

Introduction: Areas of Emphasis

The opportunity to conduct an institutional self-study, and in particular to engage in a participative planning process as initially manifest in this Areas of Emphasis option, is both a critical and timely one for The University of Vermont.

In addition to the importance of the accreditation process itself, the new leadership team of President Judith Ramaley and Provost Geoffrey Gamble has recognized that changes in administration since our last accreditation — and the resulting changes in institutional planning and strategic direction — call for a revitalized and fully inclusive planning effort to establish a coherent, consistent, and productive direction for the future.

At the same time, the University has also recognized a need to begin initial planning for a proposed comprehensive capital campaign. A *sine qua non* of such a campaign is a logical, consistent, engaging, and clearly articulated definition of mission, purpose, focus, and direction for the institution as a whole and for each of its constituent colleges and schools.

Thus, although the accreditation process, the institutional planning process, and the philanthropic campaign planning process derive from quite different requirements, serve different purposes, and will eventually proceed in different directions, they are at the present identical and consonant, and moreover serve to engage the largest possible representation of the university community in an ongoing discussion of our individual and collective futures.

This Areas of Emphasis option, therefore, is one which ideally suits multiple needs of the institution and will bring internal and even key external constituencies together not only for the time-limited purposes of drafting this document, but for the longer-term process of vetting then modifying and evolving the concepts discussed herein to best position the University in the coming decade.

Shaping the Future in Concept

The challenges implicit in how The University of Vermont is presently defining its future may be somewhat different than those seen at other institutions. As discussed in the first part of this Accreditation Self-Study, the University's status as an instrumentality of the state with both private and public histories, and private and public Boards of Directors, suggests that the planning process must be both comprehensive and inclusive in order to successfully integrate often disparate perspectives and goals.

President Judith Ramaley began her administration by not only focusing the institution on re-establishing a formal planning process but anchoring it to extraordinarily powerful concepts and values inherent in the institution's 208-year history. How those institutional core values align with the planning process, principles of academic excellence and institutional integrity, strategic priorities, the institutional mission, and the role and work of the Board has been

conceptualized by the President in a schematic that has become known as The Greek Temple (included with this introduction).

At the base of UVM's Greek Temple figure lie Institutional Core Values. While not all core values have been fully identified at this point, both internal and external constituencies have begun the process of articulation and there is, moreover, a broad consensus that such a body of core values does in fact exist and has in fact played a major role in the institution's longevity and success. "Our Common Ground," included with this introduction, is one recent attempt to articulate those core values that have particular impact on how members of the university community aspire to relate to each other and to the institution.

A platform above the core values foundation represents Effectiveness of Institutional Governance — the concept that the University necessarily integrates core values into its decision-making, develops a system of appropriate metrics (which we extend well beyond the measurement of outcomes by use of the phrase *a culture of evidence* and by inculcating the relevance of substantiated statements and assertions in our public as well as private conversations), and in turn ensures those core values inform the four strategic pillars of the institution:

1. Ensure a high quality, successful student experience
2. Ensure sustainability of resources (human, physical, technological, financial)
3. Ensure accountability and institutional effectiveness
4. Ensure effectiveness of relationships with key constituencies

The four pillars are structural in nature, concerned with the "what" of the institution as opposed to the "how."

The pediment of the temple incorporates Academic Excellence and Institutional Integrity in the development of specific areas of institutional focus and investment priorities. When President Ramaley introduced the Temple early in her tenure, those foci and priorities were of course not yet established. In the intervening months, however, various processes of constituent community participation and input have led to a workable menu of potential priorities from which the Provost has aggregated a list for consideration and comment. When the process of discussion, refinement, and consensus eventually finalizes these foci and investment priorities, they will not only provide a grid for institutional planning but represent areas of emphasis and investment relative to the proposed philanthropic campaign. Interestingly, and largely consonant with institutional history, the Provost's initial listing of broad priorities borrows significantly from previous Area of Excellence foci in the past decade. Our presently proposed institutional foci and investment priorities, discussed more extensively in the portion of this document on Strategic Budgeting, include:

- A broad and high-quality liberal education as foundational imperative
- Health
- The environment

- Technology
- Connectedness or Engagement

The apex of the Greek Temple pediment leads directly to the University's mission statement, which has been modified over time and continues to remain a work in progress. The mission again integrates other elements of the Temple leading up to it and must in turn remain consistent and focused per the oversight of the Board of Trustees.

While UVM's mission is one component of a two-page *Mission and Purposes of UVM* discussion (included with this introduction), the statement itself is succinct:

Our mission is to create, interpret, and share knowledge, to prepare our students to lead productive, responsible, and creative lives, and to promote the application of relevant knowledge to benefit the State of Vermont and society as a whole.

Shaping the Future in Practice

With the structure and key elements of the Greek Temple diagram outlined by President Ramaley, the next step in making notable progress was clearly through a broadly inclusive dialogue and discussion. One early outcome of that dialogue was the consensus that the University needed to articulate in writing those core principles dealing with how we as individual members of the community aspire to relate to each other. To that end, a committee was impaneled to develop what became the principles of "Our Common Ground" (attached). Since the first publication of those principles, the document has been widely circulated, enthusiastically approved, and endorsed by the Board of Trustees. The six principles deemed to be most intrinsic to the value of the University, and perhaps most significant for the future health and vigor of the UVM community, are:

- Respect
- Integrity
- Innovation
- Openness
- Justice
- Responsibility

To ensure that the Common Ground principle of openness was honored, and to further ensure that the institutional planning process truly reflected contributions by the primary constituencies of students, faculty, and staff, we conducted presidential fora and roundtable discussions at various points from fall 1997 through spring 1998. These opportunities for the candid exchange of views and perspectives were additional to contributions funneled through the Accreditation Steering Committee and to regular fora such as Faculty Senate, Staff Council, Academic Council, and Student Government Association.

Beginning in early October 1998, six roundtable discussions were facilitated on the topics of:

1. UVM and Its Students in the 21st Century
2. UVM and Its Faculty and Staff in the 21st Century
3. Research and Scholarship at UVM in the 21st Century
4. UVM, Vermont, and the World in the 21st Century
5. The Measurement of Quality and Effectiveness at UVM in the 21st Century
6. Strategic Budgeting in the 21st Century.

From these conversations and other ongoing discussions with faculty, staff, students, and key external constituencies, the Provost formulated the above-listed areas of institutional foci and investment priorities.

How these foci and investment priorities shape our institutional strategies and tactics will be determined in the coming months. Those strategies and tactics will in any event be constantly evolving and responding to various environmental stimuli, whether internal or external, financial in nature or deriving from the needs and wants of constituent audiences. Less likely to change is the process of institutional planning itself, which after nearly a decade, has regained a degree of inclusiveness and participation; has taken as its subtext the unique character and time-proven values of the institution; and has focused on sustainable areas of strength which will support the University in successfully meeting the challenges it faces in the next ten years and beyond.

To help ensure planning viability — which we define as yielding meaningful results and demonstrating continuous improvement — measurement and accountability mechanisms need to be integral to the process; just as importantly, the process must work in tandem with the process of strategic budgeting. How closely planning and budgeting will coordinate at the institution can be inferred from a recent publication by President Ramaley:

Strategic budgeting is really a means for building a sense of community and shared purpose and for translating these intentions into individual and collective goals, activities, and responsibilities. Strategic budgeting is an investment model that emphasizes as its primary purposes the generation and preservation of assets that will support the university mission. A related purpose is to develop and utilize measures of outcomes as a guide to the allocation of resources. In doing this, strategic budgeting can help to clarify how each unit generates and consumes resources and contributes to the collective work necessary for achieving agreed upon missions and goals, as well as how each unit defines excellence from the perspective of its distinctive mission.¹

Defining excellence — essentially the process of refining and testing the Areas of Emphasis, delineating and adding substance to the areas of institutional focus and investment priorities,

¹ “The Making of a Budget: Strategic Thinking at a Public Research University,” Judith A. Ramaley, in *The Vermont Connection: The Student Affairs Journal of The University of Vermont*, Vol. 19, 1998, p. 11.

and each unit's determination of how it contributes to one or more of these elements — is a fundamental task upon which the entire institution is presently engaged.

This portion of the Self-Study is intended solely as an initial expression of that task's ultimate outcome, a stake in the sand, as it were. Even though scores of individuals were involved in the development and drafting of each following section — UVM and the Student Experience; UVM, Research, and Scholarship; UVM's Relationship to Vermont and the World; UVM and its Faculty and Staff; and Strategic Budgeting — a much smaller number has any familiarity with all five sections. Even more importantly, the majority of UVM faculty, staff, students, and external constituents, whose opinions and counsel are vital to strategic planning success, are largely unfamiliar with any of this portion of the Self-Study.

The following chapters are therefore not intended to provide the final word in each area. We recognize that unanimity of opinion is neither the goal of this portion of UVM's Accreditation Report, nor a likely result: such an outcome is simply uncharacteristic of a decentralized institution in a highly independent-minded state. Rather, we believe this element of the Self-Study offers a sense of the genesis and evolution of each focus area and details some of the issues and considerations involved in plotting a course for the future.

The President, Provost, members of the Accreditation Steering Committee, and faculty and staff contributors not only seek but welcome comment and criticism from both internal and external readers.

PRIMARY WORK FOR THE FUTURE

MISSION

To be a university of distinction renowned for outstanding instruction, leading research, and dedicated public service

STRATEGIC PRIORITIES

ACADEMIC EXCELLENCE AND INSTITUTIONAL INTEGRITY

1. Ensure high quality, successful student experience

2. Ensure sustainability of resources (human, physical, technological, financial)

3. Ensure accountability and institutional effectiveness

4. Ensure effectiveness of relationships with key constituencies

CAMPUS EFFECTIVENESS

INSTITUTIONAL CORE VALUES

OUR COMMON GROUND

"Education is not preparation for life. Education is life itself"

-- John Dewey, educator, philosopher,
UVM Class of 1879

The University of Vermont is an educationally purposeful community seeking to prepare students to live in a diverse and changing world. We who work, live, study, teach, do research, conduct business, or participate in the University of Vermont are members of this community. As members, we believe in the transforming power of education and agree to help create and foster an environment where we can discover and reach our true potential.

We aspire to be a community that values:

RESPECT. We respect each other. We listen to each other, encourage each other and care about each other. We are strengthened by our diverse perspectives.

INTEGRITY. We value fairness, straightforward conduct, adherence to the facts, and sincerity. We acknowledge when things have not turned out the way we had hoped. As stewards of the University of Vermont, we are honest and ethical in all responsibilities entrusted to us.

INNOVATION. We want to be at the forefront of change and believe that the best way to lead is to learn from our successes and mistakes and continue to grow. We are forward-looking and break new ground in addressing important community and societal needs.

OPENNESS. We encourage the open exchange of information and ideas from all quarters of the community. We believe that through collaboration and participation, each of us has an important role in determining the direction and well-being of our community.

JUSTICE. As a just community, we unite against all forms of injustice, including, but not limited to, racism. We reject bigotry, oppression, degradation, and harassment, and we challenge injustice toward any member of our community.

RESPONSIBILITY. We are personally and collectively responsible for our words and deeds. We stand together to uphold our common ground.

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

PHYSICS 435

LECTURE 10: QUANTUM MECHANICS OF PARTICLES IN POTENTIALS

1.1. THE SCHRÖDINGER EQUATION

1.2. THE WAVEFUNCTION

1.3. THE HEISENBERG UNCERTAINTY PRINCIPLE

1.4. THE TUNNELING EFFECT

1.5. THE QUANTUM MECHANICS OF PARTICLES IN POTENTIALS

1.6. THE QUANTUM MECHANICS OF PARTICLES IN POTENTIALS

1.7. THE QUANTUM MECHANICS OF PARTICLES IN POTENTIALS

1.8. THE QUANTUM MECHANICS OF PARTICLES IN POTENTIALS

MISSION AND PURPOSES

As Adopted by the UVM Board of Trustees, December 3, 1998

Key Purposes

The primary purpose of The University of Vermont is to create and share knowledge. UVM prepares its students to live productive, responsible, and creative lives through a high quality, liberal education. As a research university, UVM endorses the intrinsic value of the creation of new knowledge and promotes the application of relevant knowledge to benefit a multi-dimensional and global society.

The success of UVM in the future will be defined by the rigor and excellence of its scholarly and creative work and the quality, diversity, and civility of the educational experience of undergraduate, graduate, and professional students. The contribution of the institution to the world of knowledge and its impact on the quality of life throughout the state, the nation, and the world, together with the effectiveness of the partnerships that link units within the University and that connect the University with broader communities, will be critical to this success.

As a research university, UVM is distinguished by the comprehensiveness of its academic mission, its range of graduate and undergraduate programs, and its commitment to research-based lifelong learning. As a community of scholars, students, both undergraduate and graduate, are involved in the generation of knowledge. As a member of its local and global community, the University has an obligation to share its knowledge, to assist with relevant applications of that knowledge, and to understand and respond to a changing and diverse world. Application of relevant knowledge is best expressed by the effective integration of scholarship and service within the curriculum and the research mission.

The University lives out its mission through research, teaching, and service. This tripartite mission supports a full range of inquiry and application within the University and in the broader community. Our fundamental mission of generating and of sharing knowledge encompasses a broad spectrum of endeavors, including discovery, the integration of new knowledge into an existing discipline or body of knowledge, and the application of knowledge to a variety of contemporary problems.

Mission

Our mission is to create, interpret, and share knowledge, to prepare our students to lead productive, responsible, and creative lives, and to promote the application of relevant knowledge to benefit the State of Vermont and society as a whole.

Goals

To sustain programs that emphasize the highest quality scholarly work, preparing students for productive, responsible, and creative lives.

To provide a foundation of excellence in research and creative activities that generates new knowledge and understanding, enriching the intellectual environment for students, staff, and faculty alike.

To promote the examination and understanding of diverse perspectives and experiences to prepare our students to live in harmony with others in an increasingly pluralistic society.

To share and interpret knowledge, and to engage in the relevant application of knowledge to a variety of contemporary problems, integrating scholarship, creative activities, and service within the curriculum, the research mission, and in outreach and engagement.

To encourage students to develop the capacity to use their knowledge for the benefit of society and to develop qualities of good citizenship and the capacity for leadership that they will carry with them throughout their lives.

To enhance research-based lifelong learning opportunities for individuals and communities throughout Vermont and beyond.

To foster a campus environment characterized by shared responsibility, community, civility, and justice.

To nurture the relationship of the University to the State of Vermont and its citizens in order to enhance the quality of life for all persons in the state.