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REVISITING UNIVERSITY STUDIES PROGRAM 2003: GUIDELINES AND REFLECTIONS ON THE TASK OF UPDATING THE CORE CURRICULUM

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UW's strategic plan, University Plan 3¹, calls for a review of the university's core curriculum, University Studies Program 2003:

Action Item 22 *Assessment of the University Studies Program.* As part of UW's initiative to enhance the baccalaureate learning experience, the Office of Academic Affairs will coordinate an assessment and review of the University Studies Program (USP), UW's core undergraduate curriculum. The purposes of the assessment will be threefold: (1) to refine assessment techniques that focus on verifiable outcomes and minimize the time commitments of faculty members and administrators, (2) to gauge how effective the curriculum has been in meeting its original learning goals and (3) based on these outcomes, to streamline the USP curriculum, reducing the number of constraints that it places on undergraduates and increasing the simplicity and clarity of the system for students and their advisors.

To launch the upcoming review, I'd like to propose some guidelines for the discussion, including a tentative set of basic premises, a short list of issues to address and pitfalls to avoid, and, as an *ansatz*, a proposed four-tier structure for the next version of USP.

Development and maintenance of the curriculum is among the central responsibilities of a university faculty. The curriculum defines the institution at a fundamental level: it enacts the mission of the institution and reflects its distinctive character and areas of expertise. For this reason, discussions about the core curriculum tend to involve prodigious self-examination and debate. The last review and revision of the core curriculum began in 2000 and reached closure in 2003. The previous incarnation of the core curriculum — the first to be called University Studies — went into effect in the early 1990s, after two years' worth of discussion and development. I hope we can bring the next round of curricular review to closure by the end of the 2011-2012 academic year, starting with a discussion of the overall structure this year.

1. UW'S CURRENT CORE CURRICULUM

The table below summarizes UW's current core curriculum, University Studies 2003. Structurally, it shares attributes with two endpoints on a spectrum of possibilities that commonly appear in U.S. higher education. At one endpoint of the spectrum stands the *common core*: a set of specific courses — as distinct from categories of courses — that all baccalaureate candidates must complete to be eligible for graduation. At the other endpoint stands the *distribution requirement*: a set of broad categories of courses, together with a prescription for how many courses from each category a baccalaureate candidate must complete.²

¹University of Wyoming Office of Academic Affairs, "The Creation of the Future: University Plan 3, 2009-2014", <http://www.uwyo.edu/acadaffairs/files/docs/UP3.pdf>, retrieved 3 October 2010.

²At a few American universities, curricular requirements are so spare that it is hard to place them along this spectrum. Among land-grant institutions, an example of this *open curriculum* is that adopted by Cornell University, which

Table 1. Summary of USP 2003

Symbol	Category	Credits
Non-embeddable requirements		
I	Intellectual community	1-3
WA	Writing 1	3
O	Oral communication	3
QA,QB	Quantitative reasoning 1 & 2	6
S,SB,SP,SE	Science	4-8
C.CH,CS,CA	Cultural context	9
V	U.S. and Wyoming constitutions	3
P	Physical activity and health	1
		30-36
Embeddable requirements		
L	Information literacy	Can be satisfied simultaneously with other course requirements
WB, WC	Writing 2 & 3	
G	Global awareness	
D	U.S. diversity	

A closer look at these endpoints helps establish some context for the discussions about UW's core curriculum. Among institutions that exemplify the common core approach, the U.S. military academies are among the most highly prescriptive. For example, the Air Force Academy³ requires all students to complete 29 specific courses, ranging from history and philosophy to engineering mechanics and computer science, and three "tailored" courses (in foreign language and an "energy/systems" option). The 29 required courses span three main content areas: culture and global awareness, leadership and human behavior, and science and technology. This tripartite division of human knowledge is a recurring motif in American baccalaureate curricula, appearing, with some variations in terminology, in both common core approaches and distribution requirements.⁴ What is perhaps most noteworthy about the Air Force Academy's approach is that, together with the physical education requirement and a mandatory first-year experience, the academy's common core requires a total of 102 credits — more than 5/6 of the credit tally required for most undergraduate majors at UW. It is hard to imagine adopting such a highly constraining core curriculum at UW, simply because our mission is much broader and our student body comes to us with so much greater diversity in their personal goals.

At the other end of the spectrum, the baccalaureate curriculum at Yale University serves as a model of distribution requirements. Yale requires undergraduates to complete two courses each in (1) the humanities and arts, (2) the sciences, (3) the social sciences (notice the tripartite structure), in addition to two courses in quantitative reasoning, two writing-intensive courses, and one to three courses in a foreign language, depending on the student's skill level. Students cannot use any single course to satisfy more than one of these requirements. In contrast to the military academies' highly prescribed and time consuming common cores, Yale's approach prescribes a set of basic intellectual skills — writing, foreign language, and quantitative reasoning — then affords students tremendous latitude in the selection of courses that promote breadth of knowledge. One finds analogous approaches at many highly selective private institutions: students must acquire fundamental intellectual skills and complete a major, but they have considerable flexibility in how they acquire the knowledge and personal development associated with breadth requirements.

requires only a swimming test, two semesters of physical education, and two semesters of a writing seminar, of which there are many options spanning a wide range of topics.

³See the Air Force Academy's "Curriculum Handbook", <http://www.usafa.af.mil/shared/media/document/AFD-090508-044.pdf>, retrieved 1 October 2010, especially pages 71-72.

⁴The tripartite structure echoes the *trivium* (grammar, logic, and rhetoric), which constituted the first stage of a medieval liberal arts education in Europe.

USP 2003 occupies a middle ground between the common core and distribution requirements. For most of UW's requirements, students enjoy some latitude to choose among an array of specific, faculty-approved courses. But students cannot satisfy the science requirement, for example, simply by taking the specified number of science, technology, engineering, and mathematics (STEM) courses from among *all* of the several hundred that UW offers. USP 2003 constrains those choices. Similar constraints govern students' choices in the cultural context, global awareness, and U.S. diversity requirements. One might characterize this system as a heavily regulated distribution requirement. Instead of broadly entrusting faculty members with course contents and students with course selection, it relies on a faculty approval process, to help ensure that courses certified to satisfy USP 2003 requirements address specific learning outcomes. UW's course approval process comes at a cost, though: it requires a standing committee of the Faculty Senate to meet weekly, to sift through course descriptions and syllabi and make judgments about their consistency with the learning outcomes. This filtering process contributes to the system's complexity, discussed in more detail below.

2. BASIC PREMISES

Because of the academy's inherent love of exploration and debate, any discussion about a university's curriculum runs the twin risks of being chaotic and inconclusive. In this setting, it helps to establish a set of common premises, to enable us to determine not only where our disagreements arise but also why. I propose three premises, which I know are themselves subject to debate: (1) the baccalaureate is a four-year degree; (2) the core curriculum has a purpose defined better by learning outcomes than by rationale; and (3) the major is an essential part of the baccalaureate.

PREMISE 1: THE BACCALAUREATE IS A FOUR-YEAR DEGREE. With extremely rare exceptions, baccalaureate programs at UW should require no more than eight 15- to 16-credit semesters to complete. Of course, many undergraduates will earn more credits and enroll for more than eight semesters before earning diplomas. Contributing factors include midstream changes in students' programs of study, failure to take prerequisite courses in a timely fashion, job- or family-related constraints that prohibit full-time study, ambitious double or concurrent majors, and UW's relatively low tuition. The point of the premise is not to penalize these students but to ensure that a well prepared, focused, adequately advised undergraduate can complete the baccalaureate degree in eight semesters, taking a reasonable course load and enjoying a measure of flexibility in course selection.

This premise is far from axiomatic. The trend at some land-grant institutions and in some pre-professional programs has been to add specialized requirements, often associated with students' major programs of study, that require students to take as many as 10 semesters' worth of focused, full-time study to complete the baccalaureate. For some professional programs, such as teacher preparation, requirements that students complete dual or concurrent majors make it difficult for students to finish accredited degree programs in four years. At the same time, in recent years some American colleges and universities have explored possibilities for students to complete the baccalaureate in three years, normally by augmenting academic-year studies with summer work. (Interestingly, some of the country's most highly respected colleges and universities tend to emphasize shorter degree options, not longer ones.) These exceptions notwithstanding, retaining the four-year baccalaureate squares with most of our external constituencies' expectations, helps keep the bachelor's degree accessible to students who struggle to balance college courses with the demands of work and family, and helps make it possible for many people to complete advanced professional and graduate degrees during their early adulthood.

PREMISE 2: THE CORE CURRICULUM HAS A PURPOSE. The concept of a core curriculum, requiring students to take courses outside their areas of specialization, is a pervasive feature of American higher education. Institutions advance many rationales for having a core curriculum:

- It equips students to be lifelong learners.
- It cultivates students' critical thinking abilities.
- It prepares students for their futures as citizens and leaders.
- It provides students with intellectual skills they will need as their careers evolve.
- It gives students the fund of knowledge required for a complete life.

- It imbues students with values and elements of shared culture that are critical for a democratic society.

These rationales are more problematic than they may appear at first blush. They tend to be inherently difficult to assess and verify, because they refer to attributes that people exhibit over time scales far longer than a typical undergraduate career. In addition, society seems deeply conflicted over the utility of some of the traits we claim to be cultivating. Critical thinkers can be inconvenient critics and rebels; “shared culture” can be empowering, but it can also be hegemonic and marginalizing; many academics look askance at institutional attempts to inculcate values, especially those that they don’t completely share; and many outside the academy do not trust us to teach values properly.

Difficulties and objections notwithstanding, there remains broad agreement within our profession that a core curriculum is a valuable component of the American undergraduate experience. Broad agreement about the rationale is more elusive.

Perhaps we don’t need to agree on the rationale. The National Leadership Council for Liberal Education and America’s Promise (LEAP) adopts a more operational approach, seeking broad agreement about the expected *learning outcomes* instead. In a 2007 report⁵, LEAP proposes a set of “essential learning outcomes”, excerpted verbatim in Table 2.

Table 2. LEAP Essential Learning Outcomes

<ul style="list-style-type: none"> • Knowledge of human cultures and the physical and natural world <ul style="list-style-type: none"> ○ Through study in the sciences and mathematics, social sciences, humanities, languages, and the arts • Intellectual and practical skills, including <ul style="list-style-type: none"> ○ Inquiry and analysis ○ Critical and creative thinking ○ Written and oral communication ○ Information literacy ○ Teamwork and problem solving • Personal and social responsibility, including <ul style="list-style-type: none"> ○ Civic knowledge and engagement —local and global ○ Intercultural knowledge and competence ○ Ethical reasoning and action ○ Foundations and skills for lifelong learning • Integrative learning, including <ul style="list-style-type: none"> ○ Synthesis and advanced accomplishment across general and specialized studies

Whether or not UW adopts the LEAP outcomes, four observations are worth noting. First, LEAP frames the purpose of the baccalaureate curriculum in terms of outcomes, not in terms of academic disciplines. Second, not all of the outcomes lend themselves to straightforward assessment during students’ undergraduate careers. Third, the outcomes make no reference to the conventional dichotomy between the liberal arts and professionally oriented studies. This observation has important corollaries: baccalaureate learning outcomes emerge from the *entire* undergraduate curriculum, and the traditional liberal arts are to be valued as disciplines in their own rights, not solely as broadening experiences for students majoring in other fields.

Fourth, and importantly for the design of a core curriculum, there is no intended or easily drawn one-to-one correspondence between the learning outcomes and specific courses. Indeed, any attempt to satisfy each outcome through a single, distinct course requirement would be an exercise in precisely the type of intellectual compartmentalization that outcomes such as “integrative learning” seek to avoid. Every course taught at UW, whether or not we associate it with the core curriculum, should contribute to several

⁵ “College Learning for the New Global Century: A Report from the National Leadership Council for Liberal Education and American Promise”, Association of American Colleges and Universities, Washington, DC, 2007, also accessible online at http://www.aacu.org/leap/documents/GlobalCentury_final.pdf.

essential outcomes, and every essential outcome requires multiple courses to impart and reinforce. In short, the mapping between baccalaureate learning outcomes and courses is — and for sound pedagogic reasons should be — complex.

These observations about the purpose of the core curriculum suggest the following conceptual scaffold:

- 1) **Learning outcomes.** We should frame the purpose in terms of desired learning outcomes. We should avoid framing it in terms of disciplines or in terms that make it impossible to gauge our success during students' undergraduate years.
- 2) **Assessment.** Although we have a professional responsibility to assess the curriculum to the extent possible, not all of its intended outcomes need to be equally easy to assess during the baccalaureate years. For this reason it may be realistic to define several tiers of assessability within the core curriculum.
- 3) **The role of other parts of the curriculum.** Not all of the outcomes need to be achieved through the core curriculum *per se*. Some may emerge more naturally from coursework in the major, from electives, or from the co-curriculum.
- 4) **Complexity of the curricular map.** Even for the outcomes that we can associate with coursework, there is no need — and arguably no justification — for mapping each outcome to a distinct course requirement or for assuming that we can achieve the outcome through a single course.

PREMISE 3: THE MAJOR CONSTITUTES AN ESSENTIAL PART OF THE BACCALAUREATE. The concept of a major field of study should continue to anchor UW's baccalaureate program. Completion of an undergraduate major ensures that each UW graduate enters post-baccalaureate life — as a citizen and possibly as a candidate for further degrees — with some depth of knowledge in at least one area.

UW's position as Wyoming's only public baccalaureate-granting institution mandates that we maintain a meaningful capacity for undergraduates to specialize. The university is the state's most important training ground for political leaders, journalists, business managers, educators, scientists and engineers, health care providers, and other professionals. Hence we must leave room in the curriculum for the development of solid expertise in these fields, within the confines of the four-year baccalaureate.

The major field of study must contribute to the learning objectives of the baccalaureate curriculum. The coursework required for the core curriculum itself is likely to constitute roughly a quarter of an undergraduate's program of study. To expect this segment of a student's coursework to bear the entire weight of any meaningful set of learning goals is to ask too much of it. And to leave the essential baccalaureate learning goals out of the major curriculum would negate our own conviction that critical and creative thinking, teamwork and problem solving, and the capacity for lifelong learning require something deeper than a purely vocational approach to professional preparation. LEAP's call for "synthesis and advanced accomplishment across general and specialized studies" amounts to a recognition that universities must assign a substantial role for the achievement of essential learning outcomes to the programs of study that faculty members require of students majoring in their fields.

3. KEY ISSUES TO ADDRESS AND PITFALLS TO AVOID

In revising USP 2003, there are at least five key issues to keep in mind. We must be clear about the purpose of the core curriculum. We owe it to our students and ourselves to limit its complexity. We need to limit its scope. We can avoid major pitfalls by designing a curriculum that is consistent with the faculty's commitment and purpose and by guarding against two false lures, described below, that can lead us in directions orthogonal to the task of improving baccalaureate education. Let's examine each of these issues.

MAINTAIN CLARITY OF PURPOSE. The most important key to maintaining clarity of purpose in the core curriculum is to frame the purpose in terms of learning outcomes, following the LEAP commission's example. To the extent possible, these outcomes should be amenable to assessment during students' undergraduate years; however, the very fact that the baccalaureate aims to prepare people for the rest of their lives makes it unrealistic to regard this goal as absolute.

Clarity of purpose — together with careful attention to the complexity and scope of the core curriculum, as discussed below — can help mollify the tendency for students and their advisors to regard USP's requirements as an extraneous burden. Dismissive attitudes are all too tempting when one is struggling to fit too many confusing requirements into a four-year program of study. The problem is only compounded if the requirements themselves seem more like the result of horse trading than a vision for the baccalaureate that is both coherent and respectful of students' diverse interests and levels of preparation.

I recommend using the LEAP essential learning outcomes as a starting point for UW's discussion about the core curriculum's purpose. The LEAP program has the proper framing in terms of outcomes; it addresses goals that align with many academics' native sense of the utility of their work; and it enjoys broad acceptance among academic leaders nationwide.

This last point is no trivial matter. Within the past few years American colleges and universities have weathered increasing scrutiny, arising from political concerns about increasing costs to students, the definition of college readiness and high levels of remedial coursework, low rates of degree completion, and whether college graduates' intellectual skills and professional capacities meet society's expectations. In the views of our harshest critics, students pay too much, find educationally inhospitable environments after they matriculate, and graduate into the workforce with too little evidence that we have taught them much. Crucial to our being able to answer these concerns is our ability to say what an American baccalaureate degree represents *beyond a mere credential*. While one of the strengths of American higher education is the diversity of its institutions and their missions, to celebrate our heterogeneity is to answer a question quite different from the ones we're being asked. The degree to which our profession has a voice in the national conversation about the baccalaureate and how high schools prepare students for it hinges, in a deep and essential way, on our willingness to articulate a reasonably consistent vision of what constitutes a college education. The LEAP outcomes provide a start.

LIMIT THE COMPLEXITY. The complexity of the current USP often confuses students and makes advising difficult. These difficulties can affect students' progress toward degrees and lead many advisors to recommend courses based on expediency rather than on their intellectual contents and the impact they will have on students' educations. And there is no evidence that a more complex core curriculum leads to better outcomes than a simple one.

One indicator of the program's complexity is the tendency toward highly prescribed course contents and a correspondingly burdensome monitoring system. In an effort to balance the program's large and diverse array of learning goals with the desire to make the program assessable with respect to each goal, USP 2003 imposes a set of detailed attributes that courses have to satisfy to meet its requirements. Under this system, a significant amount of self-imposed faculty work, conducted by a standing committee of the Faculty Senate that meets weekly, goes into the process of certifying courses for USP credit, not to mention the process of periodically renewing each course's certification. This atypical level of self-governance overhead siphons faculty time and energy away from teaching, research, creative activities, and other service activities.

LIMIT THE SCOPE. The problem of scope has two components. One is the number of credits that a baccalaureate candidate must complete to satisfy the USP requirements. USP 2003 nominally requires a minimum of 30 credits. I propose aiming for a system that requires no more than 30 credits to complete. Such a system would give us the capacity to assign roughly one quarter of a basic undergraduate degree program to general education, roughly half to the major, and roughly one quarter to electives. It would furnish students with opportunities for exploration, additional depth, and the pursuit of interests beyond those mandated in the *General Bulletin*. In contrast, a core curriculum that requires significantly more than 30 credits to complete will place upward pressure on students' times to degree completion, because it leaves less latitude for them to change majors and because some majors — typically those that are subject to constraints imposed by external accrediting agencies — leave little room for flexibility in the choice of electives.

In reality, many students take more than 30 credits to satisfy USP 2003, in part because of *de facto* requirements such as prerequisites but more importantly because not all students manage to satisfy the embeddable requirements with the same courses they take to satisfy other requirements. The problem here is not the nominal credit tally associated with USP 2003 but, as discussed earlier, the complexity of the system, which makes it hard to complete the requirements within this tally. In some majors — notably in engineering disciplines — students feel pressure to maximize the number of USP requirements satisfied by each course not associated with their majors. This objective effectively narrows their choices in ways that faculty advisors may see as elegant solutions to tricky problems but that are, at best, only accidentally related to learning goals.

The second component is the number of new courses developed *specifically* to meet USP requirements. This dynamic places upward pressure on the faculty's overall workload. Sometimes cast in terms of "curricular bloat", this issue has the potential to confuse discussions about the core curriculum. There is no problem, *per se*, with a system that permits a wide array of courses to satisfy each element of the core curriculum. In fact, as Yale's example illustrates, such a system can help combat the structural complexity and faculty governance overhead imposed by a highly prescriptive system of course approvals. It also allows the core curriculum to adapt, in an organic fashion, to the faculty's expertise.

MAINTAIN CONSISTENCY WITH THE FACULTY'S COMMITMENT TO TEACH. The problem of scope takes on a qualitatively different shade when the system encourages development of new courses that the faculty has little commitment to deliver and that align neither with the faculty's expertise nor with the institution's areas of distinction. (One hopes that these last two factors overlap meaningfully). Cast in this way, this second component of the problem of scope suggests a hard look at such existing requirements as the intellectual community or "I" course requirement. It also suggests a skeptic's lens through which to scrutinize any proposal for a new requirement of this type: would you — or anyone on the faculty — be enthusiastic to teach this course? There is no *a priori* reason not to entertain a new core curriculum that requires a suite of new courses to achieve well defined learning outcomes. But to the extent that it does, the faculty owes itself an honest accounting of who among us will teach the new courses and what existing courses we will drop or offer less frequently, to accommodate the time and energy needed to develop and deliver the new material.

Let's not require students to take what none of us wants to teach. By this statement I don't mean to imply that we can ignore fundamental intellectual skills that our students need to engage with college-level work. Highly accomplished scholars understandably expect to do more than teach elementary courses on how to write, speak, and reason quantitatively at the most elementary levels needed for college success. But we must not isolate the faculty from the foundational courses that they have decided their students must take. To do so is to negate the very *raison d'être* of the research university: to promote the cascade of knowledge from the frontiers of human understanding into the undergraduate classroom and the concomitant streaming of human talent upward, to sustain the most advanced realms of professional accomplishment, human creation, and inquiry.

Because we tend to think of the frontiers of knowledge in terms of our own disciplines, it may be too easy for academics to forget that the core curriculum — aimed as it is at non-majors — is part of this cascade. A blind spot of this nature can lead us to require students to take an intellectual community course and then make it difficult for some of them to find one. And only with such a blind spot would we recruit world-renowned experts in STEM disciplines to become our colleagues and then shield them from the entry-level courses in these areas. If we end up having trouble staffing a core curriculum of our own design, because the faculty insist on teaching something else, we will have undermined a vision for the institution that, fortunately, our state's leaders share with us.

MAINTAIN CONSISTENCY WITH THE FACULTY'S PURPOSE. A peculiar siren song that bears on the faculty's commitment to teach is the desire to use the core curriculum to fix human shortcomings. Our society is rife with them: xenophobia masquerading as patriotism or piety, flagrant disregard for the long-term sustainability of human civilization, racism and lack of appreciation for the diversity of human experience, ruinously poor judgment about personal finance, deadly inattention to personal wellness, and many others. To what extent is it the mission of the university to address these deficits directly, by requiring our students to take courses aimed at remediation? Which deficits, out of the depressingly long list of

possibilities, should we address during the limited time available in the baccalaureate curriculum? And what standing does the professoriate have to undertake such a mission? Not all students come to UW with the same array of shortcomings, much less any expectation that professors will repair them. Indeed, many students seem to arrive with a degree of control over their demons that rivals the faculty's.

A university faculty is a community of experts in scholarly and professional disciplines. Few of us have any training in or facility at human repair. The value that professors can add to the lives of our students resides in our ability to open intellectual doors, exposing them to habits of thought, methods of asking and answering questions, and modes of appreciation that expand their capacities to govern themselves. History grants that these expanded capacities are no surefire inoculation against fear, hate, greed, intolerance, shortsightedness, and lack of self-control. But neither are 15-week courses aimed at correcting these traits. Perhaps there is a legitimate role here for the co-curriculum, which tends to be staffed by people who have some relevant professional orientation and training. Be that as it may, out of humility, at least, the faculty should guard against trying to use the core curriculum for purposes to which neither we nor our classrooms are especially well suited.

AVOID FALSE LURES. Discussions about the core curriculum are susceptible to two false lures that are largely immaterial to the quality of undergraduate education: disciplinary worth and student credit hours. These inappropriate incentives have less to do with the achievement of essential learning outcomes than with certain arguably misdirected interests of some faculty members. Unfortunately, they can exacerbate the tendencies toward increased complexity and scope discussed earlier.

The false lure of disciplinary worth arises from the sense that a requirement in the core curriculum affirms the importance of one's department or area of expertise. It does not. The value of each discipline represented among UW's academic departments resides not so much in what we require students to study — which is often at a level far more rudimentary than the faculty expertise in which the institution has invested — but instead on the intellectual web to which the discipline contributes. To take a purely hypothetical example, an English Department operating in splendid isolation from other scholars and artists in the UW community would be grounds for entrusting the required composition curriculum and associated resources to a unit better attuned to the needs of majors in other fields. Of perhaps greater relevance to the professors, such a department would be a poor investment for the delivery of “knowledge of human cultures” and “intercultural knowledge and competence” called for in the LEAP outcomes. At a research university, any discipline that relies solely on the core undergraduate curriculum for its sense of scholarly self-worth hangs by a thread.

The false lure of student credit hours arises from a belief that increases in a department's enrollments will lead to proportionate increases in resources. The persistence of this article of faith, in the face of overwhelming counterexamples, is astonishing. Let's set aside, for now, questions about the wisdom of algorithmically chasing enrollments with resources. To my knowledge no corroborating events have occurred at UW during my 27 years on the faculty, whatever claims may have emanated from Old Main through the eras. In fact, many current and former department heads, at UW and elsewhere, can cite instances in which a department's enrollments grew with *no* corresponding increases in resources.⁶ Perhaps it would be more realistic to regard the latter dynamic as the dominant model. At any rate, adding to a department's annual student credit hour tally is not an effective way to gain more resources. History suggests that any new resources garnered through this strategy are virtually certain to be less than what is needed to meet the additional load.

The overarching point here is that the use of the core curriculum as a vehicle for advancing the standing or resource base associated with one's discipline is neither pedagogically appropriate nor effective.

4. A FOUR-TIERED MODEL STRUCTURE

To start the discussion, I propose a four-tiered model structure for UW's core curriculum sketched in Table 3. The tiers incorporate *core skills*, which cover the communication and reasoning tools needed to pursue college-level coursework effectively; the *major field of study*, which ensures depth of learning;

⁶I know instances in which a significant reduction in faculty positions ensued.

intellectual breadth, which impels students to acquire some experience with the (often tripartite) array of disciplines and their various methods of asking and answering questions, and a tier that I'll call, for want of a better term, *civic and personal growth*, which might accommodate the possibility that college courses can directly improve human character, without constraining students to improve it in a particular dimension that the faculty prescribes.

The table's second column represents my crude attempt to correlate these proposed tiers with elements of USP 2003, where possible. The correlations aren't perfect, and their purpose is not to constrain the next version of USP to align with the existing requirements.

As the table suggests, the tiers have varying levels of amenability to assessment. The core skills should be highly amenable to assessment, since students will need them during their undergraduate studies. For the major field of study, many departments have already invested a great deal of effort in assessment at this level. The intellectual breadth requirements may be less readily amenable to assessment, since their positive effects on students' intellectual capacities emerge over time, through "synthesis and advanced accomplishment across general and specialized studies." The elements of the curriculum associated with civic and personal growth may be the hardest to assess. In the time frame associated with students' undergraduate careers, assessment in this curricular area hinges largely on their subjective sense of self-improvement and satisfaction with life. It is only over time scales far longer than most undergraduates' careers at UW that one can accurately assess a person's international awareness, commitment to the sustainability of human civilization, dedication to justice in a diverse society, personal financial literacy, or respect for physical wellness.

Table 3. A proposed four-tier structure.

Category	Corresponding Elements of USP 2003	Amenability to Assessment
Core skills	Information literacy (L) Writing 1 (WA) Oral communication (O) Quantitative reasoning (QA, QB)	Expect clear learning goals, accepted institution-wide, and straightforward, thorough assessment
Major field of study	Major field of study	Expect each academic unit that offers a major field of study to develop clear learning goals and to manage the assessment cycle associated with them.
Intellectual breadth ⁷	Science (S, SB, SP, SE) Cultural Context (C,CH,CS,CA) Global awareness (G)	Expect learning goals that are accepted institution-wide but for which outcomes may be more difficult to assess.
Civic and personal growth	Physical activity and health (P) Diversity (D)	Expect learning goals that address individual students' needs and for which outcomes may be difficult to assess early except via student satisfaction measures. The co-curriculum has an important role to play here.

Controversy lurks in each tier. In the core skills, it is unlikely that any reasonable array of requirements in writing, oral communication, and quantitative reasoning will prepare all students adequately according to the faculty's standards. Writing clearly, reasoning precisely about quantitative and logical structures, and presenting one's ideas in compelling oral presentations are skills for which people experience neither natural plateaus nor rigid upper bounds. We didn't finish our own bachelors' degrees fully equipped in these skills, and we deceive ourselves if we expect our students to master them after one, two, or even three required courses. The point is to fit our expectations to what the university can reasonably accomplish in a small number of foundational core skills courses — say, one in each area.

⁷As mentioned earlier, many universities cast this type of requirement in tripartite terms involving arts and humanities, science, and social science, or some similar division of academic fields.

In defining this tier, UW should make every effort to ensure that students from across Wyoming can satisfy the associated requirements, if not in Laramie then through some combination of distance delivery and coursework taken at Wyoming community colleges. In addition, the institution should follow the best practices used at highly respected peer institutions in allowing well prepared students to test out of these requirements, through advanced placement tests or, where appropriate, through other forms of challenge tests. Such opportunities can create freedom for students to pursue more advanced coursework as part of the baccalaureate program. In aggregate, they can reduce the staffing pressure on entry-level courses and shift some faculty teaching responsibilities toward higher-level material.

In the major field of study, it is appropriate to establish institution-wide standards that help ensure that this component of the baccalaureate program contributes its share to the essential learning outcomes. Some may resist this apparent incursion into disciplinary autonomy. However, we accept the idea of institution-wide standards for far more discipline-centered programs, such as doctoral programs. The tricky ground will be deciding what the standards for undergraduate majors should be. Should each major program involve a summative component, such as a capstone project, a clinical experience or internship, or a portfolio, to ensure “synthesis and advanced accomplishment”? Should each involve a cornerstone experience, in which first- or second-year students encounter “teamwork and problem solving” in the discipline? Should every major program require students to undertake documented projects involving “written and oral communication”? These questions remain open for discussion. Many UW programs already incorporate activities of these types into their major requirements. At issue is how to connect the major requirements to a significant set of essential learning outcomes, to help keep the core curriculum reasonably compact.

In the realm of intellectual breadth, some controversy is likely to focus not only on the partitioning of academic fields used to define breadth but also on the level of flexibility that we should associate with the requirement. Should arts and humanities constitute separate areas for purposes of core requirements? Should biological and physical sciences? Should any course in a STEM discipline count toward the science requirement? Or should there be a prescribed array of science courses that fit the bill, screened according to their compliance with such expectations as a writing component or teamwork and problem solving exercises? All of these questions are legitimate topics for debate. But bear in mind that fine partitioning of the disciplines and detailed course screening criteria tend to add complexity, which in turn tends to confuse students, increase the faculty’s self-governance workload, and jeopardize the clarity of purpose that promotes buy-in among both students and faculty. Many institutions whose undergraduate programs are more highly regarded than ours, deserved or not, have managed to avoid these pitfalls.

The fourth tier may be the most controversial. Some faculty members will argue for omitting it altogether, based on arguments similar to those outlined above. Others will point to pervasive human failings that undeniably hinder the advancement of a just, sustainable, and healthy society, arguing that the university has a responsibility to address these ills. Even among those who favor including personal growth in the core curriculum there is much to debate: the requirements that one favors are likely to depend upon which character deficits one sees as most prominent in the list of those requiring the attention of the professoriate. Even if faculty members could agree on this list (and I doubt we can), it would be too long to address, in a meaningful way, in any reasonable core curriculum. Besides, the very agenda comes with a penalty: the more extensive and prescriptive it is, the greater the risk of diminished buy-in for the entire concept of a core curriculum, not only by our students, who may understandably resent any one-size-fits-all attempt to fix their putative shortcomings, but also by our colleagues who advise them. This penalty argues for circumscribing the footprint of any civic and personal growth tier in the core curriculum and for allowing students a great deal of flexibility in how they meet its requirements.

In navigating this controversy, it will be useful to remember that service learning and the co-curriculum have roles to play. It is largely through these activities that students hone the leadership abilities, broader perspectives, management skills, physical wellness, tolerance for others, and interpersonal respect that form essential foundations for the self-examined life. Although co-curricular activities are voluntary, they are available in tremendous diversity, and some of the ones that are most effective at cultivating character attributes that we admire — from service organizations to student government to athletics to outdoor programs to multicultural student groups — have grown in prominence and sophistication during the past decade.

These potential sources of controversy should not deter us from addressing the questions. Our students' futures, the nature of our work as teachers and scholars, and our trajectory as a nationally recognized institution of higher learning are at stake.

5. SUMMARY

UW's core curriculum, USP 2003, has been in place long enough to warrant a review, as called for in the institution's 2009 strategic plan. Structurally, the spectrum of possibilities for modifying USP is enormous, ranging from the highly prescribed common core to the more open-ended approach embodied in distribution requirements. The broad range of faculty and student interests at land-grant universities such as UW suggests that a less highly prescriptive structure may be more feasible at UW. In discussing the content of USP, a set of essential learning outcomes developed by the National Leadership Council for Liberal Education and America's Promise (LEAP) provides a starting framework. The LEAP proposal, vetted nationally, rests on learning outcomes, instead of vaguer (but no less compelling) goals that are verifiable only over time scales much longer than the typical undergraduate career.

An institution-wide discussion of the core curriculum requires a few common premises. I propose three:

- The baccalaureate is a four-year degree, at least for well prepared students who pursue focused, full-time study.
- The core curriculum has a purpose, defined by outcomes verifiable at least in part during students' baccalaureate programs.
- The major field of study has an important part to play, not only in preparing students for post-college pursuits but also in contributing to the broader baccalaureate outcomes.

These premises suggest that the vast majority of baccalaureate programs should require no more than 120-128 credits to complete. They also suggest that we restrict the requirements associated with the core curriculum to 30 credits, leaving roughly half of a well planned baccalaureate program for major requirements and roughly a quarter for electives.

In designing a core curriculum, six guidelines will help promote and sustain faculty and student buy-in, not only to the specific requirements that we establish but also to the broader concept:

- Maintain clarity of purpose, internally and as part of national conversations about higher education.
- Limit the complexity.
- Limit the scope, in terms of both number of credits required and number of courses designed specifically to satisfy the core.
- Maintain consistency with the faculty's commitment to teach.
- Maintain consistency with the faculty's purpose, as a community of experts in their disciplines.
- Avoid the false lures of perceived disciplinary worth and student credit hours.

To start the discussion I propose a four-tier structure that incorporates *core intellectual skills* (such as writing, oral communication, and quantitative reasoning), the *major field of study*, *intellectual breadth* (perhaps through a much less prescriptive system of distribution requirements than the current system), and a possible component dedicated to *civic and personal growth*. Although controversy lurks in every tier, this structure is hardly revolutionary: USP 2003 contains all four categories.

In fact, one approach to revising USP 2003 may be simply through reformulation of some requirements to provide greater flexibility, together perhaps with some judicious pruning of requirements. By re-examining USP 2003 through the premises, guidelines, and tiered structure proposed here, I believe we can develop a core curriculum that avoids undue complexity, interwoven requirements, and arguably over-prescribed structure. We will be a better institution for adopting a core curriculum that students will find less confusing, that more faculty members will enthusiastically support, and that demands less self-governance overhead to maintain.