
Creation of the Future 2

Access, Excellence,
Leadership

Office of Academic Affairs
University of Wyoming
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University of Wyoming Mission Statement

The University of Wyoming aspires to be one of the nation's finest public land-grant research universities, dedicated to serving as a statewide resource for accessible and affordable higher education of the highest quality, rigorous scholarship, technology transfer, economic and community development, and responsible stewardship of our cultural, historical, and natural resources.

In the exercise of our primary mission to teach and educate students, 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 achieve this complex mission are the University's *Academic Plan*, *Support Services Plan*, and *Capital Facilities Plan*, each revised periodically.

This document is an invitation to university planning for the period 2009-2014. Comments are welcome at

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CREATION OF THE FUTURE 2: ACCESS, EXCELLENCE, LEADERSHIP

The task of the university is the creation of the future, so far as rational thought, and civilized modes of appreciation, can affect the issue. Alfred North Whitehead

I. AN INVITATION TO UNIVERSITY PLANNING

The University of Wyoming has entered a pivotal stage of its history. Our state, which weathered prolonged economic stress at the end of the last century, now enjoys unprecedented fiscal resources. The state's leaders look to education as a key to long-term advancement. As Wyoming's only public, baccalaureate-granting institution, UW is at the center of these discussions. Along with a talented faculty and dedicated staff, among the university's most important assets are a refined set of academic foci and a solid commitment to the planning needed to advance them.

This document represents an early stage in the development of an institutional plan (University Plan 3, or UP3) for the period 2009-2014. It is part of a multistage template for planning established in the development of Academic Plan 2 (AP2), adopted by the Trustees in 2004:

- Stage 1: Identifying the main issues and themes, through presentations to and feedback from college deans, department heads, the Faculty Senate and other faculty groups, ASUW, Trustees, support service divisions and their directors, members of the President's Executive Council, and other interested parties.
- Stage 2: Formulating specific ideas through a sequence of increasingly detailed position papers, of which this document is the second.
- Stage 3: Developing department- and college-level plans that are responsive to the main issues and themes.
- Stage 4: Developing a university-level plan capturing elements that are overarching or that require coordination among several divisions.

Each stage will involve discussion, feedback, and refinement of ideas and drafts. The purpose of the early stages is to advance ideas for discussion, not to cast them in concrete. Accordingly, in many instances the current position paper identifies issues — often identified through feedback in response to the first position paper — without proposing specific measures to address them. The aim is to develop a plan that reflects the best thinking of as many stakeholders as possible. A detailed time line for the overall process appears at the end of this document.

The current document is the second step in stage 2. The remainder of the document has the following structure:

- II. A vision for the University of Wyoming
- III. Introduction of five motifs, serving as organizing principles for strategic planning
- IV. A sketch of issues associated with one of these motifs, **access** to higher education
- V. Brief discussion of another motif, fostering **excellence**
- VI. Brief discussion of a third motif, cultivating **leadership**
- VII. Conclusion.

Complementing the academic dimensions of planning are those associated with support and infrastructure — facets of the university without which the academic enterprise cannot function effectively. In contrast to the planning processes used for AP1 (1999) and AP2 (2004), we envision a more inclusive plan for the period 2009-2014. Academic Plan 2 fostered a commitment to interdisciplinary academics. We hope to broaden this mandate to include collaboration among academic and support divisions as well as partnerships with other educational, cultural, and research institutions. The plan for the period 2009-2014 will integrate the institution's academic plan with plans for support services and capital facilities, to ensure that all of the plans mesh effectively with the university's major academic directions.

The Office of Academic Affairs welcomes all feedback to this document, including comments about issues that do not appear, suggestions for reframing issues that do appear, and proposals for well defined action items at all levels of the institution. All formats are welcome; comments and suggestions relayed in writing or via email are easiest to incorporate into subsequent documents. Although we welcome personal messages, we recommend email comments to up3@uwyo.edu.

We urge all participants in the process to keep in mind two caveats. First, *a plan is not a set of budget requests*. The purpose of planning is to establish priorities and identify concrete actions that various sectors of the university will undertake to advance them, in many cases through fresh thinking about their existing budgets and resources. Second, *planning occurs at several levels*. It is neither practical nor necessary for all important initiatives to appear in the university-level plan. A rough guideline for determining whether an initiative should appear in the university-level document is to ask whether its implementation requires (a) coordination among several vice-presidential divisions or (b) approval by the President or Board of Trustees.

II. A VISION FOR THE UNIVERSITY OF WYOMING

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."

III. PLANNING MOTIFS

We propose five motifs as organizing principles for UP3.

Motif 1: Building depth versus adding breadth. UW has many academically distinguished programs. Few, however, enjoy the faculty depth, numbers of graduate assistantships, or support

budgets to which they aspire. Wyoming's strong economy furnishes an opportunity — indeed, a mandate — to build genuine depth in areas of distinction in which we have struggled to do so for decades.

Good strategic planning requires balancing the imperative to build depth and strength in existing programs with the inevitable pressure to add new degree programs. To help strike this balance, any proposal to add a new degree program should address the following questions:

- **Foundation.** Does UW have sufficient faculty expertise and commitment, along with sufficient student interest, to sustain a viable program? In particular, for proposed new graduate programs, what are the specific benchmarks — such as research productivity, faculty engagement in existing graduate programs, and evidence of graduates' subsequent success — that demonstrate this foundation?
- **Cost.** To what extent will the proposed program require new faculty positions, new support staff, new GAs, new or renovated space, new library, digital information, technological, or laboratory resources, and new support funding? To what extent can these resources come from redirection of resources currently dedicated to outdated programs?
- **Curriculum.** To what extent will the proposed program require courses beyond those currently offered? To what extent can these courses replace existing courses, instead of simply adding to the faculty's overall teaching commitments?

Temptation to add programs is rarely matched by willingness to eliminate programs, but doing so is necessary in promoting a dynamic, up-to-date, and adequately funded curriculum. UW's regulation governing academic program closure prescribes a procedure that is time-consuming and effort-intensive, even when there is consensus among the affected faculty and student demand is low. We invite the Faculty Senate to **examine UniReg 43**, with the aim of streamlining the processes by which departments can eliminate obsolete or nonviable degree programs.

Building depth requires more than balancing mission and resources. It requires deep thinking about the organization itself. Being one of the nation's smallest public research universities, UW cannot aspire to match the department sizes characteristic of sister institutions in states like Texas, Illinois, California, and Washington. However, we can turn our scale into an asset through interdisciplinarity. By promoting shared scholarly interests and overlapping areas of expertise across department and college boundaries, individual academic units can expand their intellectual communities *within* the university, at the same time as they build their stature in national and international arenas. The next motif addresses precisely these shared interests and overlapping areas of expertise.

Motif 2: Reinforcing and refining areas of distinction. As part of the academic plans developed in 1999 and 2004, UW identified six *areas of distinction*. Areas of distinction are broad areas of academic inquiry and curriculum in which the institution has both an existing foundation in faculty expertise and a commitment to sustained and increasing prominence. In alphabetical order, the areas of distinction identified in the 2004 academic plan are as follows:

- Critical areas of science and technology
- Cultural assets, arts, and humanities
- Environment and natural resources
- History and culture of the Rocky Mountain region
- Life sciences
- Professions critical to the state and region.

These areas are neither carved in stone nor codified in regulation. Still, it makes little strategic sense to change an institution's major academic directions radically from one five-year planning period to the next. A central task for the 2009 plan will be to refine and reinforce these areas.

Areas of distinction provide opportunities for many academic departments, even small ones, to pursue excellence and depth. This strategy stands in contrast to a more common model, which is to identify “marquee departments” for special emphasis and funding. By pursuing excellence in a well defined set of themes, UW can enhance its ability to recruit outstanding faculty members and students across the institution. Wyoming and the region will be better places in which to live — richer environments for personal growth, cultural depth, intellectual leadership, and economic development — if the university adheres to a stable, carefully crafted set of academic directions that involve all colleges and that enjoy national and international recognition.

Motif 3: Promoting access to higher education. As a public land-grant institution, the university has an historic commitment to access to higher education. Access also refers to our responsibility to guide and challenge students intellectually and to hold ourselves accountable for how much they learn. Access is one of three broad headings used below to organize the issues and initiatives that merit closer attention in UP3.

Motif 4: Fostering excellence. As discussed below, many of UW’s most fertile opportunities to foster excellence reside in the areas of distinction. Focusing on areas of inquiry relevant to the state and region not only connects the university to its most important constituencies but also highlights Wyoming’s role as a natural laboratory in which to explore many of the most pressing issues confronting the world. Other opportunities reside in the institution’s responsibility to build excellence in human capital. A third category of opportunities revolves around the need to plan for excellence in UW’s capital facilities, also discussed below.

Motif 5: Cultivating leadership. Few states look so consistently to their flagship university for leadership. UW is Wyoming’s most logical anchor for the professional and civic efforts required to build a magnet environment — the “society to match its scenery” articulated in UW’s vision. Many of these efforts involve professions critical to the state and region, as these are among UW’s most publicly visible vehicles for strengthening communities.

Motifs 3, 4, and 5 deserve more detailed discussion.

IV. ACCESS

With the Hathaway scholarship program in place, a tradition of cooperation among the university and community colleges, and recent increases in permanent funding for post-secondary education, Wyoming is poised for national leadership in promoting access to higher learning. The university has a responsibility to address four broad areas to help make this vision a reality.

Cost of attendance. The Hathaway scholarship program represents a remarkable stride in lowering the cost barrier to a college education, but it does not eliminate that barrier for all students.

- UW has considerable resources, in the form of privately funded scholarships, with which to complement the Hathaway program. How these scholarships articulate with other sources of financial aid is a persistent source of debate, suggesting the need for **reexamining UW’s use of private scholarships to offset institutional financial aid**. Another important potential use of privately funded scholarships — one that requires careful study because of the complexities associated with endowment agreements — is to enhance **need-based and other types of support for non-tuition costs of a UW education**. These costs are especially significant for low-income, nontraditional, part-time, and graduate students, for whom there are few other sources of financial aid. A third area for consideration, especially in light of the support that the Hathaway scholarships provide for undergraduates and broad interest in better support for graduate students, is a greater emphasis on **college- and department-level fundraising to pursue gifts that fund graduate fellowships**.

- The Hathaway program has already encouraged more Wyoming students to attend college. The resulting enrollment increases will yield modest increases in tuition revenue, but the cost of delivering a high-quality, state-of-the-art education will continue to outpace those increases. Because tuition revenues constitute an important part of UW's operating budget, the institution needs a **coherent policy for setting future tuition rates** — one that ensures continued high quality but does not undermine the benefits of the Hathaway program. Such a policy would (1) identify the appropriate rationale for increases and the appropriate uses of revenues generated, (2) strike a balance between the public and personal benefits of a college education, and (3) clarify the institution's mechanisms for mitigating adverse impacts on students for whom cost is a genuine barrier.
- Many of UW's residence halls and apartments need remodeling and upgrading. The costs, traditionally borne by students who use the buildings, can add significantly to the cost of attendance. A **university housing plan**, including clear fiscal plans for sustainably operating and periodically upgrading these facilities, must be a factor in our deliberations on student fees as well as an element in UW's capital facilities plan.

Delivery. Along with institutions nationwide, UW delivers an increasing portion of its curriculum to nontraditional students in nontraditional modes.

- UW administrators have already begun discussions about enhanced **partnerships with Wyoming community colleges** in the delivery of baccalaureate and masters'-level coursework and degree programs. In some cases, such as with Laramie County Community College and our long-standing partnership with Casper College, the conversations focus on new buildings. In other cases there is less emphasis on bricks and mortar and more on specific academic programs. Partnerships between UW, the state's community colleges, and the developing Wind River Tribal College represent a sound model for expanding access to higher education. However, avoiding a tangled skein of inefficient one-on-one arrangements between colleges and the university will require a **statewide curricular outreach plan**, including plans for funding the new programs without eroding resources that support existing programs.
- UW's current funding model for off-campus course delivery rests on premises more appropriate to the 1970s than to today's students: the Outreach School is constrained to deliver a fiscally self-sustaining portfolio of curricula. To place distance education on a footing commensurate with traditional, on-campus delivery, we propose examining a **revised Outreach funding model**.
- The demand for distance education in Wyoming is rapidly outstripping the infrastructure available to deliver it. A **plan for the state's distance-education infrastructure**, including upgrades and maintenance of the state's data networks and facilities, not only would help address the fastest growing segment of UW's student body but also would facilitate coordination among all levels of education throughout Wyoming.
- UW's academic calendar plays a role in access to academic programs. Some faculty members have expressed interest in a **winter session**; others ask whether a different structure for summer session could more effectively serve students' needs.

Student success. Access without a reasonable chance at success is a hollow benefit. UW must work across the spectrum of Wyoming's educational network to ensure that students enter college with the right preparation, begin their college careers with the right courses, and have access to the right tools and resources to succeed.

- With UW's leadership, the state has recently established a ***P-16 (pre-school through baccalaureate) Council***, to promote information sharing and cooperation among various sectors of Wyoming's education system. This council is a vehicle for more vigorous articulation among UW, the community colleges, and K-12 and preschool teachers and for smoothing the students' transitions — efforts already seeded through the work of individual UW departments and faculty members, the Wyoming School-University Partnership, and initiatives funded by the School of Energy Resources.

Four out of 10 UW students are nontraditional: they are over 25 and are not entering university directly from high school. The university must identify ways to ***assess nontraditional students' preparation*** for the university experience and provide resources to promote their success.

- Since the 2004 Academic Plan, UW has made significant headway in the assessment of student learning within academic majors. This progress notwithstanding, our assessment culture is still a patchwork: some disciplines have made tremendous progress; others still struggle to identify well-defined outcomes or to assess those outcomes. A productive next step will be to establish a ***best practices symposium for the assessment of student learning***, to facilitate a vibrant exchange of ideas on how to gauge the effectiveness of UW's curriculum and make changes where appropriate. A hallmark of UP3 should be the ***assessment of the University Studies Program***, accompanied by plans for streamlining and revision where needed.
- The Hathaway success curriculum, enacted by the 2007 Wyoming Legislature, delivers a profound message about the importance of high school preparation for post-secondary education. ***Assessing the Hathaway curriculum*** is a statewide responsibility, arguably best residing with the P-16 Council. Still, UW has a natural role to play in helping to refine the curriculum over time, to gauge its influence on student success rates in college, and to coordinate it with the institution's admissions policies. Of special interest are impacts that the curriculum will have on students' preparation for the core college curriculum. In particular, UW's academic departments are perhaps the units best positioned to analyze existing evidence and to host discussions about ***placement mechanisms and adaptive curricular measures in such fields as writing and foreign languages***.
- Four measures have the potential to help UW retain more students through graduation: establishing a ***first-year and transfer-student transition program*** at the beginning of fall semester, introducing ***programs for students who have not declared majors***, enhancing ***career counseling and guidance, and tailoring academic support services for non-traditional and distance students***. In addition, making learning communities available to all entering students can help serve students who have yet to declare majors. And ***stabilizing the funding for Synergy*** — UW's nationally acclaimed program for conditionally admitted students — will help maintain reasonable success rates for this set of students.

Inclusiveness. As the state provides new opportunities for its students, the responsibility falls to UW to maintain an inclusive environment for teaching and learning. We must continue reaching out to those for whom opportunity may not come so easily: students of color, students of limited economic means, students who have never dreamed of going to college. And we must cultivate the diverse and heterogeneous society that our graduates will find as they enter an increasingly multicultural workplace and an ever more global economy.

- The institution has made great strides in expanding students' opportunities to study abroad and in smoothing some of the increased bureaucratic barriers that confront international students and scholars who seek to study and work at UW. A key element in UP3 will be to solidify the institution's emphasis on ***internationalization***, in part by enhancing opportunities for study abroad and in part by more effectively importing international perspectives into the

curriculum. UW's foreign language curriculum can play an important role in this effort. A proposed **Center for European Studies** may be another viable approach.

- A coherent plan for more effective recruitment and retention of students of color may include such measures as **partnerships with historically black colleges and universities and with other minority-serving institutions of higher education**; greater outreach to Latino and Latina students, especially in Wyoming and Colorado; and more focused efforts to recruit and retain American Indian students.
- UW has arguably had less success in **retaining women and people of color on the faculty** than in recruiting them. Recent first steps in analyzing this problem have included a statistical analysis of salary equity, participation in a nationwide survey on the experiences of early-career faculty members, and an examination by the University Tenure and Promotion Committee of potentially subtle barriers to reappointment, tenure, and promotion, especially for women in some technical fields and faculty members of color across the institution. The issue's very persistence — at UW and at research universities nationally — suggests that additional measures are worth investigating, including initiatives designed to promote a more supportive community within the university and off campus. In addition, the **recruitment and retention of staff members of color** remains a challenge. Mechanisms such as the establishment of a diversity funding pool for staff hiring, analogous to the funding mechanisms used in the Office of Academic Affairs for academic hiring, may be worth considering.
- An issue of increasing prominence in the American workplace is providing **fair, equitable benefits to domestic partners** of UW employees. For UW to remain competitive with the corporate sector, with the top tier of private universities, and with an increasing number of our public peer institutions, we must follow through with the university's current efforts, in collaboration with outside consultants, to develop expanded health insurance coverage and a sound strategy for funding an appropriate suite of benefits.
- UW has made significant progress toward full **access for students and employees with disabilities**. An important task for UW for the near future will be implementation of key recommendations made by UW's disability services task force.
- Through planning, coordination, outreach, and grants administration, UW can continue to increase the percentage of Wyoming students pursuing post-secondary education. Close collaboration with K-12 and Wyoming community colleges to help students understand the opportunities of higher education in our state is essential in **expanding the proportion of Wyoming students who achieve baccalaureate degrees**.

V. EXCELLENCE

Among the most productive pathways to excellence is through **areas of distinction**, defined earlier in this document. AP2 identified six areas of distinction, five of which are as follows:

- Critical areas of science and technology
- Cultural assets, arts, and humanities
- Environment and natural resources
- History and culture of the Rocky Mountain region
- Life sciences.

A sixth area, professions critical to the state and region, is one of the central topics of the next section.

Critical areas of science and technology

AP2 advanced three focus areas in science and technology:

- Energy and Earth science
- Computational science,
- Materials science.

Each area is potentially quite broad and therefore faces the risk of being ill-defined or spread too thinly. Lasting depth will require sustained attention to a clearly understood set of shared interests among affected departments. In addition, any strategic thinking about the future of these three areas must take into account the intellectual overlaps among them.

- Increases in enrollments, curricular changes, and growth in the research enterprise have combined to place significant stresses on UW's laboratory space. High on the list of priorities for new capital facilities is a **science teaching laboratory facility**, which would provide modern laboratory space dedicated to instruction in entry-level laboratory courses and relieve some of the pressure on research laboratory space.
- UW's presence in the computational sciences, once limited to isolated sectors of the faculty, is now well established. Nevertheless, the university's computational science community is still too small to support the institution's recently established partnership with the National Center for Atmospheric Research (NCAR). Key tasks for UP3 will include (a) hiring at least five faculty members who have **joint appointments with NCAR**; (b) developing a **coherent plan for UW's high-performance computing infrastructure**, perhaps through a research computing council composed of computational scientists from academic units and the Division of Information Technology; (c) developing a centrally funded structure for **coordinated system administration** to support research-based computing; and (d) expanding **student opportunities for hands-on experience in high-performance computing**.
- The School of Energy Resources (SER), established with new state funding in 2006, provides a vision and a set of incentives for expanding UW's traditional strengths in Earth and energy science. The school itself faces a delicate task of balancing the need for relevance to Wyoming's current energy portfolio, which is truly remarkable but largely based on fossil-fuels, with the need for a broader energy portfolio for the long term. Striking this balance will require scientific and technical advances as well as economic and policy analysis. A critical task in stabilizing SER is the **planning, funding, and construction of a School of Energy Resources facility**, to house interdisciplinary teaching and research in disciplines contributing to the school.
- Materials science remains the least well organized of the three areas. In part this fact is attributable to the sheer breadth of the field itself; in part it is attributable to differences in vision among various faculties. Perhaps the most effective pathways toward a **better focused materials science program** at UW are through such scientific areas as the Molecular and Cellular Life Science program, discussed below, and our growing community of computational scientists. Some have proposed that UW's materials characterizations instruments, housed mainly in the Department of Geology and Geophysics, should become a university-wide core facility to support this initiative.
- Arguably better poised than materials science — and more directly relevant to the state and region — is UW's faculty expertise in water resources. This expertise is distributed across many departments, the UW Office of Water Programs, the Haub School, and several colleges. Water resources being central to the life and economy of the Rocky Mountain west,

there are compelling reasons to explore ***interdisciplinary graduate and professional programs and enhanced faculty expertise in water-related fields.***

Cultural assets, arts, and humanities

UW is Wyoming's natural hub for the fine and performing arts and creative endeavors in the humanities. Already home to the richest array of cultural assets in the state, UW enjoys a reputation in these areas that would be enviable even at larger, wealthier institutions. With award-winning academic programs in the studio and performing arts, a new MFA program in creative writing, an art museum of increasing national prominence, and outstanding archives, the university has an impressive array of assets upon which to build a magnet environment.

- AP2 called for stronger links between the Art Museum, the American Heritage Center, and the curriculum-bearing programs in the fine arts and humanities. To a commendable extent, the directors of these units have fortified these links. UP3 should help solidify these efforts, promote measures to assess them, and explore opportunities to expand them. In particular, there may be opportunities for these units to join with the College of Arts and Sciences and other colleges in ***increasing avenues for undergraduate research.***
- The Fine Arts Building no longer suffices to house the Departments of Art, Music, and Theatre and Dance. A pressing task for the coming years is to seek funding for ***new fine arts facilities***, including a new building to house visual arts programs and funds for renovation needed to make the existing building suitable for teaching and learning in the performing arts.
- The facilities housing the American Heritage Center archives and the Art Museum suffer from a complicated array of maintenance and repair problems whose resolution apparently will require several years and millions of dollars' worth of work. A plan for the ***maintenance and repair of the Centennial Complex*** is a critical step in the advancement of this area of distinction.
- In any university, identifying consistent focus areas for the humanities is, by the nature of the disciplines, a challenging task. Several UW faculty members have proposed the ***establishment of a humanities institute***, to provide a unified intellectual home and common forum for this segment of UW's scholarship. Recognizing that there may be disparate thoughts about the best configuration and mission for such a center, we encourage interested faculty members to lead the discussion. The success of such an institute will depend on the level of interest and initiative among humanities faculty members.

Environment and natural resources

UW's expertise and reputation in environment and natural resources (ENR) are now firmly established. Measures worth exploring further include the following:

- One of the most promising opportunities in the near term is the potential for strong connections between the Haub School; its research component, the Ruckelshaus Institute for Environment and Natural Resources; and the School of Energy Resources. Complementing this opportunity — especially in light of increasing undergraduate enrollments in the area — is the need for a ***review of the Haub School's structure and its teaching workforce.***
- The College of Business has begun to develop cross-departmental expertise in ***sustainable business practices.*** Translating this expertise into a coherent curriculum, especially at the graduate level, will require a stable, focused definition of sustainability in this context; a carefully staged approach to orchestrate course contents and program goals among the contributing departments; and a commitment to areas of inquiry that are distinctive and meaningful to the Rocky Mountain west.

- UW offers a growing array of credit-bearing courses related to technical and social aspects of sustainability. The UW Sustainability Committee is an appropriate group to develop an **inventory of sustainability-related courses**, to help ensure that they mesh coherently with each other and with courses in related areas.

History and culture of the Rocky Mountain region

This area of distinction has a special challenge: studying the region makes sense only if we bear in mind the global context. Potential measures for advancing the institution's already considerable presence in this area of distinction include the following:

- Several social science departments, the American Heritage Center, and the Art Museum already house collections and expertise focused in this area. Continued **emphasis on faculty expertise in Rocky Mountain history, culture, religions, and immigration** will help solidify these assets. A proposal for a major in Religious Studies holds some promise in this respect, subject to the caveats listed in section II above for new degree proposals.
- A preliminary vision for an **American Indian Center** at UW is another promising avenue for advancing interdisciplinary scholarship in a core element of this area of distinction and for promoting the recruitment and retention of American Indian students and faculty members.

Life sciences

Like many land-grant universities, UW has a long tradition of strength in the life sciences. In recent years this strength has become more focused. Through a combination of efforts, including academic planning, new graduate programs, and large programmatic grants, UW has identified several focus areas for faculty hiring, doctoral education, and infrastructure development. Three of these areas have been particularly successful, having attracted widespread faculty interest across several departments and colleges:

- Ecology
- Molecular and Cellular Life Science (MCLS)
- Neuroscience.

An important question for UP3 is how to refine and complete this set of focus areas.

The question of *refinement* is especially difficult. Each of the three areas listed above admits so much breadth that it risks having little sustainable focus. In practice, however, UW already has several outstanding nucleation sites around which to develop future faculty hiring in each area. A critical task for the life science faculty will be to craft strategies for avoiding intellectual dilution in these areas.

The question of *completeness* is essentially the question whether the three focus areas listed above are sufficient. Not all of UW's life scientists fit naturally into these areas. And there have been numerous suggestions for other focus areas: reproductive biology, systems biology, biomedical science, to mention just a few. The arguments — not all equally compelling — range from a desire to encompass all existing areas of UW life-science expertise to a perceived need for closer links between clinically oriented and research-oriented programs.

- Defining a reasonably **complete and stable array of life-science doctoral programs** is perhaps the most difficult — and most important — task facing life scientists at UW. A recent position paper¹ on life science doctoral programs, posted by the Graduate School and the

¹ http://www.uwyo.edu/acadaffairs/policystatements/Life_Sciences_Rep_2007.pdf, accessed 10 October 2007.

Office of Academic Affairs, provides some suggestions and ground rules for this discussion, which we urge the faculty to undertake. The questions posed in section II above for new degree proposals will be critical in this project.

- The Program in Ecology (PiE), established as a doctoral program under AP2, has rapidly acquired stability and momentum. We encourage affected faculty members to **explore natural ties among PiE, the Haub School of Environment and Natural Resources, and the School of Energy Resources** in matters related to land use policies, wildlife, long-term impacts of energy development, and an understanding of climate change.

Questions related to infrastructure are also important:

- The Berry Center for Natural History and Conservation, currently under design, will provide an outstanding venue for the integration of disciplines spanning the life sciences and other natural sciences. Effectively **weaving the Berry Center into UW's research mission and credit-bearing curriculum** will be a critical task for the affected departments.
- Several faculty members have proposed the design of a **biological field station**. The merits of the idea hinge on a more precise definition of the field station's mission. This definition should articulate how the station might augment or mesh with such assets as the Berry Center for Natural History and Conservation, facilities and research funding currently in place at the UW's three Research and Extension Centers (Powell, Lingle, Sheridan), and the UW-NPS Research Center in Jackson Hole

Building excellence in human capital

The foundation of an excellent university is excellent people. In UP3, we urge greater institution-wide attention to developing the talents of our students, faculty, and staff. In part, this effort requires a more consistent, institution-wide culture that encourages lifelong learning and professional development among all employees. But there are also specific, concrete measures that we can undertake.

- More effective **recruitment and retention of high achieving and diverse undergraduates** from both within and outside of Wyoming will have a profound effect on UW's educational climate, not only in our classrooms but also in students' personal aspirations and the co-curricular learning environment.
- UW has made noteworthy strides in assessing its curriculum and in **cultivating an institutional environment focused on learning**. Measures to encourage further advances will help solidify the learning cascade — from cutting-edge scholarship to classroom-based learning — that undergirds UW's competitive advantage as a research university. UP3 should include **action items directly related to the enhancement of UW's educational program**, the central theme in the university's self-study for the 2010 accreditation review by the Higher Learning Commission.
- One of the most important contributions to human capital development is the training of graduate students who become the nation's scientists, engineers, scholars, business leaders, teachers, health care providers, and lawyers. More prominent now than during the formulation of AP2 is the perceived need to **increase the number of graduate assistantships**, to strengthen graduate programs, and to attract top students to them. Addressing this issue will require a multipronged strategy, including (a) reviewing the appropriate uses of state-funded GAs, (b) institutional and department-level mechanisms for boosting the number of externally funded GAs, (c) potential uses of the faculty position budget to augment the state-funded GA pool, (d) greater emphasis on graduate fellowships in college- and university-level fund-raising campaigns, and (e) honest appraisal and

enhancement of UW's ability to recruit promising graduate students to fill new slots. A legislative request to increase the GA budget is also possible, so long as UW is willing to identify where GA funding stands among such competing priorities as continued increases to support budgets, library funding, and other needs.

- Faculty hiring and retention practices are pivotal in determining UW's future. While UW's culture of excellence in hiring has grown more robust over the past decade, several issues are perpetual sources of concern. We welcome **fuller discussion of credit toward tenure, early tenure, and the appropriate institution-wide criteria for promotion to the rank of professor**. Retaining high-caliber faculty also requires continued attention to salaries: to keep top professors, the institution must continue to strive for average **faculty salaries at or above the fiftieth percentile of those prevailing at other public research universities**. Among the measures worth considering in this effort is a restructuring of promotion raises to include a **20 percent salary increase for faculty members and academic professionals when they attain the senior rank in their fields**.
- To aid in meeting the reporting requirements of accreditation organizations and to promote greater fairness in faculty performance evaluations, we propose exploring a **common electronic system for updating, reporting, and tracking professional accomplishments** of faculty members and academic professionals. In particular, the system must facilitate an accounting of the substantial contributions that academic professional lecturers make to UW's core undergraduate curriculum.
- UW's practices in budgeting for classified staff positions leave little room for adaptivity or responsive decision-making as staff support needs evolve. A key step for the next five-year planning period will be to develop an effective **system for allocating some fraction of the resources associated with vacated staff positions**. Preliminary estimates suggest that collecting only the salary dollars in excess of those needed to refill at the entry level for each pay grade could yield roughly \$1 million per year in institution-wide capacity to make decisions about the staff salary budget. Thus it may be possible to add new staff positions each year, in judiciously selected areas, without requiring the reallocation or elimination of existing staff positions.

Building excellence in capital facilities and infrastructure

UW is committed to the capital facilities planning process and will continue to push for high-priority projects in that plan, to the extent that realistic funding strategies permit. Prominent among these projects are the fine arts facility mentioned above, a science teaching lab facility, upgrades to the residence halls, and the expansion of Half Acre Gymnasium. With respect to infrastructure, the most academically central initiative is the Libraries' commitment to build national-caliber collections and to explore measures, such as the Alliance Digital Repository, that will expand UW's preservation of and access to digital materials. UW is also committed to further expanding physical access to its facilities, through the use of legislatively authorized major maintenance funding.

- With an infusion of new funding for collections and a new facility under construction, the University Libraries are poised for even greater integration into the institution's scholarly life. With these new assets come new questions about how to allocate resources to emerging digital sources of information, how to contribute to the national conversation about scholarly dissemination, and the rapidly evolving expertise needed to staff the Libraries. For UP3 we urge the Libraries, together with the Library Council, to develop strategies for enhancing **access to digital resources and cooperative library arrangements with other institutions**.

- The Laramie campus is undergoing an unprecedented period of new construction. Pressures for continued growth in capital facilities suggest the need for a comprehensive **long-range development plan for UW properties east of 15th Street**.
- Concomitant with the expansion of the Laramie campus is the need for a **comprehensive UW-Laramie transportation plan**. The Division of Administration has begun developing a draft plan for review by the university community beginning in summer 2008.
- As a leader in energy-related teaching and research, UW has a responsibility to demonstrate the principles of **sustainable and energy-efficient operating practices**, not only through business practices such as recycling and energy conservation but also in its plans for new and renovated facilities, including plans for the future operation of the central energy plant. The UW Sustainability Committee is a natural locus of responsibility for proposing (a) a set of measures to upgrade existing buildings, (b) a set of principles to guide the design and siting of new buildings, and (c) a set of recommended operating practices that can be realistically implemented by 2012. These initiatives should be consistent with the American College and University Presidents' Climate Commitment, which UW signed in 2007.
- Given the growth in off-campus enrollments as well as the need to serve Wyoming citizens through the Cooperative Extension Service, Student Educational Opportunity, and Wyoming Small Business Centers, UW should develop a **comprehensive statewide plan for learning facilities**.

VI. LEADERSHIP

As a planning motif, leadership spans both the institutional and personal levels. The university itself has a leadership role to play, most prominently in educating people for professions critical to the future of the state and region but also in nurturing a reserve of expertise to help solve the state's most pressing problems. Paralleling the institution's leadership role is the responsibility to cultivate the often intangible aspects of character at the personal level that make good leaders. This mandate seldom appears explicitly in a university's curriculum or in any enumeration of its research or service accomplishments. A central element of the 2009 institutional plan will be to weave this motif more tightly into the fabric of our students' experiences and our employees' careers.

Professions critical to the region's future

Arguably more critical in Wyoming than in other states is the need to align a significant portion of the university's teaching, research, and service with the economic needs of the state and region.

Health care

- The national landscape in health care includes rapid growth in the number and cost of clinical degree programs. To remain responsive to the needs of the state and region, UW must focus its faculty energies on a thoughtfully circumscribed set of programs and practical experiences, through a **comprehensive clinical education plan in the College of Health Sciences**. Such a plan is the natural context in which to weigh the costs and benefits of clinically oriented graduate and professional programs. The plan should also review and delineate mechanisms for **UW's involvement in statewide policy discussions related to health care**, since the issues in this arena bear on Wyoming's ability to attract and retain health care professionals.
- Wyoming faces a persistent shortage of primary care physicians. The urgency of the problem suggests a more integrative mission for UW's Division of Medical Education and

Public Health in the **recruitment, training, and career placement of physicians**, ranging from recruitment into the premedical curriculum through post-residency placements. UW's WWAMI loan repayment account is one among several possible tools for this endeavor.

- UW has wide-ranging expertise in mental health disciplines. To build on this expertise, we urge faculty members in the relevant departments to form an **interdisciplinary mental health collaborative**, spanning faculty expertise in the Colleges of Health Sciences, Education, and Arts and Sciences, to organize the institution's involvement in the mental health issues that are widespread in Wyoming's communities.

Education

- Wyoming is fertile ground for **improvements in science, technology, engineering, and mathematics (STEM) education** — a topic that looms large in national conversations about elementary and secondary education. Existing doctoral programs in the College of Education, ongoing collaborations with science and mathematics faculty, and leadership in the Science-Mathematics Teaching Center provide fertile ground for **enhanced focus areas in mathematics and science education**. UW's new partnership with NCAR suggests an opportunity for truly creative **initiatives to import computational science into the K-12 curriculum**, perhaps through the work of an advisory board under the aegis of the Wyoming P-16 Council.
- UW has several departments that house **expertise in early childhood**. A significant body of evidence documents the critical influence of early care and education on success throughout the lifespan. The College of Education is a leader in cross-college collaborations both in research and in the development of Wyoming's care and education workforce. These efforts, strengthened by expertise in the Department of Family and Consumer Science and the state's early childhood initiatives, enable UW to play a key role in this national priority.
- The College of Education has become a center for scholarship in literacy and English as a second language, areas that appear to be poised for national prominence. Members of the Education faculty have proposed the **establishment of a Center for Literacy**, to help solidify the college's scholarship in that arena.
- Our nation's rich diversity continues to increase, and our world is increasingly interconnected. Several departments in the College of Education have growing **expertise in multicultural and culturally sensitive education**, teaching diverse populations, and supporting students learning English as a second language. We endorse the college's discussions about building on this nucleus of expertise.
- The College of Education also faces continual pressures to provide lifelong learning and professional development for in-service teachers throughout Wyoming. We recommend that the college develop a **professional development plan** to define a responsive yet manageable set of professional development contributions.

Energy

- The School of Energy Resources already furnishes a remarkable set of resources for colleges that can contribute to the school's mission. An important task for the next few years will be to establish a reasonably **stable portfolio of well-funded energy research centers** within SER's Institute for Energy Research.
- Open questions remain about the **possibility of a baccalaureate curriculum associated with SER**. The interdisciplinary Earth Systems Science major, currently administered by a committee of four college deans, is one possibility. Balancing the interest in defining an SER-

sponsored undergraduate curriculum is SER's main mission, which is to provide support and incentives for energy-related teaching and research in UW's seven colleges, which are more natural homes for majors and degree programs. An example of a possible college-centered program is an **energy systems engineering program** under consideration in the College of Engineering and Applied Science.

- Carbon management is a rapidly growing area of research and policy analysis, owing to international concerns about the climate-related impacts of energy consumption. Because carbon dioxide is an inevitable by-product of fossil fuel use, and because of the close technical connections between carbon dioxide management and Wyoming's oil and gas production, there is an urgent need for a **well-defined strategy for SER's involvement in carbon capture and sequestration research**, coupled with a coherent plan for building relevant faculty expertise in appropriate disciplines.

Business and economic and community development

- A robust economy is essential to attract, develop, retain, and provide employment for Wyoming's future residents and leaders. Small businesses, many of them started by entrepreneurs with little formal business training, employ nearly 70 percent of the state's non-governmental workforce. The College of Business has an important role to play in **disseminating business principles**, not only for business majors but also for students seeking degrees outside the college and for leaders in existing and emerging businesses.
- UW's Cooperative Extension Service has begun to be involved with household energy education and economic development in communities experiencing energy-related impacts. We urge CES to deepen this role and to address **longer-term community issues associated with energy conservation and sustainable energy use**.
- The Office of Research and Economic Development manages and coordinates a wide array of initiatives supporting economic diversification and development, entrepreneurship, innovation and business incubation. Many of these initiatives provide excellent **avenues for colleges and their faculty and students, such as the College of Business, to link to the university's economic development activities**.
- To augment the Wyoming Technology Business Center, we encourage closer examination of prospects for a **research park in southeast Wyoming** and its potential to offer career-building educational opportunities for students.

Law

- Recent increases in faculty resources provide an outstanding opportunity for **enhanced faculty depth in natural resource and energy law**, a goal that we see as critical to building strength in the College of Law.
- As a link between its professional degree and one of UW's longest-standing areas of distinction, the College of Law has established an option to pursue the MA in Environment and Natural Resources in conjunction with the JD program. **Stabilizing the JD-MA program** will be a critical task in the first few years of the period covered by UP3.

Knowledge transfer and policy analysis

- The School of Energy Resources creates new opportunities for **statewide energy-related outreach**. We urge the Western Research Institute to become a partner in delivering these programs.

- UW is home to an enormous reservoir of faculty expertise in areas of interest to policy-makers. To facilitate the contributions of experts from many disciplines to local, state, and federal decision-making, we advocate the exploration of a **policy analysis clearinghouse** at UW.

Cultivating leaders

Universities are home to many of society's intellectual leaders, and they help nurture future leaders in all walks of life. This facet of UW's mission suggests a more prominent emphasis on leadership development beyond the traditional setting of the credit-bearing curriculum.

- To promote greater levels of excellence in one of UW's premier academic programs for future leaders, we propose increased attention to the **infrastructure, curriculum, and support for the Honors Program**.
- Many of UW's co-curricular programs have proven highly effective at **fostering student leadership, civic engagement, and place-based and service learning**, both within and alongside the credit-bearing curriculum. These programs range from ASUW to athletic and club-sport teams to programs for minority students to the Outdoor Adventure Program, to mention just a few. We urge more systematic and inclusive attention to leadership development in organizations like these, drawing on faculty expertise where appropriate. The Student Leadership and Civic Engagement office will be pivotal in this endeavor. In particular, UW's geographic setting and recently signed partnership with the National Outdoor Leadership School makes it an ideal institution to adopt **outdoor experiences as an area of distinction in the co-curricular program**.
- Universities need a steady supply of leaders in the faculty, staff, and administration, not only to assume formal management responsibilities but also to provide day-to-day guidance in tasks that are essential to higher education. To promote rich opportunities for lifelong personal growth and to ensure smooth transitions in governance, it is critical to implement **programs for developing leadership skills and career pathways among UW's faculty and staff**.
- UW already plays a role in leadership development statewide, as a partner in **Leadership Wyoming**. However, the program can be substantially enhanced through greater UW faculty and staff participation in the program.

VII. CONCLUSION

The future of the University of Wyoming is inextricably linked to the health of our state. As Wyoming's only public university, UW has the capacity to make Wyoming and the Rocky Mountain region an environment where people embrace higher learning, where citizens enjoy opportunities for rich and rewarding lives, and where arts, creativity, and the entrepreneurial spirit flourish. Our challenge is to maintain relevance and connectedness. Indeed, it is to go further: we owe it to our constituencies to **build** a society that sustains thriving, culturally vibrant communities. UW must be the catalyst, providing the access, promoting human excellence, and demonstrating the leadership needed to create the future.

Anticipated Time Line for UP3

AY 2006-2007:	Propose main issues through presentations in various forums
October 2007:	First position paper from Academic Affairs Department-, division-, and college-level conversations, feedback to Academic Affairs
April 2008:	Second position paper from Academic Affairs Department-, division-, and college-level conversations, feedback to Academic Affairs
August 2008:	Third position paper from Academic Affairs
October 2008:	Due date, first draft of department-level plans and other division-level plans
November 2008:	Due date, first draft of college-level plans
January 2009:	First draft of university plan
March 2009:	Final drafts of all plans
May 2009:	Consideration by UW Board of Trustees

The task of the university is the creation of the future, so far as rational thought, and civilized modes of appreciation, can affect the issue.

Alfred North Whitehead