

# Research

Research is a primary function of the University of Idaho and is closely related to teaching for both students and faculty members, especially at the graduate level. Research and teaching are intimately associated and mutually complementary. Hence, most classroom teaching faculty members are also actively engaged in research.

## University Research Office

The University Research Office stimulates and supports research and creative activities at the university. While colleges, departments, and other units commonly develop and administer their own scholarly activities, the Research Office focuses on promoting research university wide and on providing assistance in writing multidisciplinary proposals and in obtaining research funds. This is accomplished by organizing and promoting research activities such as special grant programs and research awards; providing to individuals and departments information on grant opportunities from federal agencies, state and private sector groups and foundations; and processing and recording all grant and contract proposals to ensure that policies and procedures are recognized and followed. The Research Office strives to increase UI's research competitiveness by offering assistance to faculty, staff, and students.

The Research Council, the faculty's standing committee involved with the development and oversight of research policy, works closely with the vice president for research and graduate studies to resolve differences in interpretation and implementation of these policies. Additionally, the council acts as the peer review board in the university's internal competitive grants programs.

## Idaho Research Foundation

The Idaho Research Foundation, Inc. (IRF), is a private nonprofit corporation organized for the purpose of supporting research at the university. Its principal activity is licensing technologies resulting from academic research to the private sector. The IRF identifies and protects the intellectual property developed at the University of Idaho and transfers it to the private sector through licensing agreements in order to secure support for and further develop the university's academic, research, and service responsibilities. The IRF also disseminates scientific knowledge and technical information and encourages and assists researchers and inventors by providing the means by which their scientific discoveries may be patented, copyrighted, developed, and applied. The transfer of technology generated through UI research turns society's investment into new products and industrial processes, thus increasing Idaho's competitiveness as well as the nation's.

## Research Units

Research activities are many and varied, and are unique for each department and college. Certain administrative units provide an additional research function and emphasis that are, in many cases, related to the research program of the departments. Some of these units are:

**Aquaculture Research Institute.** The Aquaculture Research Institute (ARI), University Research Office, conducts, facilitates, supports, directs, and coordinates aquaculture research activities at the University of Idaho, at the Hagerman Fish Culture Experiment Station, and throughout the state. Through the institute, UI scientists from various disciplines conduct research in both commercial and conservation aquaculture sciences and technologies such as fish culture and production efficiency, fish breeding and genetics, fish nutrition and growth physiology, fish diseases and pathology, fish waste management and water quality assessment, aquaculture marketing and economics, and recovery efforts for endangered fish species. The ARI does not offer degrees. Rather, the ARI assists academic departments in the training of graduate-level students by providing resources and opportunities for research.

**Bureau of Public Affairs Research.** The Bureau of Public Affairs Research, College of Letters, Arts and Social Sciences, prepares research studies and handbooks for state and local officials; it also conducts training for state and local government employees. The Idaho Election Report, a summary and analysis of state and federal elections, is published by the bureau every two years.

**Caine Veterinary Teaching Center.** The Caine Veterinary Teaching Center facility, Department of Animal and Veterinary Science, College of Agricultural and Life Sciences, is located at Caldwell, Idaho, and is staffed with scientists involved with research, extension, service, and instruction in the animal and veterinary science graduate

program. It provides clinical training for WOI students in veterinary medicine and is also a satellite clinical laboratory specializing in the identification, study, and control of diseases of animals used for human food.

**Center for Advanced Microelectronics and Biomolecular Research.** At CAMBR advanced microelectronics are created for both government and commercial applications. There are currently many CAMBR-designed processors flying in space, supporting missions including the Hubble Space Telescope, Mars Odyssey and other NASA and DoD spacecraft. Technology developed at CAMBR includes commercial foundry-based Radiation Tolerant electronics, capable of operating error-free in the natural space environment, and Ultra Low Power (ULP) electronics that operate at 0.5 volts and consume orders of magnitude less power than traditional space borne devices. CAMBR has the expertise to custom design Very Large Scale Integrated (VLSI) circuits providing high data rate, low power applications which push the environmental and density capabilities of commercial processes. In addition to developing electronics for government agencies, CAMBR has designed commercial processors for Hewlett Packard, Amplex, Broadcom and Advanced Hardware Architectures. CAMBR consists of a team of 14 professional VLSI designers and professors, experienced at complex digital and analog VLSI.

Molecular biologists from the National Institutes of Health have recently joined the electrical engineers at CAMBR. One new project combines the technology of molecular biology and microelectronics in the development of electronic sensors.

CAMBR provides graduate education opportunities at the master's and doctoral levels for individuals interested in multidisciplinary research programs associated with engineering and the life sciences. CAMBR was created at the University of Idaho in 1985 as the Microelectronics Research Center (MRC), transitioned to the University of New Mexico in 1992, named as the NASA Institute of Advanced Microelectronics in 1995, and returned to the University of Idaho in 2002. CAMBR is located at the University of Idaho Research Park in Post Falls.

**Center for Applied Thermodynamic Studies.** The Center for Applied Thermodynamic Studies (CATS) was established at the College of Engineering in 1975. Since its inception, the primary focus of the research in CATS has been the development of standard reference quality thermodynamic property formulations for fluids of engineering interest. In addition to equation of state development, CATS research areas include the extended corresponding states methods and mathematical formulation development for transport properties of cryogenic fluids, refrigerants, and natural gases. In conjunction with this research, CATS also develops linear and nonlinear regression techniques and fluid properties database. The CATS Experimental Laboratory houses a dual-sinker densimeter and a magnetic suspension balance. The apparatus is used to determine the density of pure gases and gas mixtures.

CATS is an integral part of the research program of the College of Engineering. Graduate and undergraduate students in mechanical and chemical engineering are employed as research assistants in the work of the center. Many students have participated in theses and short-term projects as a part of their academic programs. Research at the center has also resulted in a significant strengthening of the undergraduate and graduate courses in engineering thermodynamics.

**Center for Business Development and Entrepreneurship.** The Center for Business Development and Entrepreneurship [CBDE] is a 'virtual' organization within the College of Business and Economics. The CBDE provides an administrative framework and support services for faculty-led business outreach efforts. The goals of the CBDE are to support business development in Idaho and the region served by the University, while providing students with practical experience in 'project' settings. Outreach activities supported by the CBE faculty include non-credit seminars and workshops, business consulting projects involving students working in project teams, and research projects addressing particular business problems such as market research, productivity improvement and economic impact analysis.

**Center for ETHICS\* (Ethical Theory and Honor in Competition and Sport).** The Center for ETHICS\*, Department of Health, Physical Education, Recreation and Dance, College of Education, believes in "teaching the tradition of competitive integrity to inspire leaders of character." The goal of the center is to improve moral development and character education through intervention, consultation, and leadership in advancing moral education.

**Center for Educational Research and Public Service.** The Center for Educational Research and Public Service was established to conduct and support research and evaluation, to facilitate research by College of Education faculty members and graduate students, and to be of assistance to local school districts and to other educational institutions. The center publishes a monthly newsletter providing information on grant opportunities (<http://www.uidaho.edu/ed/cerps>).

**Center for Forest Nursery and Seedling Research.** The Center for Forest Nursery and Seedling Research develops and demonstrates cost and environmentally effective processes for propagation, growth, and subsequent

survival of forest seedlings. Processes are tested and demonstrated in a production scale nursery operation, with subsequent transfer of technology to the forest nursery industry of the region.

**Center for Intelligent Systems Research.** The Center for Intelligent Systems Research (CISR) operates as a center in the Microelectronics Research and Communications Institute (MRCI), University Research Office. CISR does research, teaching, and outreach in the development of intelligent autonomous systems. These systems include, but are not limited to, self-propelled autonomous vehicles operating under on-board intelligent computer control. Other computer-controlled electrical, mechanical, and chemical systems also fall under the purview of CISR. CISR provides a structure of collaboration among researchers, students, and industrialists concerned with the development of autonomous machines controlled by intelligent computers.

**Center for International Training and Outreach.** The Center for International Training and Outreach (CITO) functions as the College of Natural Resource's international outreach center. Its central long-term goal is the development of a self-sufficient program of worldwide training, technical assistance and research activities focused on three related substantive areas: (1) nature-based tourism, (2) environmental interpretation, and (3) protected area management and sustainable development. Key within CITO's functions is the cultivation of strategic linkages within organizations that can help facilitate a greater role for the UI and the College of Natural Resources in international training and outreach. Paramount in this vision is the establishment of strategic linkages and institutional partnerships with government, private firms, and international institutions of higher education.

**Center for Research on Invasive Species.** The Center for Research on Invasive Species (CRISSP) combines advanced techniques in molecular biology with traditional approaches to biological and ecological management, in order to maintain and enhance the integrity of our nation's native plant and animal populations. The goal of the center is to address the challenges and inform policy on invasive species and small or threatened populations. This will be accomplished by taking an integrated approach that coordinates resources and expertise for scientific research on these problems. The Center's mission also incorporates public education and outreach on invasive species and conservation biology issues. The Center contains state-of-the-art instrumentation for molecular biology and a dedicated computer laboratory, to facilitate data acquisition and analysis. Stipends for graduate study and undergraduate internships are available through the Center to students with an interest in invasive species and/or conservation biology issues.

**Center for Secure and Dependable Systems.** The Center for Secure and Dependable Systems (CSDS) operates as a center in the Microelectronics Research and Communications Institute (MRCI), University Research Office. This board-approved center concentrates on computer-related security education and research. The National Security Agency designated the University of Idaho in 1999 as one of the initial seven Centers of Excellence in Information Assurance Education, partly in recognition of CSDS's efforts in promoting information security education and research. This status was reapproved in 2005. The CSDS faculty conducts research in the areas of system defense, intrusion detection, critical infrastructure protection, secure protocols, network security, evolutionary algorithms, computer forensics, reliability, and fault tolerance.

**Electron Microscopy Center.** A campus-wide facility, including scanning and transmission electron microscopes and energy-dispersive x-ray microanalysis, is available for use in teaching, research, and service. Located in the Holm Research Center at the western edge of the campus, this facility is available to students and faculty members. Information concerning use of the EM Center may be secured directly from the facility or through the University Research Office.

**Environmental Biotechnology Institute.** The Environmental Biotechnology Institute (EBI), University Research Office, supports environmental and ecological research at the University of Idaho in areas such as microbial physiology and genetics, subsurface microbiology, ecosystem processes and dynamics, bioreactor design, microbial community characterization, astrobiology, and bioremediation of soils and water contaminated by toxic chemicals. EBI supports research by developing research proposals and providing instruments, facilities, and services, including molecular biology computing, capillary electrophoresis, liquid/chromatography/mass spectrometry, ion chromatography, electrospray tandem mass spectrometry, supercritical fluid extraction, and access to inductance coupled plasma atomic emission, HPLC, SEM, and TCLP testing capability. The Institute has full capability for recombinant DNA research and, in association with the Idaho National Laboratory (INL), maintains a Molecular Ecology and Genomics Laboratory with complete capability for preparation and experimentation with oligonucleotide arrays. EBI assists in the multidisciplinary training of predoctoral and postdoctoral scientists from departments that award graduate degrees in environmental fields.

**Forest, Wildlife and Range Experiment Station.** The Forest, Wildlife and Range (FWR) Experiment Station is the research arm of the College of Natural Resources. Its staff includes all members of the college faculty, full-time research associates and technicians, and graduate students. The station staff conducts research on a wide variety of

natural resource management problems in the areas of forestry, forest products, range, wildland recreation, wildlife, and fisheries. Because many of the graduate students enrolled in the college are on assistantships associated with station projects, the programs of the experiment station are closely connected with the college's graduate education mission.

**Glaciological and Arctic Sciences Institute.** Established by the Board of Regents in 1975, the Glaciological and Arctic Sciences Institute, located in the College of Science, is a cooperative summer program with the University of Alaska-Southeast and the Foundation for Glacier and Environmental Research, Pacific Science Center, Seattle WA. It promotes opportunities and administers academic field work on the Juneau Icefield on the Alaska-B.C.-Yukon border. The two-month field training and research involvement on the Western Hemisphere's fifth largest icefield is expeditionary and interdisciplinary in nature and emphasizes the environmental and earth systems sciences. It includes field geology, exploration geophysics, glaciology, Pleistocene stratigraphy, process geomorphology, glacio-hydrology, arctic geobotany, remote sensing, and allied areas of the atmospheric sciences and survey and mapping. This program has an international scope and is the only one of its kind in the U.S. The summer session is in an expedition mode and runs for eight consecutive weeks during July and August. Upwards of 40 students participate, including undergraduate and graduate students, some high school science teachers, and a select number of high ability high school senior student advance placements. In recent years, NASA, the National Science Foundation, the M. J. Murdock Charitable Trust, the U.S. Army Research Office, the Department of Defense, the National Geographic Society, and the Foundation for Glacier Research have supported a number of full and partial field scholarships. Because these awards are limited and competitive, early application is encouraged. Experiential training is emphasized and up to 9 credits can be earned. Opportunities for senior thesis and graduate thesis work are available with a faculty/student ratio of nearly one to one.

**Hagerman Fish Culture Experiment Station.** The Hagerman Fish Culture Experiment Station is located in the heart of Idaho's aquaculture industry in the Magic Valley and its focus is on rainbow trout. Most of Idaho's large commercial aquaculture operations are located nearby, and the close proximity of the research facility provides opportunities for industry partnerships in aquaculture research.

The Hagerman Station is a field laboratory of the College of Agricultural and Life Sciences, and is a part of the Aquaculture Research Institute. UI scientists from various disciplines conduct research at the station in both commercial and conservation aquaculture sciences and technologies. Research is conducted within two centers at the station: the Center for Sustainable Aquaculture and the Center for Salmonid and Freshwater Species at Risk. The Hagerman Station has both exceptional water resources supporting its wet laboratories and outdoor fish culture systems and leading edge analytical resources supporting functional genomics in association with nutrition, immune function, growth, reproduction, and marker-based breeding programs for rainbow trout. The Hagerman Station also hosts USDA Agriculture Research Service scientists who contribute to UI research, educational and extension programs. Idaho Springs, a nearby commercial-scale trout farm, is operated by the Hagerman Station as a research farm where large-scale trials and long-term broodstock holding can be conducted. Scientists at the station are deeply involved in recovery efforts for Idaho's endangered fish species, and in assessment of threatened stocks and species. These efforts are often done in partnership with state and federal agencies, and with the Columbia River Inter-Tribal Fish Commission, and other tribal entities.

The Hagerman Station works closely with Idaho's aquaculture extension educator, who is nearby in Idaho's Magic Valley. Through this collaboration and that with other UI faculty and staff throughout the state, a variety of outreach activities designed to educate the public and support and promote aquaculture are pursued.

**Idaho Agricultural Experiment Station.** The Idaho Agricultural Experiment Station is the research arm of the College of Agricultural and Life Sciences. Applied and fundamental research programs provide a technological base to assist the agricultural industries and rural development in the state and region. Graduate education at the M.S. and Ph.D. levels is an integral part of most research projects. Research Centers located at Aberdeen, Boise, Caldwell, Kimberly, Moscow, Parma, Sandpoint, Salmon, Teton, and Twin Falls provide opportunities to conduct studies in local areas where problems exist. The off-campus agricultural research centers represent a significant component of the college's and university's research capacity in terms of personnel, facilities and experimental land resources. Over 40 of the college's research faculty and over 100 research support staff are stationed at these centers. Facilities at the off-campus centers are valued in excess of \$50 million and the centers have an experiment land resource exceeding 4,000 acres. Cooperative research programs involving a number of USDA Agricultural Research Service scientists and Federal laboratory facilities exist at Aberdeen, Kimberly, and Parma.

**Idaho Cooperative Fish and Wildlife Research Unit.** The cooperative program involving UI, College of Natural Resources, the U.S. Geological Survey, and the Wildlife Management Institute in Washington, D.C., conducts research to find answers to a broad spectrum of questions relating to the management and viability of fish and wildlife resources. Issues addressed are of local, national, and international interest. Graduate students are trained at both

the master's and doctoral levels. The unit provides in-service training for new and established conservation agency employees and provides technical assistance and information to the public and to federal and state organizations.

**Idaho Cooperative Park Studies Unit.** The UI Cooperative Park Studies Unit in the College of Natural Resources applies the results of sociological and biological research to the management of parks, preserves, and recreation areas. Because major funding comes from the National Park Service, the unit has a primary responsibility to conduct research related to the mission of the NPS and the management of the national park system. An important responsibility of the unit is technical assistance to park staffs, working directly with resource managers to help solve management problems.

**Idaho Forest, Wildlife and Range Policy Analysis Group.** The Idaho Forest, Wildlife and Range Policy Analysis Group is a research program of the Idaho Forest, Wildlife and Range Experiment Station, College of Natural Resources, created by the Idaho legislature to provide timely and objective analyses of natural resource issues of importance to the citizens of Idaho. Graduate students are involved in specific short-term tasks to support policy analysis projects.

**Idaho Geological Survey.** Established in 1919, the Idaho Geological Survey is the lead agency for collecting, interpreting, and disseminating all scientific information on the geology and mineral resources of Idaho. As a special program of the University of Idaho, the Idaho Geological Survey's main office is at the Moscow campus. The Survey also has branch offices in Boise at Boise State University and in Pocatello at Idaho State University. A staff of geologists conducts applied research with a strong emphasis on producing geologic maps and providing technical and general information to the public.

Cooperative projects between the Survey, state universities, and other academic, state, and federal institutions, including the U.S. Geological Survey, enhance research productivity and educational outreach. At the Moscow office, the Survey provides a sales service for publications and maps and maintains reference collections of statewide research. The Survey directs its activities at the broad interests of the state's citizens, teachers and students of earth science, the mineral industry, land developers, land-use planners, scientific researchers, and city, county, state, and federal agencies.

**Idaho Water Resources Research Institute.** The Idaho Water Resources Research Institute, University Research Office, was established at UI by the regents on October 24, 1963. The national institute program is administered by the United States Geological Survey of the U.S. Department of the Interior to stimulate, sponsor, coordinate, and supplement research, education, and outreach programs in the field of water resources. The institute serves the state by developing and coordinating water research programs intended to assure the state, region, and nation adequate supplies of high-quality water.

The area of water resources planning, development, and management is a composite of many disciplines. Consequently, the Idaho Water Resources Research Institute believes that professional needs in these areas are best achieved by individuals with strong basic education in a traditional academic department enhanced by programs of study in water resources problems and professional practice. The university has developed procedures that encourage existing schools and departments to strengthen their programs in light of the special needs for water resources. The Idaho Water Resources Research Institute has coordinated master's and doctoral programs in several disciplines and specializations through various participating divisional programs.

The objectives of the institute are to: (1) promote water resources research and coordinate the efforts of the various university divisions and departments involved in water resources research; (2) strengthen and coordinate water-related undergraduate and graduate programs and course offerings so that the university can supply well-trained professionals and leaders; (3) develop, gather, and disseminate research findings within the state universities and to various federal, state, local, and civic organizations interested in water resources; and (4) promote water education for both the youth and adult community within Idaho.

**Inland Empire Tree Improvement Cooperative.** The Inland Empire Tree Improvement Cooperative in the College of Natural Resources includes all of the major commercial timber holding agencies in the Inland Northwest. The cooperative's main function is genetic improvement of five forest tree species. Substantial research opportunities are available in the delineation of genetic patterns and prediction of genetic gains in the five programs. Results of such research have the potential for immediate application in operation programs.

**Institute for Materials and Advanced Processes.** The Institute for Materials and Advanced Processes (IMAP) in the College of Engineering, composed of scientists from a number of colleges and disciplines within the University of Idaho, supports, directs, and coordinates research in the areas of materials and advanced processing. The former area includes both structural (i.e., load bearing) and functional (e.g., electronic/magnetic devices) materials. The

latter includes research on materials processing using high energy sources such as plasma, laser, and electron beam, as well as processing of polymer, ceramic, and composite materials.

Other programs in the advanced materials arena cover topics including low density metals, intermetallic compounds, and hydrogen effects in metals.

Pervasive to the whole activity is application of material science and engineering and transition of the research programs to real-world applications.

**Institute for Pacific Northwest Studies.** The Institute for Pacific Northwest Studies, College of Letters, Arts, and Social Sciences, enhances awareness of history and life in the region comprising Oregon, Washington, Idaho, western Montana, Alaska, and western Canada. It fosters scholarly investigation as well as popular understanding of the Pacific Northwest and seeks to relate developments there to those in the rest of the United States, Canada, and the world. The institute promotes inter-institutional and interdisciplinary cooperation among investigators in such areas as anthropology, history, literature, political science, and sociology, and the dissemination of the resulting knowledge through monographs, lectures, seminars, workshops, and popular forums.

**Intermountain Forest Nutrition Cooperative.** The Intermountain Forest Nutrition Cooperative in the College of Natural Resources includes the major state, federal, and private forest management organizations throughout the Inland Northwest. The cooperative's main function is the support of research dealing with the nutritional management of forests. Results of such research have the potential for application in forest management programs.

**Laboratory Animal Research Facility.** A centrally located facility for housing and maintaining small animals for use in teaching and research is available to faculty members and students. Information concerning space availability, use, and services provided is available through the University Research Office or through the facility itself.

**Laboratory of Anthropology.** The Alfred W. Bowers Laboratory of Anthropology serves as a research unit within the Department of Sociology, Anthropology, and Justice Studies, College of Letters, Arts, and Social Sciences. The three primary objectives are research, cultural resource management, and public outreach and education. Research facilities include the Pacific Northwest Anthropological Archives, the Asian American Comparative Collection, and the Crabtree Lithic Collection. As the Archaeological Survey of Idaho, Northern Repository, the Laboratory of Anthropology houses site forms and archaeological collections for the ten northern counties of Idaho. Public education projects include interactive presentations at area schools.

**Lionel Hampton Center.** The mission of the Lionel Hampton Center, Academic Affairs, is to ensure the future of the American art form jazz, through unique educational, research, and performance opportunities. The center is a unique partnership between the UI Lionel Hampton Jazz Festival and the Lionel Hampton School of Music. Each year, in late February, the UI Lionel Hampton Jazz Festival brings thousands of students from all over the U.S., Canada, and as far away as Japan to the UI campus to perform for judges and peers, enjoy world class concerts, and learn from jazz masters in workshop settings. The School of Music supports scholarships, visiting professorships, and courses in jazz studies. Together the UI Lionel Hampton Jazz Festival and School of Music service significant jazz archives including original scores, recordings, film/video, letters, photographs, and other documents, a terrific research base for jazz studies.

**Martin Institute for Peace Studies and Conflict Resolution.** The Martin Institute for Peace Studies and Conflict Resolution is an interdisciplinary research, teaching, and service center at the University of Idaho. It was founded for the purposes of advancing research and teaching into the causes of conflict and peaceful resolution. Research is supported on global conflict and policy issues. The institute administers the undergraduate major in international studies through the Martin School of International Affairs and supports courses on conflict and peace.

**Microelectronics Research and Communications Institute.** The Microelectronics Research and Communications Institute (MRCI), University Research Office, first established at the University of Idaho in 1983, focuses its research efforts on the application, development, design, and testing of high performance electronic circuits and systems. Since 1995, MRCI's capabilities have expanded into other disciplines such as avionics, computer security, neurocomputing, communications and information engineering, electromagnetics, and intelligent controls systems. Partnerships with local and national industries as well as governmental agencies continue to provide research opportunities for University of Idaho graduate and undergraduate students. The MRCI also collaborates with ERI and NIATT and with several University of Idaho departments to enhance multidisciplinary research endeavors. Additionally, two research centers approved by the Idaho State Board of Education (SBOE) reside in the MRCI: Center for Intelligent Systems Research (CISR) and Center for Secure and Dependable Systems (CSDS).

**National Institute for Advanced Transportation Technology.** The mission of the National Institute for Advanced Transportation Technology (NIATT), University Research Office, is to work with industry, government, and research institutions to develop, evaluate, and market technologies that will improve the design and operation of transportation systems and vehicles. NIATT is one of 33 university-based centers of excellence established by US DOT to advance U.S. technology and expertise in the many disciplines comprising transportation through the mechanisms of education, research and technology transfer. Four centers currently operate as part of NIATT, each with a unique mission related to transportation. The Center for Clean Vehicle Technology focuses on research to promote a cleaner environment and reduce our dependence on foreign oil, testing clean engine technologies on a variety of vehicle test beds. The Center for Traffic Operations and Control conducts research concerning traffic detection, control, surveillance, simulation and optimization. Erosion control, bridge construction, and pavement design, as well as planning methods, design practices, and software development fall under the auspices of the Center for Transportation Infrastructure. The Idaho Technology Transfer Center also operates within NIATT, supporting and enhancing the overall effectiveness of local transportation agencies through communication, consultation, technical support, and training programs. NIATT provides opportunities for graduate and undergraduate students to participate in research supported by the University Transportation Centers program, the Idaho Transportation Department.

**Potato Center of Distinction.** The Center encompasses research programs on development of new cultivars in concert with USDA-ARS potato germplasm program; development and refinement of production methods; development on insect, disease, and weed germplasm program; development and refinement of storage methods; and utilization of potato products. The Center's education program includes extension programming focusing on variety choice, crop production, pest management, storage, and processing. The Center also includes utilization and pesticide residue testing, research on genetic manipulation of the potato, and economic research.

**Remote Sensing Research Unit.** The Remote Sensing Research Unit, College of Natural Resources, was formed to encourage, facilitate, and coordinate, on an interdisciplinary basis, remote sensing and geographic information system (GIS) research at UI. The unit maintains "state of the art" computing hardware, software, and field equipment for project support. Research funding comes from a variety of sources including NASA, USFS, and commercial forest industries, among others. Most research projects utilize graduate students as essential elements in both data acquisition and interpretation. These projects often form the basis of either a thesis or dissertation.

**Rocky Mountain Cooperative Ecosystem Studies Unit.** The Rocky Mountain Cooperative Ecosystem Studies Unit, College of Natural Resources, is a university-federal agency partnership involving the University of Idaho, University of Montana, Montana State University, Salish Kootenai College, Utah State University, Washington State University, and federal land management agencies. The mission of this unit is to improve the scientific base for managing ecosystems in the rapidly changing social, cultural, and environmental landscape of the Rocky Mountain Region. The unit provides research, technical assistance, and training programs for federal partners and provides support for faculty and graduate student ecosystem studies programs.

**Rocky Mountain Forest Experiment Station.** The Rocky Mountain Forest Experiment Station, College of Natural Resources, with facilities on the UI campus, is a research branch of the USDA Forest Service. It conducts research in silviculture, forest health, forest genetics, and watershed management. The station provides funding to UI faculty and graduate students to pursue forestry and watershed management sciences.

**Snake River Conservation Research Center.** The Snake River Conservation Research Center at Kimberly, Idaho, has been developed as a cooperative facility between UI and the U.S. Department of Agriculture. USDA scientists specialize in research to improve soil and water management practices and to contribute to a better understanding of basic soil processes. Programs are focused on systems and practices that improve irrigation uniformity, efficiency, and crop yields; decrease costs and energy; and reduce soil erosion. Collaborative research projects between the USDA and UI specialists provide graduate students the opportunity to work closely with experts in both agencies and to utilize expanded facilities. USDA scientists hold adjunct faculty rank and may assist in directing student research projects and serve on graduate committees.

**Statistics Consulting Center.** The Statistics Consulting Center, College of Science, provides assistance in the design of experiments and sample surveys, advice on statistical analyses, and expertise on recent developments in statistical research. Proper statistical design and analysis play a key role in producing quality research within the university. The optimal time to seek statistical consulting is during the earliest stages of the research project, and certainly before any data collection stage. Faculty members and graduate students from any discipline are welcome. The center is located in on the fourth floor of Brink Hall. There is no charge for these services.

**USDA Hemoparasitic Disease Research Unit.** The USDA Hemoparasitic Disease Research Unit, College of Agricultural and Life Sciences, is a USDA-University of Idaho cooperative research unit carrying on studies dealing with blood parasites of livestock. This is the only USDA research unit dealing with hemoparasitic diseases, which are

of major importance in livestock throughout the world. USDA personnel hold graduate research appointments with UI and/or Washington State University.

**U.S. Sheep Experiment Station.** The U.S. Sheep Experiment Station, College of Agricultural and Life Sciences, outside Dubois, Idaho, is linked to the College of Agricultural and Life Sciences through affiliate faculty members. The facility provides an opportunity to investigate sheep breeding and reproductive physiology, nutrition, and range and flock management.

**Wilderness Research Center.** The university-wide Wilderness Research Center (WRC), created in 1969, is located in the College of Natural Resources. The staff conducts and facilitates research by faculty, cooperators, and graduate students on wilderness and related topics. The WRC sponsors a Distinguished Lecture Series and teaches several wilderness-related undergraduate and graduate classes. Research focuses on (1) wilderness ecosystem research and monitoring and (2) use of wilderness for recreation, personal growth, therapy, education, and leadership development. In 1999, the Outdoor Behavioral Healthcare Research Cooperative (OBHRC) was established in the WRC by a consortium of 12 wilderness and outdoor treatment companies to support research important to their industry.