

CYCLE OF ACADEMIC PLANNING

This report card documents the University of Wyoming's progress in implementing its strategic plan for 2009-2014. *University Plan 3* (UP3) defines UW's major educational and scholarly directions, both in concept and in practice. It guides every resource allocation, every decision about academic programs and infrastructure, every faculty position allocation, the institution's capital construction priorities, and its legislative budget requests.

The pages that follow review action items completed during fiscal year 2012 (1 July 2011 through 30 June 2012). By the end of the year, UW brought closure to 88 (81%) of the 109 action items in UP3. The Office of Academic Affairs, working with

vice presidents from other divisions, has identified an additional 14 action items for completion during fiscal year 2013.

UP3 encompasses five planning motifs:

- 1. Building depth
- Reinforcing and refining areas of distinction
- 3. Promoting access to higher education
- 4. Fostering excellence
- 5. Cultivating leadership

The areas of distinction in motif 2 lie at the heart of the plan. These areas of faculty expertise represent the university's major educational and scholarly directions and allow UW to remain connected to important issues facing Wyoming, the region, and the world:

- Critical areas of science and technology
 - Earth and energy science and technology
 - Computational science
 - Water resources
- Cultural assets, the arts, and humanities
- Environment and natural resources
- History and culture of the Rocky Mountain region
- Life sciences, especially
 - Ecology
 - Neuroscience
 - Molecular and Cellular Life Sciences
 - Biomedical Sciences
- Professions critical to the state and region

HIGHLIGHTS AND ACCOMPLISHME

REINFORCING AND REFINING AREAS OF DISTINCTION

Excellence at UW requires a firm commitment to a stable, focused set of areas of distinction, carefully aligned with the institution's mission and with UW's responsibilities to the public. The following areas, listed alphabetically, have been subjects of explicit focus for investment and added depth for well over a decade.

Critical Areas of Science and Technology. Three fields have received special strategic emphasis during UP3:

- Computational science and engineering
- Earth and energy science and technology
- Water resources

Deep connections link these fields, but it is useful to track progress in them separately.



UW's advances in the computational sciences include acquiring highperformance hardware at the NCAR-Wyoming Supercomputing Center in Cheyenne and UW's Advanced Research Computing Center (ARCC) in Laramie. ARCC benefitted from a 2012 legislative appropriation of \$2.17 million in onetime funding, complemented by an internal allocation of recurring funds to sustain the program. In summer 2012, UW installed a high-performance cluster for modeling, data analysis, and datamover nodes; a shared pool of networked, high-performance disks; and a mass storage facility. This facility represents a new era for UW's Division of Information Technology in supporting faculty-based computational research (action item 40).

To build on this infrastructure, UW introduced a new graduate minor in



computational sciences (action item 41). Housed in the Department of Mathematics and overseen by a university-wide advisory committee, this 15-credit minor requires three core courses and two elective courses. In addition, UW hired a director of research computing to support the new research focus for the Division of Information Technology. These efforts allow UW students to gain critical skills for careers in the rapidly growing "third pillar of science."

Energy-related teaching and research at UW continues to grow. The School of Energy Resources (SER), in collaboration with UW colleges and the energy industry, established strategic initiatives focused on three themes: (1) exploiting unconventional reservoirs, (2) climbing the value chain,

and (3) wind and solar energy. The 2012 Wyoming Legislature allocated new funding for these initiatives, and UW's administration also raised significant funds the from energy industry in support of the strategy. Implementation is underway through infrastructure improvements and new faculty hiring (action item 42).

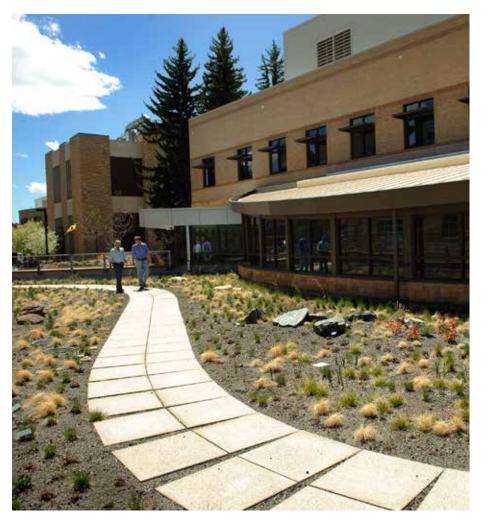
The College of Engineering and Applied Sciences has strengthened its energy-related focus (action item 43). The college's innovative Bachelor of Science in Energy Systems Engineering received full accreditation from the Accreditation Board for Engineering and Technology in September 2012. This undergraduate program is the only one of its kind in the United States, designed to train students for the country's greatest challenges: achieving energy independence while

managing the environmental implications of energy development. Also, after restarting the program in 2006, UW once again offers a fully accredited BS degree in Petroleum Engineering. Student interest in this program is surging, with undergraduate enrollments jumping 55 percent in the last year.

UW also made significant headway in water resources. During fiscal year 2012, the university received a \$20 million, five-year grant — its largest ever — from the National Science Foundation (NSF). The award will fund a new Wyoming Center for Hydrology and Geophysics, an initiative that will bring together researchers and educators from four UW colleges and 11 departments. This grant dovetails with a separate \$6 million, three-year award from NSF to fund regional







Environment and natural resources.

UW has a nationally recognized program of teaching and scholarship in environment and natural resources. In addition, it offers a growing array of credit-bearing courses related to technical and social aspects of sustainability. In 2012, the UW Campus Sustainability Committee inventoried all UW courses and selected courses for inclusion in the UW Climate Action Plan (action item 53). A faculty committee designed a new sustainability minor to incorporate principles of sustainability into the curriculum. In addition, UW students now enjoy numerous opportunities for extracurricular and practical applications of sustainability.

The Haub School of Environment and Natural Resources expanded its scope in 2012, adding the Biodiversity The Center for Rural Health Research and Education has advanced several telehealth and telemedicine initiatives.

Institute to its portfolio following the recommendations of two faculty task forces to promote research, outreach, and education related to the scientific and cultural aspects of biodiversity. After an international search, UW hired a director of the Biodiversity Institute, who also holds a Wyoming Excellence Chair.

Life sciences. The recently opened Robert and Carol Berry Biodiversity Conservation Center provides a home for new laboratory infrastructure for life sciences research and teaching. In 2012, UW made significant strides toward integrating the Berry Center into UW's research mission and credit-bearing curriculum (action item 60). One of the most significant changes was the establishment of the Biodiversity Institute, discussed earlier.

Professions critical to the region's future.

UW aligns a significant portion of its teaching, research, and service missions with the state's needs in the professions. In health care, the College of Health Sciences' Center for Rural Health Research and Education (CRHRE) has advanced several telehealth and telemedicine initiatives (action item 88). The center has been active in statewide planning of the Wyoming Network for Telehealth. CRHRE and College of Engineering and Applied Science faculty have collaborated on several telehealth programs, for example, in piloting a telehealth system for emergency medicine in Farson. In a separate initiative, an institution-wide faculty group organized by the Dean of Health Sciences has established a mental health collaborative (action item 91). The group provides expertise in areas of administrative concern, such as suicide prevention and an employee assistance plan, as well as cross-college teaching and research opportunities to enrich student experiences and faculty scholarship.

In summer 2011, UW's Family Medicine Residency Program in Casper successfully navigated the dissolution of its decadelong affiliation with the Community Health Center of Central Wyoming. With internal funding from the UW administration, the program re-equipped the Casper clinic and staffed the clinic's business operations, with minimal disruption to patient care and the training of residents. These stabilizing measures helped lay the groundwork for upcoming strategic planning for the residency programs in Casper and Cheyenne.



ACCESS TO HIGHER EDUCATION

Access to a UW education is a multidimensional goal. It encompasses cost of attendance; extending baccalaureate and graduate education throughout Wyoming; enhancing students' aspirations, preparation, and success; internationalization; and increasing the diversity of the student body. This year, UW made progress in all of these dimensions.

Education throughout Wyoming. The number of courses delivered through the Outreach School via distance technologies and on-site at UW Casper College Center (UWCC) continues to grow. For most of the past few decades this growth was incremental and was not based on a long-term plan. Based on the work of consultants in 2010, the Outreach School

developed such a plan. As a result, UW developed a new financial and staffing system that shares tuition revenues with the academic colleges (action item 12), placing responsibility for outreach teaching assignments and compensation solely with departments and colleges. In addition, the Outreach School redirected five vacant academic positions, partnering with the Colleges of Arts and Sciences and Education to provide additional faculty positions at UWCC.

The College of Engineering and Applied Science also extended its reach, in conjunction with the Outreach School. Two efforts are particularly important: first, when Wyoming community colleges have difficulty delivering lower division

Engineering Sciences courses, UW delivers those courses to students statewide via distance technologies (action item 13). Second, the college offers courses in land surveying that are delivered statewide and across the nation, leading to a certificate in land surveying.

UW remains committed to providing the best possible statewide access to library resources. The Dean of Libraries has worked with the State Library in restructuring the Wyoming Library Database, to allow better electronic access to the collections. UW's catalog is linked with the state catalog, and new software allows staff to move electronic materials back and forth as needed (action item 15).

The Trustees approved a new set of assured admission standards that will help guide all college-bound students on how to prepare for college-level learning.

Enhancing students' preparation. In November 2011, the Trustees approved a new set of assured admission standards that will help guide all college-bound students on how to prepare for college-level learning. The new standards reinforce the state's Hathaway Scholarship Program in emphasizing the critical role that high school preparation plays in students' postsecondary education.

In addition, several departments have explored placement and adaptive curricular measures in writing and foreign languages (action item 17), to augment UW's long-standing mathematics placement program. Incoming students are now placed in foreign language during or

before orientation: they can either take a challenge test, where satisfactory performance allows them to receive credit, or take a computer-based placement test.

UW continues to work to lower barriers for community college transfer students. A highly effective system of statewide articulation and course transfer among Wyoming's public institutions of higher learning has been in place for many years. In the 2011-2012 academic year, UW expanded its transfer agreements to community colleges in Colorado and Nebraska, through formal agreements with Aims Community College in Greeley, Colorado, and Western Nebraska Community College in Scottsbluff,

Nebraska. In addition, UW is formalizing an articulation and transfer agreement with the Colorado Community College System (action item 19).

Enhancing students' success. UW continually strives to enhance its learning environment (action item 20). Two recently completed facilities reflect this goal. The new College of Business building is a state-of-the-art facility that provides a learning environment for business students as well as students from other colleges. Innovative lab facilities in the building include a dedicated trading room and behavioral lab. Coe Library is an equally impressive facility, offering students an outstanding place to meet





and study. The Wyoming Union parking lot is often full long past business hours, indicating the extensive use of both buildings late into the evening.

The Learning Resources Network, established under an earlier strategic plan, has hired work-study students to serve as guides in high-difficulty 1000 and 2000 level courses. This strategy enhances students' access to much-needed help in these courses, at the same time creating opportunities for work-study students to hone their own knowledge and communication skills (action item 20).

The Office of Academic Affairs, the University Assessment Coordinators, and the Ellbogen Center for Teaching and Learning (ECTL) continue to work together to identify best practices in assessment of student learning (action

item 21). This year, the ECTL, in collaboration with the University Assessment Coordinators, held two university-wide events to bring together faculty and administrators to showcase these best practices. More than 150 faculty, administrators, and staff convened to discuss the best ways to improve student learning at the three-day Fall Assessment Forum and a two-day Spring Colloquium on Critical Thinking.

The College of Engineering and Applied Science reviewed the structure and delivery of the Engineering Science curriculum and developed an Engineering Science instructional plan (action item 23). The plan addresses the tradeoffs that highly differentiated curricula and small class sizes have for student flexibility, faculty teaching loads, and capacity for research and graduate-student supervision. The

college conducted a careful study to assess student performance in larger classes and developed a strategy for staffing larger classes with outstanding professors at the helm. The instructional plan also incorporates a survey of the engineering faculty, to identify which courses most need a thorough content review during the 2012-2013 academic year. A major goal of these measures is to preserve a long tradition of UW engineering students' excellent performance on the national Fundamentals of Engineering exam.

Internationalization and diversity. UW has addressed internationalization and diversity through two initiatives relating to English as a Second Language (ESL). First, the College of Arts and Sciences hired a lecturer to administer ESL programs and teach ESL classes. As a result, in 2011 UW introduced a new English Proficiency

Test to assess the English language skills of international state-funded graduate teaching assistants to help ensure that graduate students are ready to teach a class or lab before fulfilling teaching duties. Second, the College of Education continues to provide students with the knowledge and skills necessary to work with K-12 students who speak English as a second language. Over 1,000 students have completed this ESL endorsement program (action item 28).

Beginning in September 2011, UW began providing health-care benefits for employees' domestic partners who are not eligible for coverage through another employer-paid insurance plan (action item 37). This new benefit helps UW compete nationally and internationally for faculty members.



CULTIVATING EXCELLENCE

Building excellence in capital facilities and infrastructure. UW's capital facilities plan guides both the immediate future and the long-range development of the university's infrastructure. In July 2011, the Division of Administration completed an updated capital facilities plan, posted on the UW web site.

The recent opening of the Visual Arts building and the expected January 2013 opening of the Energy Innovation Center are two prominent examples of the remarkable transformation of the Laramie campus during the past decade. The next wave of capital projects to unfold in 2013 includes a major addition and upgrade of the Performing Arts Center, a renovation and addition for Half Acre Gym, and

groundbreaking for the Michael B. Enzi STEM Undergraduate Laboratories. Several facilities around the state are also coming online, including a building in Casper in partnership with Casper College. Finally, campus beautification projects continue — most notably the completion of the Sullivan Plaza, adding to the beauty of Prexy's Pasture.

UW continues to work toward improved parking and transportation for students and employees. With UW's involvement, several initiatives have been completed in the comprehensive UW-Laramie transportation plan. The Gem City Grand bus route now provides an important east-west transit route for the university and Laramie communities. In addition,

UW Transit and Parking acquired six new buses, installed three new expanded bus shelters, and completed improvements to the south shuttle parking lot. Demolition of the old Ivinson Hospital building made room for an expanded parking lot south of the main west campus. Pedestrian and bicycle enhancements continue to be implemented, and the university is working with the City of Laramie on dedicated bicycle routes to and from the core campus (action item 76).

The Wyoming Geographic Information Sciences Center (WyGISC) has expanded its administrative contributions. WyGISC works closely with the Division of Administration on maintenance of the university real estate and utilities datasets and on developing other applications to support the management of UW's physical plant. WyGISC now also conducts mapping and analysis services for the Office of Institutional Analysis, the Division of Student Affairs, the President's Office, and the UW Foundation (action item 77).

UW continued to make its operations more sustainable and energy-efficient (action item 78). This is an ongoing effort being promoted and managed by several university departments, including the Physical Plant, Facilities Planning, Procurement Services, Auxiliary Services, Residence Life and Dining, and others. Together, these departments are implementing a set of principles and practices to make more efficient use

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of energy and human resources. These measures include metering all core campus buildings to monitor utility consumption; improving waste minimization and recycling programs; improving the processes for procuring paper, equipment and furniture; developing standards for building upgrades; expanding bicycle pathways and bike racks; and expanding the mass transit systems to decrease use of single occupancy vehicles.

Protection of computer privacy and personal data. UW's Division of Information Technology has devoted increased attention to the protection of computer privacy and personal data of UW students and employees using UW's data network. This action item is arguably best viewed as a permanent and constantly evolving way of doing business (action item 80).

Classroom, laboratory, and instructional technology support. UW students and faculty enjoy an academic environment rich in state-of-the-art instructional technology. Much of this technology was placed in classrooms that have been brought online with UW's dramatic surge in capital construction and renovation projects over the past decade. A growing

concern has been the institution's ability to fund updates of this equipment and software in a consistent and orderly fashion. UW addressed this concern by allocating \$1.3 million in recurring funds, through a ramp-up plan spanning two years, from new tuition revenues approved by the Board of Trustees in March 2012 (action item 81).

The Colleges of Arts and Sciences and Engineering and Applied Science conducted a review of the machine shops to develop a coordinated plan for the shops administered by these two colleges. Based on this completed review, UW administration concluded that both shops function well and provide distinct services that meet the needs of their constituents (action item 82).



Research collections of national caliber.

UW's drive to build a national caliber library collection continued in 2012. The university committed a total of \$900,000 in new recurring funds, beginning in fiscal year 2013, from tuition revenues approved by the Board of Trustees in March 2012. The increase in library funding allowed UW to reach a long-standing milestone in its collections budget. As a result, the UW Libraries have renewed efforts to gain membership in the Greater Western Library Alliance (GWLA), a consortium of 32 research libraries in the midwest and western U.S. Representatives from GWLA visited UW in September 2012 as part of a formal site visit (action item 83).





CULTIVATING LEADERSHIP

Education. The University of Wyoming Literacy Research Center and Clinic is on schedule for anticipated opening in fall 2013. Level 2 planning is nearly complete, and fund-raising for the facility is 80 percent complete. Wyoming First Lady Carol Mead is a statewide advocate for the center and for literacy. In addition, the endowed chairs funded by the Wyoming Excellence in Higher Education Endowment have established approximately eight partnerships across the state with non-profits, community organizations, and state agencies, focused on literacy initiatives (action item 94).

UW has also been working to increase the faculty expertise in multicultural and culturally sensitive education. The College of Education completed refinements to its ELS Endorsement Program and to the online Teachers of American Indian Children (TAIC) graduate certificate and endorsement program. ESL is currently the most popular add-on teacher endorsement program offered in the college to Wyoming teachers, and the TAIC program has been offered to all teachers in two school districts in the Wind River Indian Reservation (action item 95).

The faculty in the College of Education established a professional development plan to define a responsive yet clearly circumscribed set of expectations for faculty involvement in the professional development of Wyoming's in-service teachers. The college based its plan



on a statewide survey of professional development needs in Wyoming's K-12 school districts, as well as a collegewide study of the types of professional development offered throughout the state for Wyoming in-service educators (action item 96).

The College of Business continues to disseminate business principles to existing

and emerging businesses in Wyoming (action item 97). The business leadership program provides short courses to Wyoming business people twice a year. The college also teaches business ethics as part of the Daniels Fund initiative. These principles are taught at high schools, community colleges, and at area chambers of commerce. Other short courses include

the Wyoming CPA Society's continuing education program. UW's MBA Program offers new curricula targeting professionals in engineering, health sciences, and law, and plans are being developed to add an energy emphasis in the MBA Program.

The Office of Research and Economic Development has identified numerous avenues through which UW students and faculty can contribute to UW's economic development initiatives (action item 99). As a result, each of UW's major economic development programs now includes student interns. Overall, 53 UW students have served in internships with Manufacturing Works, the Market Research Center, the Research Products Center, the Wyoming Technology Business Center, or through various small business development centers.

Research park in southeastern Wyoming.

At the request of the Vice President for Research and Economic Development, the Director of Facilities Planning appointed a committee to develop a Level I plan for a research park in Laramie. The Board of Trustees authorized UW to enter into an agreement with the City of Laramie and the Laramie Economic Development Corporation to purchase a 23-acre parcel, if the city's Cirrus Sky Technology Park application is approved by the Wyoming Business Council. When the grant application is approved, the Level 1 plan will be completed by establishing the University of Wyoming Research Park within the technology park. Consistent with UW's emphasis on enriching students' learning experiences, the UW research park will provide internship opportunities for students in science, engineering, and business-related fields (action item 101).

Cultivating leaders. The Vice President for Student Affairs has expanded support and marketing efforts to establish outdoor experiences as an area of distinction for UW's co-curricular program. The Outdoor Program is a natural focal point for this endeavor, with proven success at developing students' leadership skills. This year, the Division of Student Affairs completed an Outdoor Program plan to solidify this initiative. Elements of the plan include the expansion of Half Acre Gym, further investment of financial resources in the Outdoor Program, an agreement with the National Outdoor Leadership School (NOLS) that allows degree-seeking UW students to receive

UW academic credit for selected NOLS courses, and the upcoming transfer of the Wyoming Conservation Corps to Student Affairs (action item 107).

A variety of programs cultivate leadership skills and career pathways among UW's faculty, academic professionals, and staff (action item 108). The Office of Academic Affairs initiated a new academic leadership development series for earlycareer faculty members who may assume department head and other administrative posts in the future. Academic Affairs continues to support new department heads with a series of workshops each fall, and it provides individual faculty support for leadership development through targeted initiatives funded by the Millgate Endowment.

To complement these programs, the Vice President for Administration implemented a UW Leadership Academy in fall 2011. The program targets dean- or directorlevel employees who are poised to become higher level leaders. Sixteen participants met one day per month throughout the 2011-2012 academic year to learn about and discuss leadership philosophies. The participants then practiced these philosophies in the workplace, each with the assistance of a mentor chosen from the president's cabinet. In May 2012, the participants and their supervisors and mentors celebrated the completion of the classroom-oriented phase and began working on group projects. A new leadership program for classified staff employees who are in supervisory roles is scheduled to be implemented in January 2013 (action item 108).



FOCUSING ON THE FUTURE

A sound strategic plan, together with the will to implement it through every significant decision about resources and human talent, enables UW to achieve genuine educational distinction. It also helps us create a bright future, both for the institution and for Wyoming, even as the state's economy fluctuates.

President Buchanan's executive council has identified the following initiatives for fiscal year 2013.

Access: Solicit further funding to support scholarship aid to students based on financial need; solicit funding to support fellowships for masters' and doctoral students; identify strategic fields in which to focus scholarship enhancements, to help address projected shortages of future workers; enhance partnerships between UW and other colleges to increase the distance delivery of UW baccalaureate and

masters-level programs; develop a state-wide student services pipeline to ensure that UW's off-campus students have the best possible access to UW services; and continue to work across the spectrum of Wyoming's educational system to ensure that students enter college with the right preparation and enjoy access to the tools and resources they need to succeed.

Improving the learning environment: Establish a task force to explore closer connections, scholarly exchange, and common programming between the Buffalo Bill Historical Center and UW; and examine the feasibility of reconfiguring the plant biology curriculum across the university.

Facilities enhancements: Continue planning for a major upgrade of UW's

engineering facilities; develop a long-range plan for storing seldom-used materials in facilities outside of the core Laramie campus; develop a multi-year plan for staging and funding upgrades to UW's athletic facilities; and develop strategic plans for the Cheyenne and Casper Family Medicine Residency Centers.

Human capital: Continue to pursue funding strategies that enable faculty salaries, when averaged by discipline and rank, to reach or exceed the average of prevailing salaries at public research universities; develop further professional support for academic employees working outside the Laramie campus; and acquire an electronic tracking system for updating, reporting, and tracking professional accomplishments of faculty members and academic personnel.



SUMMARY OF UNIVERSITY PLAN 3 ACTION

Action Item	Brief Description
12	Revised School of Outreach funding and faculty staffing model
13	Off-campus delivery of engineering and technology-related curricula
15	Wyoming Library Database
17	Placement and adaptive curricular measures in writing and foreign languages
19	Articulation agreements with Colorado and Nebraska community colleges
20	Enhancing UW's learning environment
21	Symposium on best practices in the assessment of student learning
23	Review of structure and delivery of the Engineering Science curriculum
28	Staffing plan for ESL instruction
37	Health-care benefits for domestic partners
41	Graduate curriculum in computational science
42	Expansion of energy-related research centers
49	Maintenance and repair of the Centennial Complex
53	Inventory of sustainability-related courses
60	Weaving the Berry Center into UW's research and mission and credit- bearing curriculum
76	Comprehensive UW-Laramie transportation plan

ITEMS ADDRESSED IN 2011-2012

Action Item	Brief Description
77	Administrative role for WyGISC
78	Sustainable and energy-efficient operations
80	Protection of computer privacy and personal data
81	Classroom, laboratory, and instructional technology support
82	Administration of academic shops
83	Research collections of national caliber
88	Health-care data sharing and telehealth initiatives
91	Mental health collaborative
94	Establishment of a Center for Literacy
95	Expertise in multicultural and culturally sensitive education
96	Professional development plan in the College of Education
97	Disseminating business principles
99	Student and faculty links to UW's economic and community development activities
101	Research park in southeastern Wyoming
107	Outdoor experiences as an area of distinction in Student Affairs
108	Programs for cultivating leadership skills and career pathways among UW's faculty, academic professionals, and staff

For more information about the University of Wyoming's strategic plan and detailed supporting documentation for many of the action items described in this document, please visit:

www.uwyo.edu/AcadAffairs/Plans

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