergraduate and graduate students find work in research programs while gaining academic credit toward their degrees. Most GI faculty have joint appointments providing teaching opportunities at the College of Natural Science and Mathematics or the College of Engineering and Mines.

The institute focuses on the needs of Alaska, using geophysical data as the basis for decision-making tools. Examples include monitoring earthquakes and volcanic eruptions leading to hazard alerts to federal and state agencies. Remote sensing specialists use satellite and airborne observations to help fight forest fires and monitor the health of Alaska's ecosystems. Together with the Arctic Region Supercomputing Center, institute scientists run computer simulations of tsunamis, aiding coastal communities in developing emergency evacuation plans. The institute has programs reaching out to K-12 schools with scientific curricula to educate and motivate potential science students.

More than 500 permanent field sites are operated throughout Alaska which are associated with the Poker Flat Research Range, the Alaska Earthquake Information Center, the Alaska Volcano Observatory and the Permafrost Research Laboratory.

For more information, visit [www.gi.alaska.edu](http://www.gi.alaska.edu) or call 907-474-7282.

### **CENTER FOR GLOBAL CHANGE AND ARCTIC SYSTEM RESEARCH**

The Center for Global Change and Arctic System Research facilitates collaborative research by faculty and students in environmental science and earth system studies. The center sponsors an annual student research grant competition that provides support to students for research related to global change with an arctic or subarctic focus presented in an interdisciplinary context. The center also participates in education and outreach activities on global change and arctic system research.

For information on education opportunities in earth system and environmental sciences, see Interdisciplinary Studies in the Degrees and Programs section of this catalog,

or call 907-474-5415. For more information about the center and its activities, visit [www.cgc.uaf.edu](http://www.cgc.uaf.edu) or call 907-474-5818.

### INTERNATIONAL ARCTIC RESEARCH CENTER

The International Arctic Research Center was established in 1999 as a cooperative research institute supported by both the U.S. and Japanese governments. Funding comes from the National Science Foundation, the Department of Energy, and the National Oceanic and Atmospheric Administration in the U.S. and from the Japan Agency for Marine-Earth Science and Technology, and Japan Aerospace Exploration Agency.

IARC serves as a focal point of excellence for international collaboration and provides the arctic research community with an unprecedented opportunity to share knowledge about science in the Arctic, with an emphasis on global climate change research. IARC's mission is to foster arctic research in an international setting to help the nation and the international community to understand, prepare for, and adapt to the pan-Arctic impacts of climate change. In order to fulfill that mission, IARC provides an integrated science and service program for the benefit of the arctic community.

Key elements of that program include analysis, synthesis and provision of Arctic climate information, including Arctic Ocean hydrographic information for scientists, students, decision-makers, and the public; support and coordination of Arctic system modeling; and serving as a "gateway" or arctic climate science coordination center for Alaska and the arctic research community with special attention to collaboration with international scientists and institutions.

IARC conducts an internationally popular summer school for young researchers and holds workshops on the integration and synthesis of research. IARC also supports several K – 12 outreach projects.

IARC is located in the Syun-Ichi Akasofu Building adjacent to the Elvey Building on the Fairbanks campus. For more information, call 907-474-6016 or visit [www.iarc.uaf.edu](http://www.iarc.uaf.edu).

### KODIAK SEAFOOD AND MARINE SCIENCE CENTER

The Kodiak Seafood and Marine Science Center contributes scientific and technical expertise through academic courses, short courses, workshops, service to the Alaska seafood industry, and research pertinent to seafood harvesting and processing. The seafood processing program focuses on greater use of Alaska's seafood harvest and issues of food safety and quality. KSMSC faculty have expertise in the areas of fisheries, nutrition, food chemistry, food microbiology, seafood processing, seafood economics and seafood engineering. The Kodiak Center provides ready access to coastal and offshore marine systems as well as freshwater streams and lakes. The center is located near the National Marine Fisheries Service and the Kodiak Fisheries Research Center. For more information, call 907-486-1500 or visit [www.sfos.uaf.edu/ksmssc/](http://www.sfos.uaf.edu/ksmssc/).

### INSTITUTE OF MARINE SCIENCE

The Institute of Marine Science conducts marine science studies in the world's oceans, with special emphasis on arctic and Pacific subarctic waters.

The faculty provide expertise in chemical, geological and physical oceanography and marine biology. Instruction is carried out through the graduate program in marine sciences and limnology in the School of Fisheries and Ocean Sciences, where degrees are offered at the master's and doctoral levels in various fields of marine science.

Research efforts cover a wide range of disciplines, and some projects are components of large national and international cooperative programs that are worldwide in extent. Institute of Marine Science researchers also participate actively in the broad marine science community, serving on a variety of national and international steering committees, boards, panels and advisory committees.

Research facilities include modern laboratories on the Fairbanks campus; the Seward Marine Center, a major coastal facility in Seward; and the Kasitsna Bay Laboratory, a marine biology field station on Kachemak Bay. The Seward Marine Center supports a high-quality seawater system and excellent biological and chemical laboratories. The Alaska SeaLife Center, a private state-of-the-art mammal and bird research and exhibition facility adjacent to the Seward Marine Center, also offers outstanding research facilities.

Institute of Marine Science research programs include the Virtual Tsunami Center; Alaska Natural Geography in Shore Areas, Census of Marine Life; Alaska Ocean Observing System; GAK1, Gulf of Alaska CTD Time Series; GOAIERP, Gulf of Alaska Integrated Ecosystem Research Program; RUSALCA, Russian-American Long-Term Census of the Arctic; and NEWNET/ORION, a radiation and climatological monitoring program through autonomous stations at Fairbanks, Seward, Nome, Kotzebue, Point Hope and Barrow. Laboratories and specialists cover areas including acoustics; algae, biological, chemical, fisheries, geological and physical oceanography; marine biology; mammals; pathology and ecosystems; remote sensing; seagrass studies; and underwater instrumentation.

The main offices, laboratories and computer facilities of IMS are located in the William A. O'Neill, Laurence Irving and Arctic Health Research buildings on the west ridge of the University of Alaska Fairbanks campus. For more information, visit [www.ims.uaf.edu](http://www.ims.uaf.edu) or call 907-474-7229.

### INSTITUTE OF NORTHERN ENGINEERING

The Institute of Northern Engineering serves as the research branch of the College of Engineering and Mines. INE faculty engineer solutions for the world's cold regions and beyond. The institute supports faculty and students studying such unique areas as arctic hydrology, renewable energy, ground water contamination, environmental remote sensing, robotics, ecological engineering, cold regions infrastructure, materials technology and mining.

The institute includes the Alaska Center for Energy and Power, Mineral Industry Research Laboratory, Petroleum Development Laboratory, and the Water and Environmental

Research Center, home of the Alaska Stable Isotope Facility. INE also participates in many cross-institute endeavors.

External grant and research support for INE programs approaches \$14 million annually. Most of INE's approximately 65 researchers are full-time faculty in the College of Engineering and Mines, allowing research results to reach the classroom quickly. INE has formed a diverse interdisciplinary team in cooperation with other research groups to tackle many varied problems. This environment provides graduate and undergraduate students with extensive hands-on experience, making them particularly valuable as future employees. INE is a student-centered research unit. For more information, visit [www.uaf.edu/ine/](http://www.uaf.edu/ine/) or call 907-474-5457.

#### **UNIVERSITY OF ALASKA MUSEUM OF THE NORTH**

Voted the "Best Museum in Alaska," the University of Alaska Museum of the North is a vital component of UAF's research and education facilities as well as a thriving visitor attraction.

The museum's research collections hold more than 1.4 million artifacts and specimens representing millions of years of biodiversity and more than 11,000 years of cultural traditions in the North. These collections form the foundation for the museum's exhibits and education programs and serve as a critical source of data for issues unique to the circumpolar North. Using the collections, university students work with the museum's faculty curators on original research aimed at interpreting the region's dynamic environment and cultures.

The museum's Rose Berry Alaska Art Gallery features 2,000 years of Alaskan art — from ancient ivory carvings to contemporary sculptures. In the Gallery of Alaska, exhibit highlights include the state's largest gold display, extensive displays of Alaska Native art and artifacts, and Blue Babe, a 36,000-year-old mummified steppe bison. The museum also hosts several special exhibits each year. In addition, the museum presents artists' residencies, lectures and family programs on a variety of Alaska topics throughout the year. Handheld audio guides supplement the exhibits.

In 2005, the museum opened its new wing. Nationally recognized architect Joan Soranno and the GDM/HGA architectural team designed the expanded museum to convey a sense of Alaska, with innovative lines and spaces evoking images of glaciers, alpine ridges, breakup on the Yukon River and the northern lights. The expansion, a \$48 million project, doubled the size of the museum's facilities and included major renovations to the museum's original building.

For more information, visit [www.uaf.edu/museum/](http://www.uaf.edu/museum/) or call 907-474-7505.

#### **UNIVERSITY OF THE ARCTIC**

UAF is a founding member of the University of the Arctic, a cooperative network of universities, colleges and other organizations committed to higher education and research in the North. The consortium's overall goal is to create a strong, sustainable circumpolar region by empowering northerners and northern communities through education and shared knowledge. As part of this network, UAF participates in research and teaching partnerships and is an active member of the UArctic mobility program north2north, which provides opportunities for students from UArctic member institutions to experience different northern regions firsthand, and to share experiences face-to-face by allowing students to study at other UArctic institutions. For more information visit [www.uaf.edu/gradsch/university-of-the-arctic/](http://www.uaf.edu/gradsch/university-of-the-arctic/).