



University Plan 4

First position paper, October 2012

Office of Academic Affairs
University of Wyoming
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**UNIVERSITY PLAN 4 (UP4): A STRATEGIC PLAN FOR THE UNIVERSITY OF WYOMING, 2014-2020
FIRST POSITION PAPER, OCTOBER 2012**

**Office of Academic Affairs
University of Wyoming**

1. INTRODUCTION AND OVERVIEW

This document represents the first of three position papers envisioned for the development of the next strategic plan for University of Wyoming. The plan, due to UW's Board of Trustees in May 2014, will cover the period 2014-2020. Our intent is threefold: to provide context for the planning process, to propose a set of major issues that the final plan will address, and to invite discussion and feedback about the shape and focus of the final plan. The narrative below reviews UW's mission and vision, analyzes the setting that the university will likely face during the period 2014-2020, offers a series of short narratives related to several key issues to be addressed, and outlines a process for developing the plan.

UW enjoys a tradition of strategic planning that stretches back to *Academic Plan 1* (AP1), developed in spring, 1999.¹ This tradition will soon enter its fourth cycle, as shown in the following table:

Plan	Period Covered
<i>Academic Plan 1</i>	1999-2004
<i>Academic Plan 2</i>	2004-2009
<i>University Plan 3</i>	2009-2014
<i>University Plan 4</i>	2014-2020

Strategic planning has allowed the university:

1. **to focus on areas of distinction**, developing bench depth needed to promote the highest levels of scholarship and teaching, in a way that permits and encourages most academic units to contribute;
2. **to connect these areas to critical issues facing Wyoming and the world**, through initiatives that transcend traditional disciplines, without diminishing the expertise that they nurture;
3. to go even further, helping **to define and create Wyoming's future**, in new and emerging economic, technical, social, and cultural dimensions as well as in the state's historic strengths;
4. **to identify core institutional principles** that guide resource allocations within the university and that shape the institution's responses to external opportunities and challenges.

A memorandum² from the Office of Academic Affairs, distributed in January 2012, outlines the structure, process, and timeline to be followed in developing a strategic plan for the University of Wyoming for the period 2014-2020. The current document expands upon key issues identified in that memorandum, anticipating the need for further input and refinement between now and the May 2014 due date for *University Plan 4* (UP4).

Strategic planning in the academy requires that its best minds — people who typically devote their creative energies to the advancement of specific disciplines or sectors of the university — engage in thinking that is more global and integrative than that which typifies most of our classrooms, offices, laboratories, and scholarly work. In the planning discussions that unfold between now and 2014, the most compelling ideas will be those that (1) reinforce the entire university's mission, (2) advance and refine the vision crafted in previous plans, (3) enhance the distinctiveness and lifelong impact of a UW experience, and (4) promote the university's role as a recognized leader in building the future, for Wyoming and the larger world.

¹A comprehensive record of UW's planning tradition, including planning documents and progress updates, is retrievable from the Academic Affairs website: <http://www.uwyo.edu/acadaffairs/plans/index.html>.

²See <http://www.uwyo.edu/acadaffairs/plans/14-20/index.html>.

2. UW'S MISSION AND VISION

MISSION STATEMENT³

In the exercise of our primary mission to promote learning, we seek to provide academic and co-curricular opportunities that will:

- Expose students to the frontiers of scholarship and creative activity and the complexities of an interdependent world;
- Ensure individual interactions among students, faculty, and staff;
- Nurture an environment that values and manifests diversity, free expression, academic freedom, personal integrity, and mutual respect; and
- Promote opportunities for personal growth, physical health, athletic competition, and leadership development for all members of the university community.

As Wyoming's only university, we are committed to outreach and service that extend our human talent and technological capacity to serve the people in our communities, our state, the nation, and the world. The primary vehicles for identifying the specific actions and resource allocations needed to accomplish this complex mission are the university's strategic plans, revised periodically.

A VISION FOR THE UNIVERSITY OF WYOMING⁴

Alone among society's institutions, universities both imagine the future and create it. And alone among states in the U.S., Wyoming entrusts this duty to a single public, land-grant, research university.

The University of Wyoming is a community of scholars, learners, and leaders committed to two institutional hallmarks. The first is our mission to explore, create, and share knowledge, in areas that are meaningful to our constituencies and at a level of accomplishment that garners international recognition. The second is a culture that advances the intellectual and ethical capacities of our students and employees, with a degree of effectiveness that is exemplary among public universities.

The University of Wyoming is also an institution with a distinctive character. Counting among its assets a remarkable geographic setting, unparalleled statewide presence, and a heritage of strong public support, the university embraces both its historic sense of place and its mandate to create the future. We prize the institution's stature as a national model for *access* to higher education, *excellence* in areas of inquiry that are relevant and important to the state and region, and the cultivation of *leadership* for a civil society. We take pride in possessing the will to focus energy and resources on endeavors that build what Wallace Stegner envisioned as "a society to match its scenery."

³This version of UW's mission statement appears at <http://www.uwyo.edu/acadaffairs/mission/index.html>.

⁴This vision statement appears in *University Plan 3*, <http://www.uwyo.edu/acadaffairs/files/docs/up3.pdf>.

3. THE INSTITUTION'S SETTING IN 2012

Several tangible attributes define the context that delineates both the constraints and the opportunities that the university faces.

- **Statewide role.** UW is the only public university in the state. This status confers benefits, responsibilities, and challenges. UW enjoys recognition by state officials as Wyoming's largest reservoir of high-level expertise in many areas. It benefits from a streamlined decision-making chain, since it does not report to a statewide system of higher education. It has steadfast supporters in every branch of state government and among the state's citizens. At the same time, as Wyoming's only university, UW carries a wide-ranging portfolio: it serves as the state's most important source of teachers, engineers, health-care providers, scientists, business professionals, attorneys, political leaders, writers, and artists. The institution faces perennial pressures — largely from external constituencies — to broaden this portfolio beyond what its budget can support.
- **Planning for a new president.** President Tom Buchanan will retire in summer, 2013. His eight years in office will mark a period of extraordinary growth in the university's academic stature, physical plant, and statewide presence. Leadership transitions at this level, after such remarkable successes, are challenging. Nevertheless, we are confident that talented people will find the UW presidency a highly attractive post.

One key to a successful presidential search — and an asset that will help sustain the university's progress during and after the transition ahead — will be a visible institution-wide commitment to self-reflection, advancement of mission, and energetic self-determination through strategic planning. We look forward to the development of this plan not only throughout the remainder of the current academic year but afterward, too, with a new chief executive officer at the helm.

- **Research and graduate education.** As a research and doctorate-granting university, UW expects faculty to conduct rigorously peer-reviewed scholarly work and creative activity and, in some fields, to mentor doctoral students. As with many peer institutions nationwide, UW's investments in research and graduate education constitute an essential component of the state's economic development strategy.⁵ At the same time, they impart to its baccalaureate programs the distinctive opportunities associated with flagship public universities and elite private institutions. UW's status also imposes costs. In hiring and retaining faculty, we compete in one of the world's most competitive markets, for some of the world's most highly trained professionals, and the people we hire must live up to expectations significantly more complex than those that prevail at comprehensive universities or at undergraduate-only institutions.
- **The land-grant mission.** UW is a land-grant university. Its mission encompasses preparation for a wide range of professions as well as opportunities to pursue the liberal and fine arts. This attribute — and the public service mission embedded within it — lie close to the heart of UW's importance to the state. Owing to the land-grant ethos and the federal funding that underpins it, UW offers career pathways and emphasizes on applied research, extension, and community and business development that liberal arts institutions seldom stress.

UW enjoys a solid stance from which to nurture public-private partnerships that reinforce the land-grant mission and connect it to Wyoming's economy. The seven economic development units within UW's Office of Research and Economic Development⁶ have enabled many such partnerships in Wyoming. And since 2006, the Enhanced Oil Recovery Institute, Wyoming Reclamation and Restoration Center, Advanced Conversion Technology Task Force, and other

⁵Noteworthy in this respect is a 2010 document, "A Plan for Wyoming Science and Technology," prepared for Governor Freudenthal by the Wyoming Science and Technology Planning Group. The plan emphasizes water, energy, and computation — three areas emphasized in the areas of distinction identified in UP3. See <http://www.uwyo.edu/research/files/docs/science-and-technology-a-plan-for-wyoming-2010.pdf>.

⁶See <http://www.uwyo.edu/research/economic%20development%20reporting%20units/index.html> for an overview.

energy-related initiatives have reinforced this role. Gift-matching programs sponsored by the Wyoming Legislature have provided outstanding resources to enable partnerships of this type.

- **Exceptional state funding.** Wyoming ranks first among states in per-capita public expenditures on higher education. As the table below shows, the Wyoming Legislature provides roughly 73 percent of UW’s base funding and more than 41 percent of the institution’s overall funding. At public doctoral institutions nationwide, state funding in 2009 averaged 19 percent of overall funding,⁷ and in many states the level of state funding is closer to half that percentage.

Strong state support, explicit attention to the instructional workforce, and deliberate management of the faculty position budget has enabled UW to achieve a student/faculty ratio of 14. By comparison with research universities in most states,⁸ UW has excellent faculty resources for the size of its student body.

As an unfortunate corollary of this exceptional state support, reductions in legislative appropriations hit hard. This aspect of UW’s fiscal profile becomes critically important whenever the state’s general fund revenues drop, as discussed further below.

UW Funding Sources for FY 2013 (1 July 2012 – 30 June 2013)

Base (“Section-1”) Funding	
General fund (legislature-appropriated)	\$204.7 M/yr
Tuition and other revenue (land-grant funds, royalties, etc.)	76.3 M/yr
Total, section 1*	\$281.0 M/yr
Self-Sustaining (“Section-2”) Programs	
Non-grant section II funds	\$140.6 M/yr
Grants & contracts (estimated, excluding student financial aid)	74.4 M/yr
Total, section 2 (estimated)	\$215.0 M/yr
Estimated total	\$496.0 M/yr
*Within this category, roughly ¾ of the expenditures are for salaries and benefits.	

- **Dependence on energy commodity markets.** Wyoming’s state budgets rely heavily on revenues from energy production. For at least the past decade, natural gas revenues have played a prominent role. While that revenue stream was robust in the years preceding the 2009 recession, it has weakened considerably in the past year.⁹ Concerns about the potential for sustained reductions in state revenues led Wyoming’s Legislature and Governor to ask all state agencies, including UW, to submit plans for eight percent reductions in general fund appropriations for FY 2014. Such a reduction would amount to \$15.7 million/year for the university — significantly more than the annual budgets of most UW colleges.¹⁰ If UW has to manage cuts at this level, the institution will undergo a period during which (1) reductions in support budgets, student financial aid, and staffing levels will force UW to exercise careful judgment in identifying the initiatives that it will support in the near term and (2) progress in these initiatives will be slower.

⁷National Science Foundation website, “Science and Engineering Indicators 2012, retrieved 8 July 2012 from <http://www.nsf.gov/statistics/seind12/c2/c2s.htm>.

⁸For example, among highly regarded public universities the student/faculty ratio at UC-Berkeley is 17; at U. Virginia, 16; at U. Michigan, 15; at UNC-Chapel Hill, 14; at Georgia Tech, 19; at Colorado School of Mines 16; at UC-San Diego 19; at UC-Davis 15; at Texas A&M, 19; at Clemson, 16; at U. Minnesota, 21; at Colorado State U., 18.

⁹The daily natural gas price at Wyoming’s Opal Hub averaged \$5.90/mcf during the period FY 2005-2008. For the last half of FY 2012 the average was \$2.27/mcf (source: Utah Geological Survey website, <http://geology.utah.gov/emp/energydata/natgasdata.htm>, retrieved 8 July 2012).

¹⁰This observation serves only as a rough gauge of magnitude, not as an indication of how UW would manage such a reduction. For information about UW’s budget reduction plans, see various documents retrievable at the Academic Affairs website, <http://www.uwyo.edu/acadaffairs/plans/budget/index.html>.

This caveat notwithstanding, we must continue to pursue progress. Strategic planning provides a critical tool here. Our plans identify and reaffirm major institutional directions, and they establish priorities among the initiatives undertaken to pursue them.

Whatever Wyoming's economic picture may look like in the near term, UW must maintain both a sense of direction and sufficient momentum to capitalize on any upward trends that may occur during the 2014-2020 implementation period. History bears out this notion: many of the successes of the mid-2000s — including dramatically increased prominence in energy-related fields, the arts, computational science, and the life sciences — had their roots in the academic plan developed in 1999, when Wyoming's economy sat in the doldrums.

- **Salaries below market levels.** For many years, UW's faculty salaries have lagged the national averages. In 2011-2012, for example, UW's average salary for full professors was 87.9 percent of the average for public doctoral institutions; for associate and assistant professors the comparable statistics were 92.2 percent and 93.4 percent, respectively.¹¹ While UW made headway in addressing this problem during the mid-2000s, the absence of salary raises since FY 2010 has caused the institution to fall further behind. Our best employees always have opportunities to increase their salaries, if not through UW-administered raises then by moving to other institutions. For this reason the persistence of salary gaps leaves the institution vulnerable to the loss of its most capable people.

In addition, when resigning and retiring faculty members leave behind smaller amounts of salary, the pool of dollars available for new hiring shrinks. This dynamic reduces the institution's flexibility to address new initiatives, leadership needs, and emerging areas of research and creative endeavor.

- **Access.** UW offers remarkably barrier-free access to a flagship-quality baccalaureate education. Owing to high levels of legislative support, UW's resident undergraduate tuition rate is the lowest among all American public doctoral universities, and our nonresident undergraduate tuition rate compares favorably with the prevailing resident rates in many feeder states. UW's competitive tuition rates for nonresidents, together with merit- and need-based financial aid, furnish opportunities to recruit students from populations more diverse than those found in most Wyoming communities.

In addition, Wyoming's Hathaway Scholarship Program generates endowment-funded financial aid for qualifying graduates of Wyoming high schools, in many cases at levels exceeding tuition. As a result, the financial barriers to a UW education are remarkably low.

Several other factors affecting access come into play. In November 2011, UW's Trustees strengthened the institution's admissions standards, sending a clear message to Wyoming high school students and their families about the importance of academic preparation for success in college. During the transition period required for this message to take hold, the university will have a responsibility to provide supplemental academic resources for students admitted with support. In the longer run, UW will have a responsibility to assess whether the new admissions standards have observable effects on incoming students' preparation.

In recent years, UW has begun to meet the needs of nontraditional students on the UW-Laramie campus as well. Nevertheless, despite UW's low tuition, cost is still a barrier for many nontraditional students, who are ineligible for Hathaway Scholarships and who often face other constraints, such as geographic limitations and the need to support families, while they take

¹¹See http://www.uwyo.edu/oia/files/facstaff/fac_rank.pdf. Comparisons of this type yield slightly different results depending on the years for which the data apply and the degree to which the analysis accounts for average salary differences among disciplines. Differences among methodologies notwithstanding, they all show that UW faculty salaries lag significantly behind market levels.

classes. And many other potential students face non-fiscal barriers to postsecondary education beginning early in their lives, including weak aspirational cultures and families who are under-informed about higher education. As a result, the State of Wyoming lags behind national averages in the percentage of adults who hold a postsecondary degree of any kind.

- **Outreach.** UW's distance education program serves as a model for public institutions. For decades the university has delivered courses and student support services to learners in communities across Wyoming and worldwide. Unlike many institutions, UW offers distance education through its mainstream departments, with the Outreach School providing administrative and technical support. In particular, academic departments retain control over the curriculum and teaching personnel. This approach promotes parity between on- and off-campus curricula. In addition, it has enabled a smooth transition to modern, hybrid learning modes that combine face-to-face and online delivery.

In implementing UP3, UW changed its funding model for distance education. The Outreach School no longer contracts with individual faculty members to teach courses via distance delivery. Instead, it contracts with academic colleges, distributing comparable levels of aggregate funding to support preparation and delivery of courses but allowing deans to manage the allocation of outreach-generated funds and teaching assignments within each college. With this increase in control, the colleges have absorbed some risk, which will bear careful monitoring in the next few years.

- **Partnership with NCAR.** Consistent with the commitment to computational science established in previous strategic plans, UW now enjoys an outstanding partnership with the National Center for Atmospheric Research. This partnership has provided UW researchers with access to world-class supercomputing facilities and strong connections to leading experts in computationally-related fields. Between now and late 2013, NCAR will develop its next strategic plan, and the overlap with UW's strategic planning process furnishes both organizations with an opportunity to explore scientific connections across an even broader array of areas.
- **Effective collaboration with community colleges.** The university maintains a statewide articulation agreement that facilitates students' transfer to UW after earning an associate's degree at a Wyoming community college. UW also participates in a statewide course-numbering and course-transfer agreement, to provide clear guidance on which courses qualify for transfer credit. Owing to these systems, Wyoming's excellent public community colleges serve as important pipelines through which Wyoming students can begin to pursue baccalaureate degrees. These connections can form the basis for enhanced articulation with other institutions — such as tribal colleges and public community colleges in Nebraska and Colorado — in the near future.

Augmenting these institution-level systems are a variety of periodic, discipline-specific articulation programs conducted by faculty members throughout the state. These programs, which Wyoming can sustain to a degree that is difficult in large-population states, help insure that pivotal courses remain transferable in substance as well as on paper. Some UW departments have invited affected high school teachers to join these discussions. Through this mechanism, discipline-specific articulation may help resolve, at a statewide level, some of the touchy national issues surrounding concurrent and dual enrollment, through which high school students take courses for college credit.

A statewide transfer task force is now in place, helping to pave the way for more seamless transfer to UW from Wyoming community colleges.

UW also has several intangible attributes that bear on strategic planning:

- **Strong teaching culture.** Most UW departments place historically strong emphasis on undergraduate teaching. UW must retain this emphasis as a source of pride. Teaching plays an essential role in faculty reappointment, tenure, and promotion decisions. In addition, unlike many sister institutions, UW has an academic professional employment series that promotes career-long

growth and institutional engagement among lecturers, whose duties focus on classroom teaching. The Ellbogen Center for Teaching and Learning and numerous college- and university-level teaching awards help reinforce this culture.

Institutional culture and the recent changes in UW's admissions criteria provide an opportunity for the faculty to re-examine how we teach communication skills. As professional writers and speakers, faculty members possess both a natural interest in students' writing and oral communication and substantial expertise to offer. Broadening students' opportunities to hone these skills is arguably one of the most profound enhancements that UW can make to its baccalaureate program. However, an emphasis in this area will require faculty members in all disciplines to accept a greater commitment to teach writing and oral communication in their own classes. It will also require increased attention to the resources available to students in UW's Writing Center.

UW's commitment to graduate education is less uniform, especially in Ph.D. programs. Some Ph.D.-granting programs maintain vigorous and effective student recruitment and a widely shared faculty commitment to doctoral mentoring. In other programs, graduate student recruitment appears to be less aggressive, and the production of Ph.D. graduates is spottier. Recent initiatives from the President's office and the Office of Academic Affairs, including increased funding for graduate recruitment and greater attention to the management of state-funded graduate assistantships, have begun to strengthen UW's institution-wide culture in graduate education.

- **Uneven commitment to the assessment of student learning.** Faculty commitments to the assessment of student learning vary greatly among departments and colleges. Although a few departments use assessment as an effective tool in the design and evolution of their curricula, the concept encounters resistance in a few others. Admittedly, much of the national discourse on assessment is jargon-filled and couched in the repellent rhetoric of accountability. Those decades-old barriers notwithstanding, UW has several local examples to illustrate how clear thinking about learning outcomes and pragmatic approaches to curriculum mapping and evidence-driven improvement can lead to more effective degree programs.
- **Fertile ground for interdisciplinary teaching and scholarship.** UW's status as one of the nation's smallest flagship public universities may pose challenges, but it also facilitates collaboration across department and college boundaries. Compared with many peer institutions, the university provides a rewarding environment for scholarly work that involves multiple departments or that may be difficult to pigeonhole in traditional disciplinary taxonomies. This culture is far from universal across the institution. Still, the receptiveness of UW's senior academic leaders to cross-departmental and cross-college scholarship and degree programs — and the degree to which these enterprises have guided such initiatives as UW's institution-level EPSCoR, COBRE, and INBRE grants — are noteworthy among the institution's intangible assets.
- **Sense of place.** Few universities enjoy such a remarkable geographic setting. Among those that do, the most widely admired take pains to capitalize on their sense of place. The sparse population, astonishing landscape, and distinctive human cultures and economy of the Rocky Mountain West provide fertile ground for focusing UW's areas of scholarly expertise, shaping the curriculum, and enriching the student experience. Nationally tabulated datasets seldom capture these dimensions of an institution of higher learning. But to those who look beyond the standard metrics, place-based assets provide salient guides to a university's future character.

4. KEY ISSUES TO BE ADDRESSED IN UP4

UW's planning tradition has changed the institution's culture to one that values communities of expertise in selected *areas of academic distinction*. These are fields of academic inquiry and curriculum in which UW has both an existing foundation in faculty strength and a commitment to sustained and increasing prominence. This culture helps counteract the perennial pressure to spread faculty talent over too many fields and too many degree programs, at the expense of excellence in any of them. Focusing on a well defined set of areas of academic distinction facilitates the recruitment of outstanding new faculty members, provides stability against retirements and resignations, and enhances the distinctiveness of the UW experience.

Focusing on *areas*, instead of emphasizing specific academic departments, also helps maintain incentives for all departments to pursue excellence. It whets the natural interest that departments have in each other's hiring, research programs, curricula, and overall success. This dynamic combats the self-imposed insularity that often prevails at academic institutions, largely as a result of purely administrative structures established to deliver the baccalaureate curriculum.

The issues listed below constitute a preliminary list of topics to be addressed in more detail in *UP4*. In many cases, the issues relate directly to one or more areas of academic distinction identified in *UP3*:

THE AREAS OF ACADEMIC DISTINCTION

- Critical areas of science and technology
 - Computational science and engineering
 - Earth and energy science and engineering
 - Water resources
- Cultural assets, arts, and humanities
- Environment and natural resources
- History and culture of the Rocky Mountain region
- Life sciences
 - Biomedical science
 - Ecology
 - Molecular and cellular life science
 - Neuroscience
- Professions critical to the state and region
 - Business
 - Education
 - Health care
 - Law

These areas mesh closely with the vision of a connected university: one that pursues internationally recognized excellence in fields that are relevant and important to its state and region. To complement these academic strengths, in implementing *UP3* the Division of Student Affairs has stressed outdoor experiences and leadership development as areas of distinction in the co-curriculum.

This list need not remain fixed. As the university's setting evolves and as fields of inquiry wane and emerge, UW's areas of distinction may change. For example, the past few years have seen a significant emphasis on expertise in wildlife and livestock disease. Ongoing discussions among faculty members in the humanities may yield more finely resolved directions for future emphasis in that domain. Building genuine academic distinction requires a balance between the nimbleness required to stay at the cutting edge and the sustained momentum needed to build a future based on existing strengths.

MAJOR ACADEMIC ISSUES

In the following narratives, issues marked with an asterisk relate directly to specific areas of distinction identified in UP3.

Engineering facilities.* The 2012 Wyoming Legislature challenged UW to develop a “renovation and reconstruction plan for the college of engineering [and applied science],” aiming toward “a tier one academic and research institution in areas of excellence appropriate for Wyoming.”¹² This directive creates an unprecedented opportunity to advance UW’s engineering curricula and research. A key component of UW’s next strategic plan will be the development of a compelling academic plan in the College of Engineering and Applied Science, to be pursued on an accelerated schedule and with special attention to external constituencies. Of special interest are strategic directions that (1) establish the College of Engineering and Applied Science among the nation’s prominent schools of engineering and technology, in a targeted set of areas; (2) enhance connections between UW’s academic programs and state-of-the-art concepts being developed in the private sector; and (3) provide outstanding internship and career opportunities for UW students and graduates in engineering and other STEM disciplines.

Humanities initiative(s).* In 2011, UW’s administration invited members of the humanities faculty to explore potential initiatives that might strengthen the humanities as a community of teachers and researchers at the university.¹³ Ideas emerging from this discussion have included the identification of coherent foci for humanities research at UW, a humanities institute, new degree programs, and other proposals. Although we have no *a priori* prescription for how to bolster this set of core disciplines, we welcome the discussions as a vehicle for developing proposals for UP4 that enrich our students’ learning and the professional lives of UW’s humanities scholars.

Solidifying strength in the arts. UW has demonstrated a commitment to statewide leadership in the arts and arts education. Major construction projects, the Neltje gift, and many award-winning exhibits, degree programs, performances, and other activities have enhanced both the resources assigned to UW’s fine arts programs and the strength of artistic endeavors and the arts community in the state and region. We welcome conversations about solidifying UW’s role as a leader in the visual and performing arts as well as discussions about expanding opportunities for faculty and students to engage in the arts.

ENR-related programs and the Biodiversity Institute.* Spurred by the completion of the Berry Center for Biodiversity Conservation and the development of an array of other assets related to biodiversity, ecology, and natural resources, in 2011 a UW faculty task force developed a proposal¹⁴ to establish a Biodiversity Institute. This proposal builds on numerous institutional assets developed over the past decade, including the Ph.D. Program in Ecology, a Stable Isotope Facility, the Wyoming Geographic Information Sciences Center, faculty expertise in several life science and social science departments, and numerous others. Following the recommendations of a second task force,¹⁵ UW appointed a director for that institute, to be housed as a part of the Haub School for Environment and Natural Resources. A significant task for the next few years will be the reallocation of faculty and academic professional positions toward areas and units that can contribute to the success of this vision.

Implementation and dissemination of an updated strategic plan for SER.* Funded by the Wyoming Legislature in 2006, as an outgrowth of Academic Plan 2, the School of Energy Resources now rests on stable state support and has developed a plan for expanding its suite of faculty positions. As the school marshals additional external funding and moves into the new Energy Innovation Center, it will be imperative to implement this plan in a way that maximizes SER’s impact on UW’s research missions and external funding, helps shape the curricula in contributing academic departments, and provides effective

¹²Wyoming Legislature House Bill HB0121, retrievable at <http://legisweb.state.wy.us/2012/Enroll/HB0121V2.pdf>.

¹³See “A proposal for the humanities,” posted on the Academic Affairs website at the following URL: http://www.uwyo.edu/acadaffairs/files/docs/humanities_proposal_9-6-11.pdf.

¹⁴The task force report appears on the Academic Affairs website, at the following URL: http://www.uwyo.edu/acadaffairs/files/docs/biodiversity_initiative_tf_rep.pdf.

¹⁵The report appears at http://www.uwyo.edu/acadaffairs/files/docs/biod_organizational_relation.pdf.

incentives for faculty members to pursue competitive research through the school's eight centers of excellence.

Diversity in STEM disciplines. Through the School of Energy Resources, the NCAR-Wyoming Supercomputer Center, and state-of-the-art research programs in several colleges, UW now offers many spectacular opportunities for upper-division undergraduates to participate in science, technology, engineering, and mathematics (STEM) research. By the time UW is implementing UP4, the Enzi STEM Laboratory will be in place, providing first-rate facilities for entry-level coursework in STEM disciplines. These advances notwithstanding, there is a growing need, in Wyoming and nationally, for university graduates in STEM-related fields. UW can enhance the attractiveness of STEM fields not only with its facilities and better student recruitment generally but also through attention to recruitment of women and people of color, who remain underrepresented in these disciplines. Because careers in these fields are so critical to the nation's future and provide such effective pathways to leadership, UW must undertake efforts to tap this talent pool more effectively.

Enhancements in premedical and medical education.* Motivated in part by recently approved changes in the Medical College Admission Test, several UW faculty members have begun discussions about possible revisions in the premedical curriculum. The advent of the Enzi STEM Laboratory makes this study especially timely, and UW's close relationship with the University of Washington School of Medicine provides a potentially valuable resource.

For over three decades, UW's Family Medicine Residency Centers in Casper and Cheyenne have offered graduate medical education for physicians specializing in family medicine. These programs help build a workforce of primary care providers for Wyoming's challenging rural setting. In addition they serve as a health-care safety net for the regions surrounding Wyoming's two largest cities, and they provide clinical training opportunities for students pursuing careers in allied health professions. For much of their history, the residency programs have struggled with problematic funding models. A continuing challenge for UP4 will be the identification and implementation of new funding models and business practices that can support the integrative, patient-centered approaches to medical care that are emerging nationwide.

Materials science curriculum and research.* For decades, faculty members in the Colleges of Agriculture and Natural Resources, Arts and Sciences, and Engineering and Applied Science have maintained vigorous research programs in materials science. At times these programs appeared to have little in common; at times there have been promising signs of cross-college and cross-disciplinary collaboration. Several UW leaders have proposed reviving this area as a focus for a more coordinated faculty hiring and curricular development. Whether such a proposal makes sense hinges on the prospects for productive new collaborations among existing faculty groups and for sustained commitments to cooperative hiring among the affected departments.

Wildlife and livestock disease initiative.* The College of Agriculture and Natural Resources has developed a multifaceted program of fundraising and internal resource commitments dedicated to research and education in wildlife and livestock diseases. This initiative responds to critical needs of Wyoming's agricultural industry, and it has important connections to some of the most pressing scientific questions surrounding neurodegenerative diseases in humans.

Computational and data-enabled science.* With the growing importance of large-scale, data-intensive research in many disciplines, UW's role in the NCAR-Wyoming Supercomputer, and UW's faculty strength in computational science, UW enjoys a remarkable opportunity to become a national leader in computational and data-enabled science. Achieving leadership in this area will require new curricula, possibly in collaboration with several sister institutions along Colorado's Front Range. It will also require the development of expertise and infrastructure in these areas and in such fields as scientific visualization, computational and statistical processing, and spatial statistics.

This issue connects with many other STEM-related areas of academic distinction. Computational methodologies and data-intensive science have already become prominent in UW's earth- and energy-related science and engineering, in the new doctoral program in water resources, in various research

groups focused on subsurface flow, in several of UW's life-science focus areas, and in materials science and engineering. This "third pillar of science" is more an approach to analysis and discovery than a field *per se*, and UW now enjoys a spectacular opportunity to join the top tier of American institutions in embracing this approach in its teaching and research missions.

Internationalization. At the invitation of the American Council on Education, UW is a participant in the current cohort of ACE's Internationalization Laboratory. A team consisting of faculty members and administrators has conducted town hall meetings around Wyoming and has begun to develop recommendations for UP4 action items that can enhance the global dimensions of a UW education. Prominent among these dimensions are the elements of the three-legged stool identified in UP3:

1. Cultivate an environment that attracts international scholars and students.
2. Enhance UW students' international awareness through the curriculum.
3. Expand the opportunities for UW students to study abroad.

Elements 2 and 3 require special attention to the opportunities — and hence the incentives — for students to engage in global issues in their coursework, both in Wyoming and internationally.

The undergraduate intellectual experience. The remarkable increase in opportunities for study abroad, increased emphasis on undergraduate research experiences, and investments in programs such as Synergy and the Honors Program have strengthened UW's strong baccalaureate teaching culture. The coming planning period has the potential to enhance this culture in at least four dimensions: (1) the long-term prospects for better student preparation, as UW's new admissions standards take effect; (2) the effects of the Hathaway Scholarship program in attracting more of the state's most academically successful high school graduates to attend college in Wyoming; (3) recent discussions about requiring first-year seminars as part of the general education curriculum; and (4) enhanced opportunities for undergraduates' participation in research.

Natural resources law as an area of excellence.* During the implementation of UP3, the College of Law has strengthened its faculty expertise and curricular offerings in the legal aspects of natural resource, energy, and water law. As a result, the college is poised for national prominence in these intertwined areas of expertise. A strategic question for UP4 will be how to capitalize on the gains of the past few years to solidify natural resources law as a widely recognized area of excellence at UW.

Augmenting this opportunity are plans emerging within the College of Law to emphasize experiential education. The college already focuses on legal writing and clinic experiences to a degree that is unusual among American law schools. Melding this practice-oriented teaching philosophy with the pursuit of true areas of excellence can provide a powerful strategy for attaining distinction in the coming planning period.

Literacy center.* Owing to the vision of several deans of the College of Education and the resources made available by the Wyoming Legislature through the Endowment for Excellence in Higher Education, UW established a Literacy Research Center and Clinic as an outgrowth of UP3. This center addresses the intellectual building block most fundamental to all levels of education. Significant tasks for the coming years will include the completion of a facility to house the center, identification of adequate and stable funding for sustainable center operations, and the continued development of UW's Ph.D. program in Literacy Education.

Refined policy on academic freedom and responsibility.¹⁶ For decades, the 1940 Statement of Principles on Academic Freedom and Tenure of the American Association of University Professors has served as the national standard for freedom of expression in higher education. Indeed, excerpts of the statement appear verbatim in UW's regulations. A 2006 Supreme Court decision, concerning a case outside of academia, left some aspects of this statement unclear for the academy. Straightforward

¹⁶The AAUP statement is retrievable at <http://www.aaup.org/AAUP/pubsres/policydocs/contents/1940statement.htm>. The Supreme Court decision is *Garcetti v. Ceballos*, 540 U.S. 410.

measures can preserve the intent of the AAUP statement, but enacting them will require a careful review by the Faculty Senate.

Advancing innovative modes of teaching and learning. A wide array of teaching and learning modes and technologies are now firmly embedded in UW's curriculum, in many on-campus courses as well as in courses delivered through the Outreach School. The rapid growth of these delivery modes has prompted the Office of Academic Affairs to commission a review of alternative learning management systems, to ensure that faculty and students have access to cost-effective and educationally powerful software applications. At the same time, the Outreach School's revised funding model, adopted as part of the implementation of UP3, will enable UW to provide more systematic support for faculty members who use online modes in their teaching. Finally, opportunities are emerging for UW to share curricula with other institutions, to widen the scope of our course offerings beyond our own areas of distinction. UP4 provides an opportunity for the university's faculty to examine, evaluate, cull, and refine innovative teaching modes and technologies that will enhance student learning, wherever our students live and learn.

UP3 INITIATIVES REQUIRING CONTINUED ATTENTION

The following initiatives originated as action items in UP3. Further information is available in annual report cards¹⁷ published by the Office of Academic Affairs and, in some cases, in more detailed documents posted on the Academic Affairs website. These initiatives will require continued attention during the 2014-2020 planning period.

- Implementation of a new **general education** curriculum, to promote clearly identified learning goals while providing greater simplicity, flexibility, transparency, and ease of transition for students.¹⁸
- Follow-through on **graduate education** initiatives, to enhance UW's ability to recruit outstanding master's and doctoral candidates and to promote effective assessment of graduate degree programs.¹⁹
- Follow-through on **diversity-related initiatives**, including the development of outstanding opportunities for students to learn about the myriad cultural dimensions of American society.
- **Statewide university presence**, including (1) distance-delivered academic programs that meld strategically with programs at Wyoming community colleges and (2) a plan for operation, maintenance, and construction of facilities developed in concert with the community colleges.
- Enhancement of **water resources education and research**, capitalizing on two major programmatic grants through the National Science Foundation's EPSCoR program.²⁰
- **Outdoor programs** and learning as distinctive elements of the UW experience, especially as vehicles for promoting learning outcomes — such as leadership development — that may be more difficult to pursue through the credit-bearing curriculum.
- **Infrastructure for computational science**, sustained through recurring institutional funding for research computing and faculty-oriented governance structures.²¹
- **Staff position allocation and management**, enabling the institution not only to address foreseeable budget challenges but, more importantly, to permit the alignment of staff position resources as needs evolve.²²

¹⁷Report cards for UP3 and a retrospective on strategic planning for the period 1999-2009 are retrievable at <http://www.uwyo.edu/acadaffairs/plans/background.html>.

¹⁸See <http://www.uwyo.edu/unst/usp-review-revision/index.html>

¹⁹See <http://www.uwyo.edu/uwgrad/faculty-staff/index.html>.

²⁰See <http://www.uwyo.edu/wrese/> for information about UW's new Ph.D. program in Water Resources and Environmental Science and Engineering.

²¹The NCAR-Wyoming Supercomputer Center and UW's Advanced Research Computing Center — a smaller high-performance scientific computing system sustainably funded and located on the Laramie campus — will both become operational in late 2012.

²²See the president's June 2012 memo, "Process for managing non-academic employee vacancies," retrievable at http://www.uwyo.edu/acadaffairs/files/docs/pres_to_vp_memo_staff_vacancies.pdf.

- Enhanced **leadership development and succession planning**, including refinements of existing programs for grooming future academic leaders, providing orientation for new department heads, and cultivating future leaders among UW's nonacademic employees.

The impact of the co-curricular experience on student learning merits further comment. Although the formal curriculum lies at the core of baccalaureate education, students hone many important aspects of character outside of their formal coursework. Involvement in recognized student organizations, service projects, outdoor activities, intercollegiate and intramural athletics, ROTC, and other programs provide fertile ground for the development of leadership, civic engagement, appreciation for diversity, personal integrity, mutual respect, and physical health. In some cases, co-curricular avenues can be far more effective than credit-bearing coursework at promoting these attributes.

We view UP4 as an opportunity to focus for distinction in the university's co-curricular efforts. Identifying the learning outcomes associated with these dimensions of the UW experience — and then focusing on areas of excellence that advance these outcomes — will help create pathways by which divisions such as Student Affairs and Intercollegiate Athletics can best use strategic planning to advance their missions.

POTENTIAL ADMINISTRATIVE ISSUES

The following administrative issues have emerged through broad-brush discussions among Trustees, within the president's executive council, and with deans and directors in various divisions. This position paper is an invitation for all members of the UW community to think critically about the list, to propose additions or deletions, and to envision pathways for addressing or reframing the issues through concrete action items that can make a difference.

The institutional environment:

1. Development of a strategic plan for sustainable operations
2. Planning for new operations and maintenance needs
3. Laboratory safety systems and training
4. Emergency response training
5. Anti-violence policies and practices
6. Alcohol harm reduction
7. Continued refinement and staffing of institutional fundraising priorities
8. Review of the academic calendar, possibly including a review of the semester system.

Access and student success:

9. Support for nontraditional students and veterans
10. Expanded programs for students admitted with support
11. More sophisticated enrollment modeling and refined recruitment and retention goals
12. Tracking and using longitudinal data on student success

Model employment practices:

13. Feasibility of an employee assistance plan
14. Family-friendly practices and policies
15. Coordination of sick leave, long-term disability, and family medical leave
16. Critical review of administrative processes, to minimize unnecessary procedures and paperwork and enhance people's productivity.

5. THE PLANNING PROCESS

The key feature of the process for developing UP4 will be *iterative refinement*. Following a broad-brush, preliminary identification of key issues, the Office of Academic Affairs will coordinate four cycles, each leading to a public position paper for further review. Each iterative refinement cycle will:

- provide opportunities for UW Trustees, faculty members, staff members, students, and other stakeholders to provide input and feedback;
- allow time for divisions, departments, and colleges to refine and revise drafts of their own plans, in alignment with the university-level plan;
- yield a refined university-level position paper in response to input and feedback.

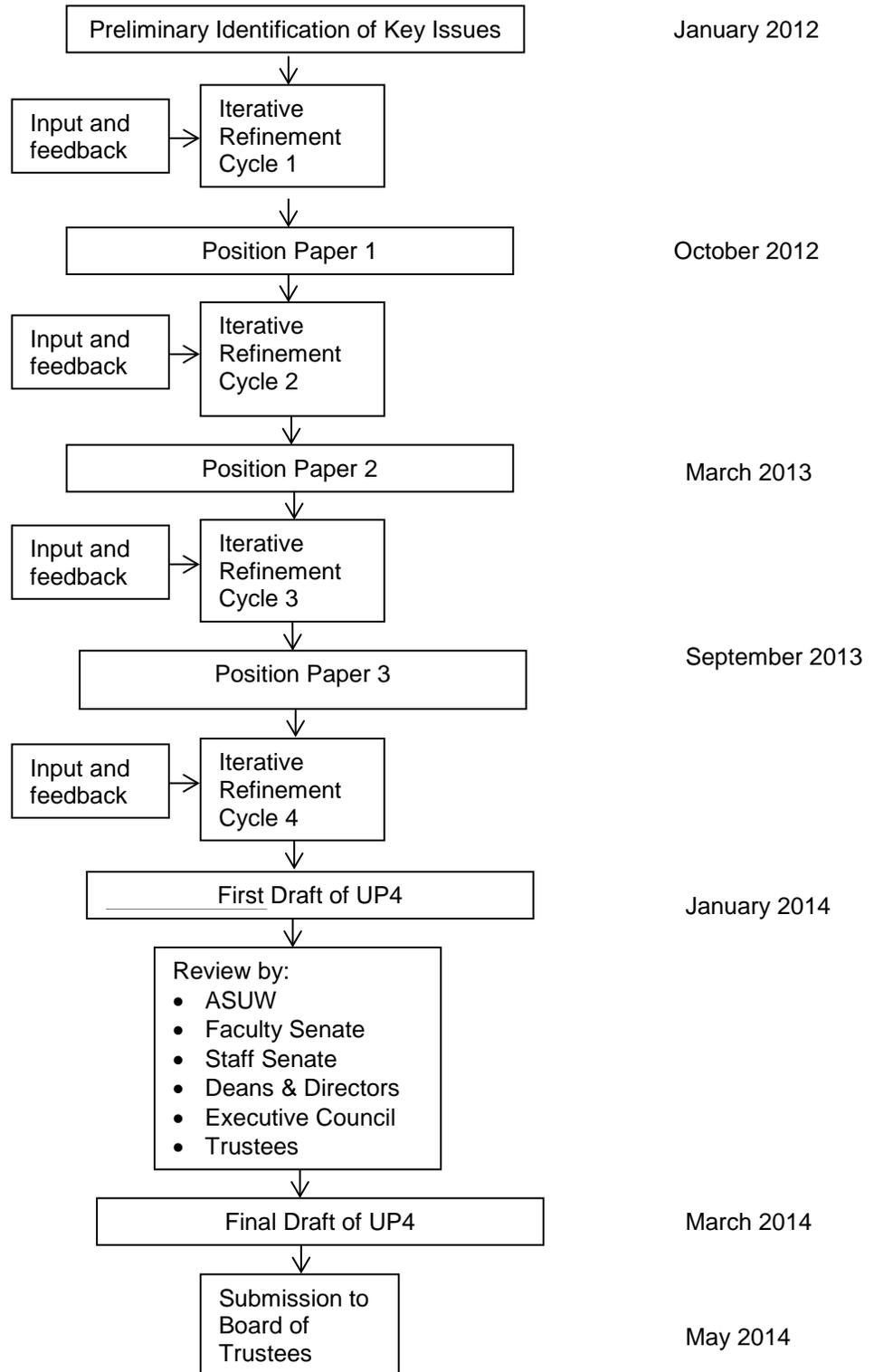
Paralleling the processes used to develop Academic Plan 2 and University Plan 3, stakeholders will include UW students; employees; advisory boards, commissions, and councils; members of the UW Foundation Board; community college leaders; members of the Wyoming Legislature; and key leaders in the state's executive branch. Their input will inform the development, by Academic Affairs in collaboration with other vice presidents, of a refined university-level position paper.

The flow chart on the next page shows how each iterative refinement cycle fits into the overall schedule.

The university-level position paper produced at the end of the fourth cycle will serve as the first draft of UP4, submitted to ASUW, Faculty Senate, Staff Senate, Academic Deans and Directors, and the President's Executive Council for review and recommendations. The final draft resulting from this stage will go to the Board of Trustees for approval in May 2014.

Key dates are as follows:

Milestone	Responsible party	Due date
Preliminary memo identifying key issues	Academic Affairs	Jan 2012
Position Paper 1	Academic Affairs	Oct 2012
Position Paper 2	Academic Affairs	Mar 2013
Position Paper 3	Academic Affairs	Sep 2013
First Drafts of Unit and College-Level Plans	Divisions, Colleges, Departments	Oct 2013
First Draft of UP4	Academic Affairs	Jan 2014
Final Drafts of Unit and College-Level Plans	Divisions, Colleges, Departments	Mar 2014
Final Draft of UP4	Academic Affairs	Mar 2014
Consideration by Board of Trustees	Trustees	May 2014



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We thank our colleagues who lead other UW divisions, for their help and insights in shaping UW's strategic plan:

Mr. Robert Aylward, Vice President for Information Technology
Dr. Sara Axelson, Vice President for Student Affairs
Mr. Ben Blalock, Vice President for Institutional Advancement
Mr. Chris Boswell, Vice President for Governmental and Community Affairs
Mr. Tom Burman, Director of Athletics
Mr. Mark Collins, Interim Vice President for Administrative Operations
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Ms. Janet Lowe, Interim Vice President for Fiscal Administration
Dr. Bryan Shader, Special Assistant to the Vice President for Research and Professor of Mathematics
Ms. Susan Weidel, General Counsel

We owe thanks to the Board of Trustees, for their endorsement of the planning process and substantive engagement in it. We also owe special thanks to UW's president, Dr. Tom Buchanan, for exceptional leadership and vision throughout UW's 14-year tradition of strategic planning.

