

**A Comprehensive Plan for Assessing
Student Learning &
Institutional Effectiveness**

BUCKNELL UNIVERSITY

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A Comprehensive Plan for Assessing Student Learning & Institutional Effectiveness

Bucknell University

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Contents

Section 1. Organization of the plan

Section 2. Definitions and principles

- 2.1 What is assessment?
- 2.2 Principles of assessment at Bucknell
 - 2.2.1 Stakeholder ownership
 - 2.2.2 Community responsibility: the assessment matrix
 - 2.2.3 Vertical integration
 - 2.2.4 Holistic view of student outcomes
 - 2.2.5 Separation of assessment from performance evaluation
 - 2.2.6 Summative and formative evaluation
 - 2.2.7 Multiple methodologies

Section 3. Institutional goals hierarchy

- 3.1 Mission
- 3.2 Vision
- 3.3 Strategic plan goals
- 3.4 Strategic initiatives
- 3.5 Tactics
- 3.6 Student learning and development goals hierarchy
 - 3.6.1 University-wide educational goals
 - 3.6.2 College learning goals
 - 3.6.2.1 College of Arts & Sciences
 - 3.6.2.2 College of Engineering
 - 3.6.3 Student affairs educational goals
 - 3.6.4 Academic division educational goals
 - 3.6.5 Departmental/program learning outcomes
 - 3.6.6 Learning outcomes of individual courses
 - 3.6.7 Assessing individual student performance

Section 4. Vertical integration: mapping the goals hierarchy

Section 5. Addressing the fundamental assessment questions

- 5.1 Are we meeting our goals?
 - 5.1.1 Institutional effectiveness
 - 5.1.1.1 Board of Trustees
 - 5.1.1.2 Strategic goals and tactics
 - 5.1.1.3 Administrative units
 - 5.1.1.4 Grant-funded projects
 - 5.1.2 Student learning and development
 - 5.1.2.1 Institutional surveys
 - 5.1.2.2 Mission elements
 - 5.1.2.3 University-wide educational goals
 - 5.1.2.4 College-level goals
 - 5.1.2.4.1 College of Engineering
 - 5.1.2.4.2 College of Arts & Sciences
 - 5.1.2.4.3 Office of Dean of Students
 - 5.1.2.5 Divisional assessments
 - 5.1.2.6 Academic departments and programs
 - 5.1.2.7 Individual courses
 - 5.1.2.8 Grant-funded educational projects
- 5.2 Are we demonstrating continuous improvement?
- 5.3 Do we compare favorably to others?
 - 5.3.1 General peer group
 - 5.3.2 Admissions peer group
 - 5.3.3 *US News* top 50 national liberal arts colleges
 - 5.3.4 Special peer groups
 - 5.3.5 Data-sharing consortia
 - 5.3.6 External evaluators
- 5.4 Do we meet and exceed external standards and public expectations?
 - 5.4.1 Regional accreditation
 - 5.4.2 Specialized accreditation
 - 5.4.3 Credentialing and licensure examinations
 - 5.4.4 External review of academic and administrative departments
 - 5.4.5 Consortium for the Advancement of Standards in Higher Education (CAS)
 - 5.4.6 Educational consortia outcomes projects
 - 5.4.7 Public accountability expectations
 - 5.4.8 Employer standards and expectations
 - 5.4.9 Assessing the applicant pool
 - 5.4.10 External grant support
 - 5.4.11 Community impact

Section 6. Administrative and faculty responsibilities

- 6.1 Institutional effectiveness
 - 6.1.1 Senior administrative responsibility
 - 6.1.2 Responsibilities of administrative department heads
- 6.2 Student learning and development
 - 6.2.1 Senior administrative responsibility
 - 6.2.2 Faculty responsibilities
 - 6.2.2.1 Department chairs/program heads
 - 6.2.2.2 Individual faculty
 - 6.2.2.3 Assessment Committee
 - 6.2.2.4 Common Learning Agenda (CLA) Coordinator

Section 7. Assessment Resources

- 7.1 Staffing
- 7.2 Assessment budgets
- 7.3 Efficiency of resource utilization
- 7.4 Teaching and Learning Center (TLC)
- 7.5 Other Resources
 - 7.5.1 Web site of Office of Planning & Institutional Research
 - 7.5.2 Assessment consultations
 - 7.5.3 Assessment committee
 - 7.5.4 E-Portfolios

Section 8. Assessment communications

- 8.1 Data-sharing policy
- 8.2 Developing a campus culture of assessment

Section 9. References cited

Section 10. Appendices

1. Assessment Organizational Matrix: Student Learning Outcomes
2. Assessment Organizational Matrix: Institutional Effectiveness
3. Constituency Assessment Matrix: The Bucknell Community of Learners
4. *The Plan for Bucknell*: Initiatives for Each Strategic Goal
5. Institutional Assessment Survey Schedule
6. Assessment Methods Used by Academic Departments and Programs
7. Template for Academic Department and Program Assessment Status Reports
8. Bucknell Administrative Departments and Available Standards from the Council for Advancement of Standards in Higher Education (CAS)
9. Student Goals in Bucknell's Mission and Relevant "Frameworks for Assessing Learning and Development Outcomes" from CAS
10. College of Arts & Sciences Schedule for External Review of Departments/Programs
11. Bucknell University's Baldrige/IHE Model for Institutional Quality and Effectiveness

Section 1. Organization of the plan

Following the terminology of Middle States, this comprehensive institutional assessment plan is organized in two broad domains representing (1) the assessment of student learning and (2) the assessment of institutional effectiveness. Within each domain, the plan describes Bucknell's approaches to answering four fundamental assessment questions for effective organizations (modified from Volkwein, 2006).

- Are we meeting our own goals?
- Are we continuing to improve?
- Do we compare favorably to others?
- Do we meet or exceed external standards and public expectations?

This plan also recognizes that each assessment question can be addressed at different institutional levels that correspond to an integrated hierarchy of institutional goals and objectives. Within the domain of student learning, we recognize the seven levels below, representing the addition of “colleges” and “academic divisions” to the five levels suggested by Miller and Leskes, 2005 (*Levels of Assessment from the Student to the Institution*, AAC&U):

- Assessing the institution
- Assessing colleges
- Assessing academic divisions
- Assessing departments and programs
- Assessing courses
- Assessing individual student learning across courses
- Assessing individual student learning within courses

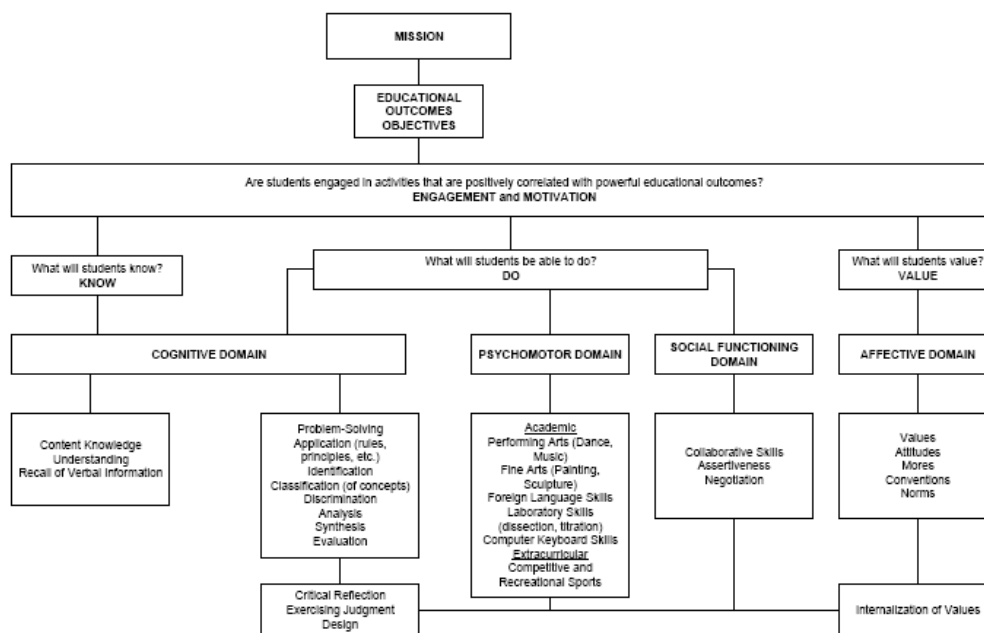
Regardless of the institutional level, there are only three fundamental types of student learning outcomes (Figure 1):

- Knowledge (What do students know?)
- Skills (What can students do?)
- Values (What do students value?)

Substantial research by the Indiana University Center for Postsecondary Research (National Survey of Student Engagement) also indicates that activities that encourage high student engagement have a strong positive correlation with the achievement of powerful learning outcomes of all three types.

The interaction of these various perspectives in the organization of this assessment plan is summarized graphically in Appendices 1 and 2.

Figure 1. A Conceptual Framework for Educational Outcomes Assessment at Bucknell¹



8/12/08

¹ Adapted from: Bloom (1956), Krathwohl (1961), Doll (1996), Gagne (1985; 1992) and Shulman (2002)

This document describes a comprehensive plan for the organization, structure and functioning of institutional assessment activities at Bucknell. Bucknell’s 2009 Periodic Review Report to the Middle States Commission on Higher Education, which has been prepared concurrently with this plan, provides detailed information on the specific actions that have been taken, or are in process, to implement this plan.

Section 2. Definitions and principles

2.1 What is assessment?

- 2.1.1 Assessment is a *systematic, continuous* way of generating feedback on performance.
- 2.1.2 As a *systematic* process, it involves the following components: clearly articulated goals and expected outcomes, valid and reliable ways to evaluate progress toward those goals, and the use of assessment data to inform University and departmental decision-making.
- 2.1.3 Assessment is a *continuous* activity undertaken with student learning—and the University mission—in mind. An effective assessment process is one that moves beyond the mechanistic steps of data collection and counting, toward engaged, reflective analysis of the ways in which we can improve the climate for teaching and learning at Bucknell.

- 2.1.4 The assessment process provides a way to make our expectations for ourselves and our students explicit, to focus our attention on shared goals and values, and to improve our understanding of the institution itself.
- 2.1.5 A major focus of assessment is the assessment of student learning outcomes: the knowledge, skills, and values that we wish students to gain from a Bucknell education. But the program of assessment at Bucknell is more comprehensive than this: assessment also includes understanding the planning, programming, teaching, and resource allocation environments that facilitate learning and encompass all aspects of the University. The plan for assessment at Bucknell is thus a comprehensive, institutional enterprise, requiring the participation and input of all University constituencies.
- 2.1.6 *The Plan for Bucknell* outlines broad strategies on which the University will focus its attention in the coming years, all of which have the end goal of either directly or indirectly improving student learning. This assessment plan reflects the focus of *The Plan for Bucknell*, further defining the learning outcomes that we desire for our students, delineating ways to understand progress toward strategic goals, and suggesting ways in which the University can use assessment to better serve its mission.

2.2 Principles of assessment at Bucknell

- 2.2.1 Stakeholder ownership. Shared responsibility for assessment by faculty and administrative staff is fundamental to the realization of the University Mission. The primary loci of student learning assessment activities at Bucknell are at the department and classroom level. Administrative assessment complements the work of the faculty by ensuring that supportive resources and services are meeting the needs of the educational process. Faculty assessment efforts also inform administrative decision-making to ensure a clear institutional focus on student learning and development. Student learning outcomes—as well as the types of techniques most useful in assessing them—will vary considerably across departments, and a “one size fits all” approach to assessment is neither necessary nor desirable. From the principle of “stakeholder ownership,” it follows that much of our assessment activity should be “embedded” in the curriculum or in the routine practices of administrative offices.
- 2.2.2 Community responsibility: the assessment matrix. As a learning community, Bucknell encompasses multiple kinds of interactions among campus constituents (students, faculty and staff), and between campus constituents and off-campus groups (Trustees, accreditors, employers, etc.). The performance of each campus group can be enhanced by feedback, formal and informal, from all of the other groups with which it interacts. This open and collaborative interchange is characteristic of the kind of community which Bucknell aspires to be, and is fundamental to the transparency expected by Middle States and the public at large. A “constituency assessment matrix” (Appendix 3) defines all of the possible kinds of constituency interactions. Some of the logical possibilities are in

fact not applicable (e.g., Trustees do not provide direct assessment or feedback for current students or faculty). For those interactions that are appropriate, the matrix identifies the feedback and assessment activities that are currently in place, and those that are in the process of implementation.

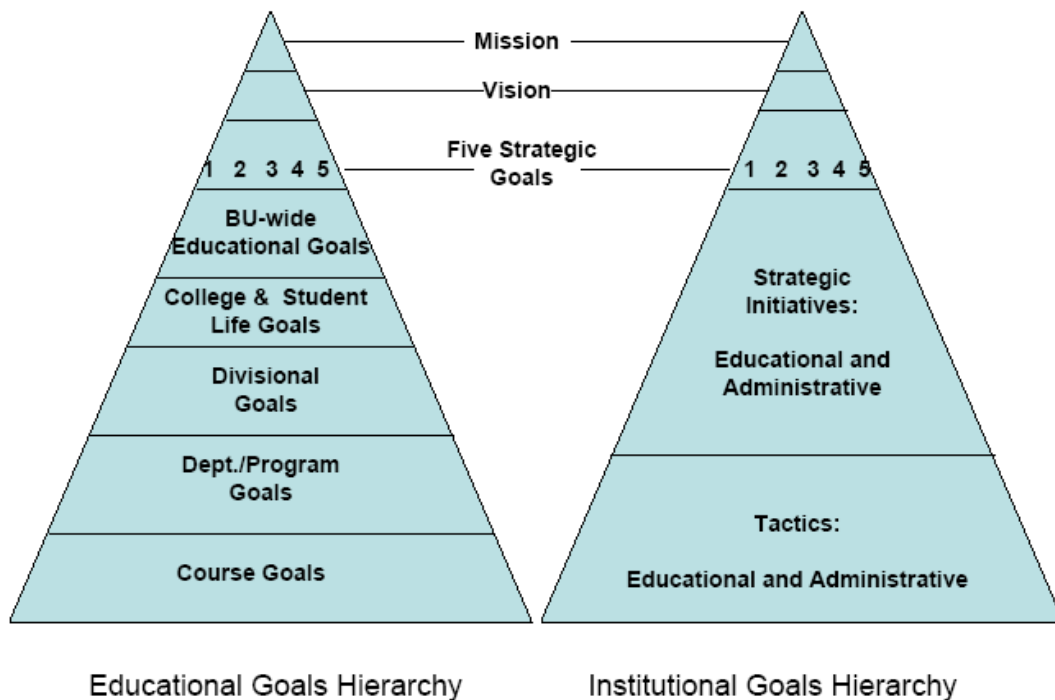
- 2.2.3 Vertical integration. Consistent with Bucknell's Mission, Vision, and the overarching goals of *The Plan for Bucknell*, academic and administrative departments have the responsibility to define their own student learning outcomes, design appropriate means for assessing those outcomes, and decide how assessment results will be used to improve teaching and learning. Outcomes at the local level should be demonstrably integrated with, and contribute to the achievement of, higher-order goals at the division, college, and institutional level, and ultimately contribute to the fulfillment of Bucknell's Mission.
- 2.2.4 Holistic view of student outcomes. According to the vision of student learning set forth in *The Plan for Bucknell*, a comprehensive assessment of student learning must include an understanding of the behavior, skills, and values developed outside the classroom as well as in.
- 2.2.5 Separation of assessment from performance evaluation. The goal of assessment at Bucknell is quality improvement at the departmental and institutional level, not individual-level performance evaluation. There is no expectation that the data from departmental or classroom-level assessment be shared, and results of assessment should not be used to evaluate the performance of individual staff members, be used in tenure, promotion, or salary decisions, or be used as high-stakes "gate-keeping" exams for students. Similarly, the methods by which individual student performance is evaluated (e.g., grades) should be distinct from the methods by which programmatic learning outcomes are assessed.
- 2.2.6 Summative and formative evaluation. Assessment should be viewed as an ongoing *research program* with two components: (1) *summative evaluation* that is retrospective and evaluates the success of a course or a program after it has been completed, or of an administrative unit at the end of the fiscal year; (2) *formative evaluation* that provides evidence of outcomes while the program is in process. The latter is particularly significant because it allows mid-course adjustments in pedagogy or administrative processes to ensure that program or unit outcomes are achieved. Assessment is thus more than a simple exercise in "counting" or data collection; instead, it is a process of rigorous and reflective analysis that works to continually improve our understanding of student learning and of Bucknell more generally.
- 2.2.7 Multiple methodologies. Bucknell's highest-level goals for students are complex cognitive and behavioral changes which are not easily measured. Effective assessment thus requires a mixture of quantitative and qualitative techniques, standardized and un-standardized metrics, and direct and indirect measures of student learning. If effectively chosen,

each of these tools can be used to inform the composite picture of student learning and institutional effectiveness at Bucknell.

Section 3. Institutional goals hierarchy

The Plan for Bucknell is both comprehensive and holistic, and results in an integrated hierarchy of goals that relate both to institutional effectiveness *and* to student learning and development. Bucknell’s goals may thus be visualized as a pyramid with two views (Figure 2). Both views are identical at the top three levels: Mission sits at the apex of the pyramid, followed by Vision (a particular, imagined future for Bucknell consistent with the Mission), and the five strategic plan goals.

Fig. 2. Bucknell Univ (BU) Institutional & Educational Goals Hierarchies



Within the Institutional Goals Hierarchy (corresponding to Middle States Standard 7), strategic goals are operationalized by a series of initiatives (both educational and administrative) and a myriad of specific tactics that the University pursues to achieve each strategic plan goal.

Within the Educational Goals Hierarchy (corresponding to Middle States Standard 14), the five strategic goals are actualized through a hierarchical succession of finer-grained objectives for students:

- Institution-wide educational goals;
- In-class educational goals of the two colleges (Arts & Sciences; Engineering) plus out-of-class “developmental” goals. The latter have been articulated primarily by the Division of Student Affairs, but with the input of other administrative units that contribute to the achievement of these goals (Athletics; Career Development Center; International Education; Service Learning).
- Academic divisions (Humanities; Social Sciences; Natural Sciences and Mathematics; Engineering)
- Department and program learning outcomes;
- Individual course learning outcomes.

Although all five strategic goals relate directly or indirectly to student learning and development, the most direct connections are with Goals 1 (Strengthen the Academic Core) and 2 (Deepen the Residential Learning Experience), which correspond to the areas of responsibility of the Office of the Provost.

The following sections elaborate on the individual components of these two, interrelated goals hierarchies:

3.1 Mission – The fundamental reasons for Bucknell’s existence are defined in its Mission Statement, which was revised in April 2006 as part of the strategic planning process that resulted in *The Plan for Bucknell*.

Bucknell is a unique national university, where liberal arts and professional programs complement each other. Bucknell educates students for a lifetime of critical thinking and strong leadership, characterized by continued intellectual exploration, creativity, and imagination. A Bucknell education allows students to interact, day by day, with faculty who exemplify a passion for learning and a dedication to scholarship. Bucknell fosters a residential, co-curricular environment in which students develop intellectual maturity, personal conviction and strength of character, informed by a deep understanding of different cultures and perspectives.

In the context of student learning and development, Bucknell is accountable for the following elements of the Mission Statement:

- Intellectual maturity
- Continued intellectual exploration
- Critical thinking
- Creativity and imagination
- Strong leadership

- Personal conviction and strength of character
- Understanding different cultures and perspectives

3.2 Vision. An aspirational Vision Statement is also included in *The Plan for Bucknell*:

To provide students with the premier undergraduate experience in American higher education.

3.3 Strategic plan goals. *The Plan for Bucknell* is a comprehensive plan comprised of five, interrelated “strategies” or goals:

- Strengthen the Academic Core (7 initiatives)
- Deepen the Residential Learning Experience (4 initiatives)
- Strengthen Diversity (5 initiatives)
- Build Bridges (7 initiatives)
- Strengthen Our Financial Future (6 initiatives)

3.4 Strategic initiatives. The five goals of *The Plan for Bucknell* are operationally defined through a series of 29 more specific “strategic initiatives” designed to advance the overall strategy (see Appendix 4 for a complete listing).

3.5 Tactics. Tactics are the foundation of strategy implementation and the bottom tier of the institutional effectiveness goals hierarchy. Hundreds of tactics suggested by the campus community are stored in a tactics database that is accessible within the Bucknell community through the *myBucknell* portal (Quick Links / Bucknell Information / Plan for Bucknell: Tactics Database). Tactical proposals are vetted through a review process that determines which tactics will be approved, and how approved tactics will be funded, implemented and assessed.

3.6 Student learning and development goals hierarchy. As indicated in Figure 2, the hierarchy of Bucknell’s educational goals begins with selected elements of the Mission Statement that relate to student learning and development, and the five goals of the University’s strategic plan. Subsidiary goal levels include the following:

3.6.1 University-wide educational goals. Prior to the development of *The Plan for Bucknell*, student learning goals were developed semi-independently by the College of Arts & Sciences and the College of Engineering. One of the tactics intended to “Strengthen the Academic Core” was to develop a common set of student outcomes that defined the Bucknell experience for any graduate of the institution. That tactic was accomplished during FY07-08 with the Faculty’s adoption of nine *Bucknell University Educational Goals*. To provide a contextual framework for these goals, the Committee on Instruction subsequently developed a “Strategic Educational Vision Statement” that was approved by the Faculty in November 2008. The inclusion in this document of a separate section on assessment reflects both

the principle of faculty ownership and progress in developing a campus culture of assessment. The nine, approved, institution-wide Educational Goals (EG's) include:

1. Learn, integrate, and apply knowledge and methodological approaches through in-depth study of an academic discipline.
2. Integrate and synthesize a range of knowledge, perspectives, and creative methods acquired through study and practice across multiple academic disciplines and diverse educational experiences.
3. Develop knowledge and skills for interpreting the commonalities and differences among human societies, including diverse cultural perspectives and traditions within the United States and internationally, to enable living and working effectively in a global context.
4. Develop knowledge and skills to identify and respond creatively and effectively to local and global challenges to humans and the natural world.
5. Understand the importance of and develop the capacities for self-assessment, ethical reasoning, and effective interaction with others so as to act responsibly and to promote justice in professional and communal life.
6. Develop critical thinking skills to evaluate arguments and address complex issues using techniques including quantitative and qualitative analysis and scientific reasoning.
7. Develop skills in oral and written communication to articulate ideas and arguments clearly and effectively.
8. Develop information literacy and technological competency across disciplines.
9. Develop the desire and intellectual skills for life-long learning.

These institutional goals are interpreted and elaborated independently by the two colleges and by the administrative units that contribute to student development outcomes.

- 3.6.2. College learning goals. The two colleges interpret and elaborate upon the institutional-level learning goals in ways that are appropriate to their own disciplinary fields. The resulting college-level goals are expressed both in the general requirements for the major, where the focus is on learning in depth, and more particularly in the General Education program of each college, which articulates the requirements for curricular breadth. The philosophical underpinnings of Bucknell's current General Education program were established in an educational strategic plan, *Foundations for the Future (FFF)*, adopted in April 1991. The newly-adopted *Bucknell University Educational Goals* provide the foundation for subsequent changes in General Education at the college level.

3.6.2.1. College of Arts & Sciences. To implement *FFF* within the College of Arts & Sciences, the Common Learning Agenda (CLA) was developed in 1992 and revised in 1997. Periodic reviews of the CLA were mandated by the enabling legislation, and included transcript analysis as well as assessment of student and faculty survey data. The final mandated review was conducted in FY07-08. The new General Education program within the College of Arts & Sciences is informed by Bucknell's new institution-wide Educational Goals and by recent changes in the Middle States standards and requirements for accreditation.

3.6.2.2. College of Engineering. The implementation of *FFF* within the College of Engineering resulted in *The Bucknell Plan for Engineering Education (BPÉE)*. The last substantive revision of the BPÉE occurred in December 2006, but it has been subsequently reviewed to assure that it conforms to the goals of *The Plan for Bucknell* and the *Bucknell University Educational Goals*. The 2008 ABET accreditation review affirmed the quality and effectiveness of assessment processes within the College of Engineering.

3.6.3. Student development goals. A set of educational goals for Student Affairs was approved by the Committee on Complementary Activities on January 22, 2009. Encompassing the units of Student Affairs, the Career Development Center, and Athletics & Recreation, the proposed goals, (with the *Bucknell University Educational Goals* to which they relate in parentheses) include:

1. Develop capacity for interpersonal competence and self-reflection (#3, #5).
2. Develop understanding of diverse perspectives and master cultural competency skills to live and work in a complex world (#3, #7).
3. Develop ability to transfer learning from one setting to another and to articulate learning outcomes (#5, #9).
4. Develop civic efficacy and commitment to public and community life through practice and reflection (#4).
5. Develop awareness of spiritual, physical and mental wellness components to develop life-long commitment to health in mind, body and spirit.
6. Understand and develop personal responsibility and accountability for community living.
7. Understand and practice ethics; develop personal ethical framework for decision-making (#5).
8. Develop ability to communicate meaningfully in multiple situations, to manage conflict and understand principles of dialogue (#5, #7).

9. Gain an understanding of environmental issues, sustainability practices and other consumer issues to develop informed decisions and habits (#).
10. Gain exposure to leadership and followership experiences in order to understand individual talents and challenges and to identify personal style of leadership (#).

Goals #5 and #6 are largely independent of the *Bucknell University Educational Goals*, but they relate in part to other elements of the University's Mission, including: strong leadership; personal conviction and strength of character; and understanding different cultures and perspectives.

Once these developmental goals receive final approval, the relevant units will develop specific outcomes and associated assessment metrics.

- 3.6.4. Academic division educational goals. While not a regular or major focus of Bucknell's assessment program, the University participates opportunistically in national comparative studies that assess student performance by academic division. For example, a sample of Bucknell's entering students who intended to major in STEM fields (science, technology, engineering and mathematics) are ongoing participants in a UCLA study (funded first by NIH and currently by NSF) to determine how many persisted to receive degrees in these fields.
- 3.6.5. Departmental/program educational outcomes. All departments and programs currently have on file with the Office of Planning & Institutional Research (OPIR) copies of departmental mission statements, student learning outcomes, and plans for assessing those learning outcomes in the major (and in some disciplines, in the minor and/or in service courses). All department/program learning outcomes are posted publicly at LINK to be developed; sample assessment plans are available at <http://www.bucknell.edu/x5189.xml>.
- 3.6.6. Learning outcomes of individual courses. Each college and academic department/program must decide where within the curriculum to assess each of its educational outcomes. Faculty who are teaching individual courses designated for such embedded assessments will thus be expected to have clear, public learning outcomes that articulate with the broader learning goals of their department/program and college. Instructors of other courses are also encouraged to include explicit learning goals within their course syllabi. (For additional information, see Section 6.2.2 on Faculty Responsibilities.)
- 3.6.7. Assessing individual student performance. Within-course assessment of individual student performance is the responsibility of the course instructor. Across-course assessment of individual student performance is a

departmental function that may be related to student advising, the progressive nature of departmental curricula, or the achievement of student outcomes related to integration and synthesis.

Section 4. Vertical integration: mapping the goals hierarchy

By definition, goals such as those in Bucknell’s Mission Statement and strategic plan are conceived broadly and are not in themselves measurable. These goals are defined operationally by the initiatives, tactics and educational objectives that the University chooses to pursue. The two tables that follow, approved by the Committee on Instruction in November 2008, clarify operationally the intent of educational Mission elements and strategic plan goals by “mapping” them to the nine university-wide Educational Goals.

KEY to Educational Goals (EG’s):

- EG 1: **Learn, integrate, and apply** knowledge and methodological approaches through **in-depth study** of an academic discipline.
- EG 2: **Integrate and synthesize** a range of knowledge, perspectives, and creative methods acquired through study and practice **across multiple academic disciplines and diverse educational experiences.**
- EG 3: Develop knowledge and skills for **interpreting the commonalities and differences** among human societies, including diverse cultural perspectives and traditions within the United States and internationally, to **enable living and working effectively in a global context.**
- EG 4: Develop knowledge and skills to identify and **respond creatively and effectively to local and global challenges to humans and the natural world.**
- EG 5: Understand the importance of and develop the capacities for **self-assessment, ethical reasoning, and effective interaction** with others so as to **act responsibly** and to promote justice in professional and communal life.
- EG 6: Develop **critical thinking skills** to evaluate arguments and address complex issues using techniques including quantitative and qualitative analysis and scientific reasoning.
- EG 7: Develop skills in **oral and written communication** to articulate ideas and arguments clearly and effectively.
- EG 8: Develop **information literacy and technological competency** across disciplines.
- EG 9: Develop the **desire and the intellectual skills for life-long learning.**

Mapping of University-wide Educational Goals to Mission Elements

Educational Goals	Mission Elements						
	Intellectual Maturity	Continued Intellectual Exploration	Critical Thinking	Creativity & Imagination	Strong Leadership	Personal Conviction & Strength of Character	Understand Differences in Culture & Perspectives
EG 1	X		X				
EG 2	X	X	X	X			
EG 3					X		X
EG 4			X	X	X	X	X
EG 5					X	X	
EG 6	X		X	X	X		
EG 7	X				X		
EG 8	X	X	X				
EG 9	X	X	X	X			

Mapping of University-wide Educational Goals to Strategic Plan Goals

Educational Goals	Strategic Plan Goals				
	Strengthen the Academic Core	Residential Learning Experience	Diversity	Build Bridges	Secure Financial Future
EG 1	X				
EG 2	X	X			
EG 3	X	X	X	X	
EG 4	X	X	X	X	
EG 5	X	X	X		
EG 6	X				
EG 7	X	X		X	
EG 8	X			X	
EG 9	X	X	X		

The collection of Educational Goals checked in each column provides a composite operational definition for that Mission element or strategic goal. These composites are “decoded” and summarized in narrative form below. Note: For the strategic goals, these summaries provide operational definitions only from the perspective of student learning and development. The strategic goals, however, relate to the entire institution, and other non-academic initiatives and tactics will more fully elaborate the intent of the strategic goal statements. A comparable mapping of the connections of non-academic tactics is already a part of the tactics database maintained by the Office of Strategy Implementation.

Operational Definition of Mission Elements

Intellectual Maturity

- EG 1: **Learn, integrate, and apply** knowledge and methodological approaches through **in-depth study** of an academic discipline.
- EG 2: **Integrate and synthesize** a range of knowledge, perspectives, and creative methods acquired through study and practice **across multiple academic disciplines and diverse educational experiences.**
- EG 6: Develop **critical thinking skills** to evaluate arguments and address complex issues using techniques including quantitative and qualitative analysis and scientific reasoning.
- EG 7: Develop skills in **oral and written communication** to articulate ideas and arguments clearly and effectively.
- EG 9: Develop the **desire and the intellectual skills for life-long learning.**

Continued Intellectual Exploration

- EG 9: Develop the **desire and the intellectual skills for life-long learning.**

Critical Thinking

- EG 1: **Learn, integrate, and apply** knowledge and methodological approaches through **in-depth study** of an academic discipline.
- EG 2: **Integrate and synthesize** a range of knowledge, perspectives, and creative methods acquired through study and practice **across multiple academic disciplines and diverse educational experiences.**
- EG 4: Develop knowledge and skills to identify and **respond creatively and effectively to local and global challenges to humans and the natural world.**
- EG 6: Develop **critical thinking skills** to evaluate arguments and address complex issues using techniques including quantitative and qualitative analysis and scientific reasoning.

- EG 8: Develop **information literacy and technological competency** across disciplines.
EG 9: Develop the **desire and the intellectual skills for life-long learning**.

Creativity and Imagination

- EG 2: **Integrate and synthesize** a range of knowledge, perspectives, and creative methods acquired through study and practice **across multiple academic disciplines and diverse educational experiences**.
EG 4: Develop knowledge and skills to identify and **respond creatively and effectively to local and global challenges to humans and the natural world**.
EG 6: Develop **critical thinking skills** to evaluate arguments and address complex issues using techniques including quantitative and qualitative analysis and scientific reasoning.
EG 9: Develop the **desire and the intellectual skills for life-long learning**.

Strong Leadership

- EG 3: Develop knowledge and skills for **interpreting the commonalities and differences** among human societies, including diverse cultural perspectives and traditions within the United States and internationally, to **enable living and working effectively in a global context**.
EG 4: Develop knowledge and skills to identify and **respond creatively and effectively to local and global challenges to humans and the natural world**.
EG 5: Understand the importance of and develop the capacities for **self-assessment, ethical reasoning, and effective interaction** with others so as to **act responsibly** and to promote justice in professional and communal life.
EG 6: Develop **critical thinking skills** to evaluate arguments and address complex issues using techniques including quantitative and qualitative analysis and scientific reasoning.
EG 7: Develop skills in **oral and written communication** to articulate ideas and arguments clearly and effectively.

Personal Conviction and Strength of Character

- EG 4: Develop knowledge and skills to identify and **respond creatively and effectively to local and global challenges to humans and the natural world**.
EG 5: Understand the importance of and develop the capacities for **self-assessment, ethical reasoning, and effective interaction** with others so as to **act responsibly** and to promote justice in professional and communal life.

Understand Differences in Cultures and Perspectives

- EG 3: Develop knowledge and skills for **interpreting the commonalities and differences** among human societies, including diverse cultural perspectives and traditions within the United States and internationally, to **enable living and working effectively in a global context**.
EG 4: Develop knowledge and skills to identify and **respond creatively and effectively to local and global challenges to humans and the natural world**.

Operational Definition of Strategic Plan Goals for Student Learning and Development

Strengthen the Academic Core

- EG 1-9: By definition, all of the University-wide educational goals are subsumed under the strategic plan goal to “Strengthen the Academic Core.”

Residential Learning Experience

- EG 3: Develop knowledge and skills for **interpreting the commonalities and differences** among human societies, including diverse cultural perspectives and traditions within the United States and internationally, to **enable living and working effectively in a global context**.
EG 4: Develop knowledge and skills to identify and **respond creatively and effectively to local and global challenges to humans and the natural world**.

- EG 5: Understand the importance of and develop the capacities for **self-assessment, ethical reasoning, and effective interaction** with others so as to **act responsibly** and to promote justice in professional and communal life.
- EG 7: Develop skills in **oral and written communication** to articulate ideas and arguments clearly and effectively.
- EG 9: Develop the **desire and the intellectual skills for life-long learning**.

Diversity

- EG 3: Develop knowledge and skills for **interpreting the commonalities and differences** among human societies, including diverse cultural perspectives and traditions within the United States and internationally, to **enable living and working effectively in a global context**.
- EG 4: Develop knowledge and skills to identify and **respond creatively and effectively to local and global challenges to humans and the natural world**.
- EG 5: Understand the importance of and develop the capacities for **self-assessment, ethical reasoning, and effective interaction** with others so as to **act responsibly** and to promote justice in professional and communal life.

Build Bridges

- EG 3: Develop knowledge and skills for **interpreting the commonalities and differences** among human societies, including diverse cultural perspectives and traditions within the United States and internationally, to **enable living and working effectively in a global context**.
- EG 4: Develop knowledge and skills to identify and **respond creatively and effectively to local and global challenges to humans and the natural world**.
- EG 7: Develop skills in **oral and written communication** to articulate ideas and arguments clearly and effectively.
- EG 8: Develop **information literacy and technological competency** across disciplines.

Secure Financial Future

This strategic goal is operationally defined by the initiatives contained in the strategic plan and by the approved tactics in the tactical database.

Section 5. Addressing the four fundamental assessment questions

5.1. Are we meeting our goals?

5.1.1. Institutional effectiveness

- 5.1.1.1. Board of Trustees. In its fiduciary role, the Board of Trustees is responsible for ensuring the continuity of Bucknell in perpetuity, its faithfulness to its historic purposes as reflected in the Charter and Mission, and its ongoing health as an organization. The Board's first-alert monitoring system includes the annual auditor's report and interim fiscal reports, and a dashboard of top-line strategic indicators (approved 2007) that are updated twice per year and chosen to reflect the overall state of the University. Should there be any question about Bucknell's performance in any domain, the Board can "drill down" to lower-level indicators (metrics) that reflect the operational status of the institution in successively greater detail.

Important groups of indicators are aggregated in dashboards that relate to: (a) each goal of the strategic plan; and (b) the responsibilities of each Board committee (including dashboards for tracking performance of *The Campaign for Bucknell*, enrollment management, etc.).

- 5.1.1.2. Strategic Goals and Tactics. As noted previously, strategic goals are by definition general in nature and not directly measurable or assessable. These goals are operationally defined in the aggregate by the sum of all of the specific tactics adopted by the University. Because the approval of tactics requires a complete business plan, including a plan for assessment, all five strategic goals are ultimately assessable by “rolling up” data at the tactical level.

Although all five strategic goals relate directly or indirectly to the quality of a Bucknell education, two—Strengthen the Academic Core, and Deepen the Residential Learning Experience—are more specifically focused on student learning and development. The plan for assessing these two goals will be considered separately and in more detail below.

- 5.1.1.3. Administrative Units. Individual administrative units are accountable for having their own objectives and action plans, and for demonstrating linkages of their goals with one or more of the strategic plan goals. Each unit will contribute differentially to the five strategic goals. Specific assessment responsibilities of each administrative unit head are described in Section 6.1.3.

Each administrative unit is also subject to periodic external reviews at intervals that are appropriate to the division in which the unit is located (for example, external review of development and alumni affairs units always precedes the start of a new capital fund drive). (See also Section 5.4.4.)

- 5.1.1.4. Grant-Funded Projects – All administrative projects that are supported with external grant funds have their own assessment plans.

5.1.2. Student learning and development

- 5.1.2.1. Institutional Surveys. At the university level, the Office of Planning & Institutional Research administers a regular series of institutional surveys that provide baseline data on student characteristics upon entering Bucknell, and periodic updates at

milestones such as the end of the first year and the end of the senior year. These instruments include:

- CIRP (Cooperative Institutional Research Program) – entering first-year students (Higher Education Research Institute (HERI), UCLA)
- BCSSE (Beginning College Survey of Student Engagement) – entering first-year students (National Survey of Student Engagement (NSSE))
- YFCY (Your First College Year) – students at end of first year (HERI)
- NSSE (National Survey of Student Engagement) – students at end of first year
- CSS (College Student Survey) – end of senior year (HERI)
- NSSE (National Survey of Student Engagement) – end of senior year
- AICUP Baccalaureate Outcomes Survey – alumni five years post-graduation; administered every five years and next scheduled in FY2009-10
- Alumni Survey – Bucknell instrument; scheduled for annual administration to alumni 1 and 5 years post-graduation beginning in FY2010-11
- Research Practices Survey – an information literacy survey first available and administered in FY08-09, and scheduled for annual administration thereafter.

The contents of these surveys have been analyzed and the questions classified into a series of subject categories (student survey clusters) that are relevant to specific student learning Mission elements and institution-wide student Educational Goals (EG's).

Additional, unit specific surveys are also administered regularly by various administrative offices, including Library and Information Technology, Residential Life, Community Health Promotion, etc. Appendix 5 provides a five-year schedule for the administration of major, regularly-administered institutional assessment surveys.

5.1.2.2. Mission elements. The educational elements of the Mission have been defined previously in terms of the Educational Goals that relate to them. Two Mission elements are also informed by specific student survey clusters:

- Personal conviction and strength of character (Life Goals & Values survey cluster)

- Understanding differences in cultural perspectives (Diversity survey cluster)

5.1.2.3. University-wide Educational Goals. The *Bucknell University Educational Goals* are addressed individually below, with explanations of the kinds of assessments and data that are available for each.

1. Study in depth. The academic major is the principal vehicle for providing the experience of study in depth. As described below under “Academic Departments and Programs,” the assessment strategies for individual disciplines are contained in departmental and program assessment plans on file with the Office of Planning & Institutional Research. Additional sources of evidence above the departmental level, or involving external authority, include the following:
 - Student survey questions (Academic Engagement cluster; NSSE questions on Academic Challenge)
 - Honors theses – These require both the review and approval of a proposal, the preparation of a final paper, and the oral presentation and defense of that paper.
 - Collaborative student-faculty research projects and joint publications.
 - External grants applied for/received by students
 - GRE content area examination results, examined at three-year intervals.
 - External competency examinations (engineering professional examinations; education certification examinations; language proficiency examinations)
 - Completion of specialized external programs (e.g., Geology field camps)
 - Institutional Review Board evaluation of human subjects research projects for best practice methodology
 - Student portfolios and performances in the fine and performing arts
 - Internships with a reflective component
 - Student teaching evaluations
2. Study in breadth, across multiple disciplines and diverse educational experiences. The General Educational program is the primary curricular vehicle for ensuring educational breadth. As noted elsewhere, General Education is separately interpreted in each of the colleges, but it is derived from the nine Educational Goals (EG’s) considered in this section. Additional institutional-level assessment data

relating to educational breadth includes the following:

- Student survey questions (Academic Engagement cluster)
- Transcript analysis of implicit curriculum (employed in the assessment of the Common Learning Agenda in the College of Arts & Sciences)
- Completions with double and triple majors
- Minors
- Interdisciplinary research projects
- Integrating experience with embedded assessment in the junior or senior year (senior design project in the College of Engineering; comparable experience to be designed in the College of Arts & Sciences as a replacement for the current capstone course requirement)

3. Commonalities and differences; live and work in a global context. This is both an Educational Goal for the entire academic program and a common goal of multiple administrative offices (Chief Diversity Officer, Multicultural Student Services, and Lesbian/Gay/Bisexual/Transgender Awareness). There is also a campus committee of faculty and staff focused on diversity planning. Assessment data and resources available for this educational goal include:

- Student survey questions (Diversity and Volunteer/Service clusters; NSSE questions on Enriching Educational Experiences)
- Frameworks for Assessing Learning and Development Outcomes (FALDO's): Appreciating Diversity (Council for Advancement of Standards in Higher Education (CAS); see Appendix 8)
- Statistics and reflective exercises associated with participation in:
 - Study abroad
 - Bucknell Brigade (Nicaragua volunteer project)
 - Service learning
 - Off-campus domestic study
 - Campus volunteerism
- Cultural competency components of foreign language training (now a curricular requirement in the College of Arts & Sciences)
- Internships with a reflective component
- Disciplinary focus of specific departments (sociology/anthropology), and specific courses (e.g.,

Education Department course in which science is taught to the Amish or to home-schooled students)

- Diversity survey data from Bucknell's participation in the consortial campus climate surveys (Consortium for High Achievement and Success; Association for Independent Colleges and Universities of Pennsylvania).

4. Local/global challenges to humans and natural world

- Student survey questions (Volunteer/Service; General Opinions and Political Beliefs clusters)
- FALDO: Social Responsibility (see Appendix 9)
- Environmental Center and Program – participation, projects
- Multi-disciplinary and multicultural courses – number and enrollment
- Disciplines for which this is an important goal, and for which there are relevant departmental-level or college-level assessments: for example, education, psychology, sociology, engineering, geography, geology, political science
- Relevant student research and theses
- Focus of some of the Residential Colleges, and the evaluation thereof
- Service learning
- Internships with a reflective component
- Volunteerism
- Participation in certain student clubs and societies
- Peace Corps participation rates
- Participation in post-graduate service organizations such as Teach for America, Teach NOLA, VISTA, etc.

5. Self-assessment; ethical reasoning; effective interaction

- Student survey questions (Self-Rating; Volunteer/Service; Extra- and Co-Curricular Activities; Nature of Relationships clusters)
- National College Health Assessment Survey (American College Health Association)
- FALDOs: Realistic Self-Appraisal; Social Responsibility; Meaningful Interpersonal Relationships; Collaboration (see Appendix 9)
- Engineering focus on professional ethics under ABET criteria

- Education focus on self-assessment and effective interaction
 - Institutional Review Board (IRB) ethics training program participation
 - IRB review of research protocols for best practice in the protection of human subjects
 - Service learning
 - Volunteerism
 - Student organization participation
 - Greek Life chapter rating program
6. Critical thinking: integrate, synthesize, apply; utilize quantitative, qualitative and scientific methods
- Departments with quantitative or qualitative research methods courses – embedded assessments
 - NSSE questions on coursework emphasis
 - Undergraduate research
 - Honors theses
 - Student government participation
 - Student organization projects
 - Culminating junior or senior experience (senior design project in Engineering; comparable experience in Arts & Sciences to replace current capstone course requirement)
7. Oral and written communication
- Student survey questions (Amount of Reading and Writing; Skill Development clusters; NSSE writing and oral communication questions)
 - FALDO: Effective Communication (see Appendix 9)
 - Writing Program assessment for self-efficacy in writing
 - Faculty assessment of student writing samples
 - Writing Center statistics on student usage, nature of problems, results of consulting
 - Student research proposals for their departments, Undergraduate Research Program, or external agencies
 - Conference presentations of student-faculty research, given by students.
 - Student Honors defense presentations
 - Kalman Symposia Awards (undergraduate research)
8. Information literacy and technological competency
- Student survey questions (Skill Development cluster)

- Research Practices Survey results
- Assessment efforts of Curriculum Committees of the two colleges (building upon efforts of Library and Informational Technology study group)
- Library and Information Technology statistics on student usage of information services and resources (educational programs, consultations, etc.)

9. Life-long learning: desire and skills

- Student survey questions (Further Education Plans; Career Aspirations; Priorities; Life Goals & Values clusters)
- Number of assignments involving research papers and other scholarly works and products.
- Formal lifelong learning
 - CDC survey of students pursuing graduate study 6 months post-graduation
 - Alumni survey of advanced degree attainment at any time during careers
 - Continuing education requirements of various professions
 - Statistics on the Baccalaureate Origins of Doctorates
- Informal lifelong learning
 - Number of books alumni read for pleasure
 - Attendance at museums, lectures, etc.
- Information literacy (EG 8) and critical thinking (EG 6), which provide the tools and skills for lifelong learning
- Employer data
 - Satisfaction with Bucknell graduates employed by company
 - Increase in number of recruiters and number of students recruited on campus
 - Relationship of recruitment patterns to economic cycle data

5.1.2.4. College-level goals

- 5.1.2.4.1. College of Engineering. The learning goals of the College of Engineering are not addressed in detail in this document because they are extensively documented in connection with the 2007-08 self-study in preparation for an ABET re-accreditation visit in fall 2008. That review resulted in only one requirement: a revision of the wording of learning

outcomes statements to conform more closely to the distinctive ABET definition that outcomes are manifested three to five years post-graduation. This plan will be updated once the College of Engineering has completed its response to those new requirements. More information about engineering program outcomes can be reviewed at:
<http://www.bucknell.edu/x43592.xml>.

5.1.2.4.2. College of Arts & Sciences. The College of Arts & Sciences completed its final mandated assessment of the current General Education program (the Common Learning Agenda) in AY07-08. That assessment involved transcript analysis and faculty and student survey data. The new General Education curriculum, which was explicitly designed to address each of the University-wide Educational Goals (EG's), draws upon a faculty survey, student focus groups, open fora, and an analysis of peer curricula and the national conceptions of General Education developed by agencies such as AAC&U and the Carnegie Foundation.

5.1.2.4.3. Office of the Dean of Students. See Section 3.6.3.

5.1.2.5. Divisional assessments. Bucknell's academic offerings are subdivided into four divisions: humanities; social sciences; natural sciences and mathematics; and engineering. Specific learning goals are not generally established at the divisional level, except for engineering, where the division is coequal with the College of Engineering (see above). Nevertheless, the University takes advantage of opportunities to participate in collaborative assessments at the divisional level. The University is currently participating in such a project conducted by HERI with NIH and NSF support. It involves the longitudinal tracking of students intending to major in the biological sciences, and in STEM fields more generally.

5.1.2.6. Academic departments and programs. Each academic department/program has on file a current mission, student learning outcomes, and an assessment plan. The Faculty's Assessment Committee requests periodic reports on the status of these assessment activities. Assessment data must be included in all requests to the Staff Planning Committee for new or returned positions. Assessment data is also a required component of department and program self-studies, which are conducted in

preparation for regularly scheduled external reviews. The specific assessment responsibilities of academic department chairs/program heads are outlined in Section 6.2.2.1. The kinds of assessment methods included in the plans of each academic department and program are summarized in Appendix 6.

5.1.2.7. Individual courses. As noted previously in Section 3.6.6, each college and academic department/program must decide where within the curriculum to assess each of its student learning outcomes. Faculty who are teaching individual courses designated for embedded assessments will thus be expected to have clear, public learning outcomes that articulate with the broader learning outcomes of their department/program and college. Instructors of other courses are also encouraged to include explicit student learning outcomes within their course syllabi. The complete list of assessment responsibilities for individual faculty is presented in Section 6.2.2.2.

5.1.2.8. Grant-funded educational projects. All externally funded educational projects include their own assessment plans.

5.2. Are we demonstrating continuous improvement over time?

5.2.1. Collection of Longitudinal Data

The collection of longitudinal data to assess improvement over time is a fundamental institutional practice. Strategic plan metrics shared with the Board of Trustees are always based on historical data for at least five years, as are annual budget decisions (e.g., the setting of faculty salaries or comprehensive fee), enrollment projections, and external reviews of academic and administrative units.

Longitudinal data is used in a variety of ways. High-level metrics—those tied directly to *The Plan for Bucknell* (see Section 5.1. – Are we meeting our goals?)—help to assess progress toward achieving long-term plan goals, illustrate areas where Bucknell is over- or underperforming relative to its goals, and highlight areas that warrant further, more detailed investigation and analysis. In addition, tactics proposed to address particular aspects of the plan, especially those that will require a long-term investment of capital resources, must include an assessment component that explains how the tactic will improve the educational experience at Bucknell over time. In these cases, longitudinal data is a critical component of the assessment process.

The maintenance of census files and longitudinal trend data is decentralized and stored on hard drives or on the network space of various

administrative offices (e.g., Admissions, Registrar, Finance, Human Resources, etc.). The Office of Planning and Institutional Research (OPIR) has the largest collection of such data and has primary responsibility for aggregating it into formats that are suitable for analysis. OPIR has developed a series of longitudinal unit-record databases in an effort to better understand, and take steps to improve, the experience of students and faculty from the time they enter Bucknell to the time that they graduate or leave the University. These databases provide the ability to investigate the factors that lead to student and faculty success, and to suggest ways that the institution can better facilitate learning among diverse populations.

For the assessment of student learning and development, OPIR retains longitudinal records of student performance on a series of regularly administered surveys of entering students, students at the end of their first year, and graduating seniors. These resources permit the examination of changes in attitudes and performance of particular cohorts throughout their time at Bucknell, as well as the changes in successive cohorts over time. Survey data can be merged with other forms of data in the University's enterprise data system (Banner) to investigate more complex questions such as predictors of academic success or academic problems.

Academic departments and programs collect and maintain their own longitudinal data from the direct and indirect assessment of student learning outcomes.

5.2.2. Baldrige/Excellence in Higher Education (EHE) Model

To assure continuous improvement in the quality of administrative functions over time, the University has committed itself in FY08-09 to begin implementing the Excellence in Higher Education (EHE) model of the Baldrige Quality Criteria. The version of this model adopted at Bucknell (see Appendix 11) will provide a common conceptual framework and set of standards for administrative assessment. The specific expression of this model and the timing of its elements will vary within the administrative divisions reporting to each cabinet-level officer (vice presidents and Provost) because of unit-specific factors and expectations (for example, see Section 5.3.6 on external reviews).

5.3. Do we compare favorably to others?

Benchmarking is a fundamental part of all institutional assessment and decision-making activities at Bucknell. It is pursued in three principal ways: (1) the use of various peer groups; (2) participation in data-sharing consortia; and (3) the reliance on external reviewers who provide the perspectives and knowledge of other institutions.

5.3.1. General peer group -- For most institutional comparisons, Bucknell employs a standard peer group that is fixed at the beginning of each strategic planning period to ensure continuity of comparisons. It is updated (if necessary) when new/updated plans are implemented. The current group of 13 institutions was approved by the Board of Trustees in 2007, following the adoption of *The Plan for Bucknell*. It is a group that is both more aspirational than previous peer groups and more diverse, representing a range of liberal arts colleges and larger universities that reflect the distinctive size and curricular breadth of Bucknell University. For some regular, annual decision-making processes (e.g., setting faculty salary increase percentages) Bucknell establishes a target rank (or range of ranks) within the general peer group. The members of this peer group include:

- Colgate University
- College of the Holy Cross
- College of William and Mary
- Dartmouth College
- Davidson College
- Furman University
- Lafayette College
- Lehigh University
- Middlebury College
- Trinity College (CT)
- University of Richmond
- Villanova University
- Wake Forest University

5.3.2. Admissions peer group. The admissions market itself determines the group of institutions that are the most potent competitors for students, as measured by admissions overlap, win-loss statistics, and related metrics. This list overlaps considerably with the general institutional peer group, but includes some additional institutions such as: Boston College, Carnegie Mellon University, Cornell University, Johns Hopkins University, and Tufts University.

5.3.3. US News top 50 liberal arts colleges. For broader comparisons, Bucknell also retains and tracks comparative data on all 50 of the top liberal arts colleges in the *US News* annual rankings. An analysis of Bucknell's standing among top baccalaureate colleges is shared annually with the University's Board of Trustees.

5.3.4. Specialized peer groups. Departments and programs in the liberal arts generally employ Bucknell's general peer group for comparisons. Pre-professional programs are more likely to require special comparison

groups (e.g., the College of Engineering has its own peer group; and the Education Department requires a list of other schools with teacher certification programs to benchmark pass rates on the standardized PRAXIS exam). Certain administrative offices and functions also require specialized peer groups (e.g., a regional group of employers provides data to benchmark the salaries of staff members recruited via regional rather than national searches).

5.3.5. Data-sharing consortia. The institutional-level student survey instruments employed at Bucknell (HERI surveys, NSSE, etc.) all provide national benchmark data, but these comparison groups are too broad to have great utility (e.g., all nonsectarian 4-year colleges; or all non-sectarian colleges with very high selectivity). For more precise benchmarking and more detailed analysis, the University's goal is to obtain institutionally-identifiable data for the specific institutions in its peer group. There are various sources of institutionally identifiable data, including, but not limited to:

- Institutional Web sites, particularly for standardized data in the Common Data Set that is distributed to all college guide vendors;
- Educational associations (AAUP for faculty salaries; NACUBO for endowment comparisons; CAE for fund-raising statistics; etc.);
- The federal IPEDS system, which has made great improvements in timeliness and accessibility;
- Commercial sources, including the annual data collection by *US News*.

In general, however, these sources are insufficient for many institutional decision-making processes. For much of our institutional benchmarking Bucknell thus relies on active membership in two data-sharing consortia: (1) the Higher Education Data-Sharing Consortium (HEDS; a national group); and the Association of Independent Colleges of Pennsylvania (AICUP). The HEDS membership includes all schools in Bucknell's peer group except the College of William & Mary (a public institution).

Consortium participation provides the following value-added benefits to Bucknell's benchmarking efforts:

- Timeliness. Comparative data from annual studies is available to Bucknell's administration sooner than it is from other data sources.
- More precise peer comparisons. HEDS conducts its own exchanges of HERI survey data among members that agree to participate. Such institution-level data is not available from any other source, and provides much more specific and appropriate benchmarking of institutional assessment information.

- Unit-record data-sharing. HEDS has implemented a program to exchange anonymous unit-record survey data among institutions that agree to participate. This program provides an unparalleled opportunity to conduct benchmarking analyses at a level of detail that is not now possible.
- Ad hoc listserv queries. The HEDS listserv is an important venue for informal institutional surveys on topics for which (a) a quick response is essential, or (b) there exists no standard data collection. Bucknell also takes advantage of similar opportunities for *ad hoc* queries of members of other educational associations, including the Annapolis Group and the Northeast Association of Deans.

5.3.6. External reviewers. The use of external reviewers also ensures a normative view of institutional practices and accomplishments. Reviewers are selected for their expertise and knowledge of practices at their own institution and at others that are peers of Bucknell. At regular intervals, all academic departments/programs and administrative offices undergo comprehensive self-studies and external reviews. Academic reviews are scheduled on a 10-year cycle. The nature and cycle of reviews for administrative units is more variable, and is determined by the senior staff member (Provost or vice president) heading each division. Some administrative department reviews are dictated by external accountabilities (NCAA review). Others are coordinated with institutional cycles (e.g., the review of institutional advancement programs in preparation for a new capital campaign). In an analogous manner, the faculty tenure and promotion system employs external reviewers to ensure a normative perspective in evaluating faculty quality.

5.4. Do we meet and exceed external standards and public expectations?

5.4.1. Regional accreditation. There are multiple sources of public expectations for the performance of higher education institutions. For purposes of this plan, we take the fourteen standards of Bucknell’s regional accrediting agency, the Middle States Commission on Higher Education—as a broad proxy for all public expectations:

1. Mission, Goals and Objectives
2. Planning, Resource Allocation, and Institutional Renewal
3. Institutional Resources
4. Leadership and Governance
5. Administration
6. Integrity
7. Institutional Assessment
-
8. Student Admissions
9. Student Support Services

10. Faculty
11. Educational Offerings
12. General Education
13. Related Educational Activities
14. Assessment of Student Learning

Bucknell submits an Institutional Profile to Middle States each year, participates in a decennial self-study and on-campus evaluation by a visiting team of peers, and prepares a substantive narrative report at the midpoint of the ten-year cycle.

- 5.4.2. Specialized accreditation. Regional accreditation standards are supplemented by the requirements of a series of specialized accreditors: the Accreditation Board for Engineering and Technology (ABET), the Computing Accreditation Commission (CAC), the National Association of Schools of Music (NASM), the Pennsylvania Department of Education, the National Collegiate Athletic Association (NCAA), and the American Chemical Society. The most recent reviews by each of these agencies have been very favorable. Individual departments bear primary responsibility for specialized accreditations, in collaboration with the appropriate deans or vice presidents. Both the overall assessments, and specific recommendations given by these reviews are used in informing planning and resource allocation decisions in the relevant departments.
- 5.4.3. Credentialing and licensure examinations. In some areas such as education and engineering, licensure examinations and other special credentialing processes document the University's success in educating students to meet specific disciplinary standards of external agencies. For students seeking professional degrees, LSAT, MCAT and GMAT scores provide an external measure of success. The Graduate Record Examination (GRE) provides a similar measure of the attainment of external standards for advanced academic degrees, but the numbers of students taking these exams in a given field in any year are too small to make definitive programmatic generalizations. Aggregated data is purchased from the Educational Testing Service at intervals of 3-5 years.
- 5.4.4. External reviews of academic and administrative departments. Academic departments are subject to a regular schedule of external review, employing experts who bring with them the perspectives of best practice and standards in the broader educational community (see Appendix 10 for schedule). Similar reviews occur for administrative departments, but on schedules that are appropriate to the requirements of individual administrative divisions.
- 5.4.5. Council for the Advancement of Standards in Higher Education (CAS). CAS provides a comprehensive series of standards for complex student

development outcomes (such as “appreciating diversity,” “intellectual growth,” and “realistic self-appraisal”). These FALDO’s (Frameworks for Assessing Learning and Development Outcomes) are useful resources for the faculty in developing internal expectations and assessments for University-wide educational goals. CAS also publishes “Professional Standards” for a wide variety of administrative functions (“service learning,” “housing and residential life,” “health promotion programs,” etc.). Appendices 8 and 9 identify the specific mission elements and administrative departments for which CAS standards are available.

- 5.4.6. Educational consortia outcomes projects. Bucknell is a member of the Annapolis Group, the Association of Independent Colleges and Universities of Pennsylvania, and other similar groups. Although these organizations are not accrediting bodies, they are comprised of colleges with missions and interests similar to Bucknell. In addition to being a valuable source of benchmarking data, these agencies occasionally undertake collaborative projects which assess the contributions that universities within them—private colleges in Pennsylvania for AICUP, highly selective liberal-arts colleges and Universities for the Annapolis group—make to their graduates and to society at large (Examples: AICUP Baccalaureate Outcomes survey, Annapolis Group’s “What matters in college,” etc). Other consortial outcomes studies are grant funded (e.g., Teagle Foundation collaboration). Whenever appropriate, Bucknell participates in these assessment efforts.
- 5.4.7. Public accountability expectations. Important institutional metrics of interest to college-bound high school students—such as graduation and retention rate (by ethnicity and gender, and for student athletes) and the availability of financial aid—are reported to the public in mandatory federal (IPEDS) and state reports. In addition, Bucknell currently makes a wide variety of institutional data available on the websites of the Admissions Office, Financial Aid Office, Career Developmental Center (job and graduate school placements), and the Office of Planning & Institutional Research, among others. Two prominent examples are: (a) the Common Data Set, which provides a wealth of public information about Bucknell’s enrollment, curriculum, and admissions requirements; and (b) the U-CAN accountability network.
- 5.4.8. Employer standards and expectations. The extent to which Bucknell graduates are meeting the needs and standards of employers can be assessed in part by the trends in the number of employers recruiting on campus, and the numbers of students they recruit. Although these numbers are also sensitive to economic trends, when supplemented with information from interviews with recruiters, they provide a good measure of the extent to which our graduates are ready for the demands of today’s workplace. The Career Development Center prepares a comprehensive

annual report on job and graduate school placement results six months after graduation.

- 5.4.9. Assessing the applicant pool. Indirect measures of the extent to which we are meeting public expectations are the trends in the size and quality of our inquiry/applicant/enrollee pools. By tracking these statistics, and conducting surveys to determine why students choose not to apply or to accept admission to Bucknell, we can evaluate the factors that affect the University's reputation in the marketplace and the perceptions of whether Bucknell is providing educational value for those who attend.
- 5.4.10. External grant support. Grant dollars raised from external agencies that evaluate the institution's record closely provide another indirect measure of the extent to which Bucknell is meeting public expectations. All grant proposals now require an assessment plan that will document our success in meeting grant objectives. Our record of success in conducting rigorous assessments of the use of grant funds, and demonstrating the impact of grant support, provides a measure of our credibility when seeking future grant support.
- 5.4.11. Community impact. The regional community has a variety of expectations relating to the University's contributions to the public good. At regular intervals, Bucknell compiles a public report to the community assessing the aggregate economic, social, and cultural impact of Bucknell to the region. Strengthening community relations is part of the larger strategic plan goal of Building Bridges. Where appropriate, Bucknell engages with the local community to assess how Bucknell can better collaborate with and contribute to the region.

Section 6. Accountability: administrative and faculty responsibilities

6.1. Institutional effectiveness

- 6.1.1. Board responsibility. The Board has fiduciary responsibilities to ensure the continuation of the institution in perpetuity, its faithfulness to historical principles as represented by the Charter, Bylaws and Mission of the institution, its success in achieving its Mission and goals, and its ongoing health and continuous improvement.
- 6.1.2. Senior administrative responsibility. Assessment responsibilities ultimately reside at the level of the president's cabinet. The Vice President for Finance and Administration is the senior officer responsible for the assessment of institutional effectiveness. Operational implementation of this responsibility is vested primarily with the director of the Office of Tactical Implementation, who maintains a database of all

tactical proposals and assures that all approved tactics have a business plan that includes an approved plan for assessing outcomes.

6.1.3. Responsibilities of administrative department heads

Each administrative department head will:

- Articulate specific unit goals.
- Make its goals available to all staff members within the unit.
- Describe how its unit goals contribute to the advancement of the University's strategic goals and mission.
- Develop an assessment plan that describes the methods that will be employed and the data that will be collected to determine whether the unit goals are being realized.
- Schedule specific times once or twice a year to collectively discuss unit assessment data and decide what changes, if any, will improve the effectiveness of the unit and the University.
- Document actions taken or decisions made as a result of the analysis of assessment data. Such documentation will be shared with the Office of Planning & Institutional Research as part of regular administrative department assessment reports.

6.2. Student educational goals

6.2.1. Senior administrative responsibilities. The Provost, who supervises both academic affairs and student affairs, is the senior officer responsible for the assessment of student educational outcomes. Operational implementation of this responsibility is vested primarily with the Assistant Vice President, Office of Planning and Institutional Research (OPIR). This office manages the survey program for assessing institutional-level student outcomes, and is the principal source of support for faculty assessment efforts. The deans of the two colleges provide primary administrative oversight of assessment activities within their respective colleges. Activities of the Teaching and Learning Center are coordinated closely with those of OPIR.

6.2.2. Faculty responsibilities.

6.2.2.1. Department chairs and program heads

Each department chair and program head will ensure that her/his unit:

- Articulates specific student learning goals for each course of study.

- Communicates student learning outcomes to current and prospective students.
- Identifies the connections between its outcomes and the appropriate higher-level goals of the college (e.g., General Education) and the University (*Bucknell University Educational Goals*, institutional strategic goals, and the University's Mission).
- Develops an assessment plan that describes the methods that it will employ and the data it will collect to determine whether student learning goals are being realized.
- Schedules a specific time once per year to discuss assessment data and collectively decide what changes, if any, will improve the quality of student learning.
- Documents changes in programs, curricula, pedagogy, faculty development, or assessment methods as a result of the analysis of student assessment data. Such documentation will be shared with the Assessment Committee as part of regular department/program assessment reports.

6.2.2.2. Individual faculty

For each course that is designated as the site for the embedded assessment of college or department/program learning objectives, members of the faculty are expected to:

- Articulate specific student learning outcomes.
- Demonstrate how course learning outcomes contribute to departmental/program goals for student learning and development
- Communicate expected course outcomes to students in the syllabus at the beginning of each course.
- Conduct course assessment activities to demonstrate whether the course outcomes are being achieved.

Faculty members are encouraged to apply the same standards to their other courses that are not designated for embedded assessments of higher-level learning goals.

6.2.2.3. Assessment Committee

Within the faculty governance structure, the Assessment Committee (a subcommittee of the Committee on Instruction) provides oversight on matters relating to the assessment of student educational goals as well as student development outcomes. Inclusion of the latter responsibility reflects both the objective of *The Plan for Bucknell* to integrate the residential

learning experience more effectively with the academic program, and the joint reporting of academic affairs and student affairs to the Office of the Provost. The membership of the Assessment Committee includes:

- Faculty representatives from:
 - Division of Arts & Humanities
 - Division of Social Sciences
 - Division of Natural Sciences and Mathematics
 - College of Engineering
- Director of the Writing Program (a faculty member)
- Coordinator of the Common Learning Agenda (general education)
- Representative from Library & Information Technology
- The Associate Dean of Engineering
- An Associate Dean from the College of Arts & Sciences
- The Dean of Students
- The Assistant Vice President for Planning & Institutional Research
- Student representative

The Assessment Committee is also responsible for the ongoing review of the implementation of this institutional assessment plan and the periodic review and revision of the plan as necessary.

6.2.2.4. The Common Learning Agenda (CLA) Coordinator. This rotating faculty position is responsible for the assessment of General Education outcomes within the College of Arts & Sciences. With the development of a new General Education program in Arts & Sciences, the title of the program and of this faculty position is likely to change.

Section 7. Assessment resources

7.1. Staffing.

The responsibilities of the Assistant VP, Planning and Institutional Research include assessments of educational and student development outcomes, and support for the faculty in their assessments at the department and individual course level. General oversight of educational assessment, and the periodic review and revision of this assessment plan, are responsibilities of the Faculty's Assessment Committee. The Teaching and Learning Center provides pedagogical support for the Faculty. The Office of Strategy Implementation is responsible for oversight of administrative assessments, rolling up assessments from the tactical level to the level of strategic goals.

With the creation of additional positions for divisional deans within the College of Arts & Sciences, the associate deans in both colleges effective January 2009 have also assumed additional responsibilities for facilitating the efforts of their departments and programs in implementing sustained programs of student outcomes assessment. They will promote and encourage departmental efforts, assist in directing faculty to existing assessment resources and in identifying emerging resource needs, and will serve as liaisons with the Office of Planning and Institutional Research.

7.2. Assessment budgets.

The Office of Planning and Institutional Research (OPIR) has a separate budget for the assessment of student learning outcomes at the institutional level. This budget is intended to cover the expenses of the regular annual institutional surveys of students upon entering Bucknell and at the end of their first year, seniors, and young alumni. Unbudgeted survey opportunities, such as participation in the NITLE survey of information literacy, are funded out of the contingency budget upon request to the VP Finance and Administration. Additional regular surveys are conducted by the Library and Information Technology, Student Life (CORE alcohol survey, residential life) and other departments, and funded from their respective budgets. A separate budget was created at the end of FY07-08 to provide summer grants for faculty to work on departmental assessment instruments. Resources related to assessment are also included in the budgets of the Teaching and Learning Center, the Common Learning Agenda Coordinator, and the offices of the deans of the two colleges.

7.3. Efficiency of resource utilization.

Institutional assessment surveys are administered on a rotating schedule that serves three purposes: (1) it minimizes the costs of data collection in dollars and staff time; (2) it maximizes the time and attention devoted to data analysis rather than data collection; (3) it aligns Bucknell's data collection with opportunities for data-sharing and benchmarking through the Higher Education Data Sharing Consortium (HEDS).

Mode of administration. Historically, the major institutional-level assessment surveys (entering first-year students, students at the end of the first year, and graduating seniors) have been administered in paper form in carefully structured, proctored setting. With participation rates as high as 97%, we have thus enjoyed the benefits of a census rather than a sample. It is time, however, to transition all of our surveys to a Web-based format to reduce expenses and staff time, and to provide quicker access to the data. Further, some of the surveys that we employ, particularly NSSE, will no longer provide benchmarking information or the full range of preliminary analyses unless the survey is administered via the Web. This is a significant change for Bucknell that will require careful coordination with

other Web-based surveys and the collaboration of multiple offices to encourage and provide incentives for student participation. Planning for this transition will begin in the Spring of 2009.

7.4. Teaching and Learning Center.

The TLC provides the following types of services for faculty: workshops and programs; mentoring; personal teaching consultation; classroom teaching consultation; faculty learning communities; and resources and materials.

Programs on a wide range of topics related to teaching and pedagogy include: (1) Friday noon sessions on pedagogy for experienced faculty; (2) sessions targeting new faculty every Wednesday and Thursday noon; and (3) a three-day workshop for new faculty in August.

Subject to the availability of resources, a pending tactic for the strategic plan proposes the addition of another full-time TLC staff person to assist departments and individual faculty in the development and implementation of their assessment plans.

7.5. Other Resources

- 7.5.1. Web site of Office of Planning and Institutional Research. This public space includes a variety of resources for the faculty:
 - Short instructional documents (“Assessment Updates”) on topics such as: developing assessment plans; embedded assessments; choosing assessment measures; and developing questionnaires.
 - Templates for assessment plans for academic and administrative departments.
 - Sample department assessment plans.
 - Links to other Web-based assessment resources.
- 7.5.2. Assessment consultations. The Asst. VP, Planning and Institutional Research consults individually with department chairs and program heads or their designees, on the development of departmental missions, effective statements of assessable learning outcomes, assessment plans, and specific assessment instruments.
- 7.5.3. Assessment Committee. The Assessment Committee provides a template for the use of department chairs and program heads in documenting departmental mission, learning goals, assessment plans, and the use of assessment data to effect changes in curricula, pedagogy, learning goals or assessments (see Appendix 7).
- 7.5.4. E-Portfolios. The division of Library and Information Technology is currently considering electronic portfolio software vendors to provide the

community with a tool that can facilitate the collection and storage of artifacts for various types of portfolio assessments.

Section 8. Assessment communications

8.1 Administrative commitment

Bucknell University's administration is committed to make available to faculty, staff and students institutional assessment data that is:

- Relevant and appropriate to the needs of each constituency;
- Supportive of each constituency's responsibility for continuous improvement;
- Consistent with legal and regulatory restrictions and the promises of confidentiality;
- Accompanied by contextual information that facilitates interpretation; and
- Capable of stimulating broad, reflective campus conversations on the quality and effectiveness of the work that we do at Bucknell.

8.1 Data-Sharing Policy

In support of these commitments, Bucknell is working to develop an institutional data-sharing policy that classifies all institutional metrics and assessment data in three levels of confidentiality:

- Public data. This is information that is already disclosed publicly, either because such disclosure is mandated (federal IPEDS and PA Department of Education data reports) or because Bucknell gives away such data voluntarily (Common Data Set, college guide surveys). Directory information for community members, as designated under FERPA regulations, is included in this category. Such data are made available to the general public via Bucknell's Web site.
- Institutional data. Information judged to be of importance for our campus community, but which we do not wish to share with outside parties, is made available to everyone in the campus community via the myBucknell portal. Many kinds of institutional assessment data are in this category, as is the tactics database described earlier.
- Privileged data. Some categories of information are shared with members of the campus community only on a "need to know" basis. Included in this category are: benchmarking data acquired through our two data-sharing consortia (HEDS, AICUP), each of which imposes specific limitations and confidentiality requirements; institutional survey data; and department-level assessment data, etc.
- Restricted data. Some categories of information are restricted legally or in other ways to only the senior officers of the institution or the administrative directors with immediate responsibility for such data. Included in this

category are personnel records, student records (other than Directory information), counseling records, and other such information.

8.2 Developing a Campus Culture of Assessment

The sharing of institutional assessment data is a necessary but not sufficient condition for developing a campus culture of assessment. In addition, we need to be encouraging and supporting opportunities for open, reflective discussion of such assessment data and the institutional practices that are responsible for our performance. In other words, the community must be considering not only what is happening in the achievement of student learning/development and institutional goals, but also why it is happening.

One of the means of stimulating these campus conversations is to bring to campus nationally reputed experts on assessment to work with subgroups of the community on specific institutional issues. The fall 2008 visit by George Kuh to discuss the relevance of NSSE data to the student life staff is an example of such facilitated, reflective assessment conversation. Bucknell plans to have a regular schedule of external assessment experts to sustain the momentum of these conversations.

Locally, the efforts of the Teaching and Learning Center mirror the work of such external experts by providing both the resources and venues for discussion about key issues in teaching and learning. The experts in these conversations are colleagues who have developed innovative pedagogies or assessments. Their work models behaviors that we seek to encourage among all faculty and staff.

Finally, and most importantly, the evolution of a culture of assessment requires the leadership and visible support of the institution's senior administration. Institutional assessment is a clear priority for both the President and Provost, who seek regular opportunities for supportive messages about assessment as part of the institution's overall plan for internal communications, and who have built assessment into the fabric of the University's strategic planning process by insisting that all tactical proposals be accompanied by well-conceived assessment plans.

Section 9. References cited

Volkwein, J. F. 2006. Navigating the Winds of Change: Coping with the Challenges of Assessment on Campus. Presentation at Middle States annual conference.

Miller and Leskes. 2005. *Levels of Assessment from the Student to the Institution*. AAC&U.

Section 10. Appendices

Appendix 1: Assessment Organizational Matrix: Student Learning Outcomes

Appendix 2: Assessment Organizational Matrix: Institutional Effectiveness

Appendix 3: Constituency Assessment Matrix: The Bucknell Community of Learners

Appendix 4: *The Plan for Bucknell*: Initiatives for Each Strategic Goal

Appendix 5: Institutional Assessment Survey Schedule

Appendix 6: Assessment Methods Used by Academic Departments and Programs

Appendix 7: Template for Academic Department and Program Assessment Reports

Appendix 8: Bucknell Administrative Departments for which Standards are Available from the Council for the Advancement of Standards in Higher Education (CAS)

Appendix 9: Bucknell Mission Elements for which Frameworks for Assessing Learning and Development Outcomes (FALDO's) are available from the Council for the Advancement of Standards in Higher Education (CAS)

Appendix 10: External Review Schedule for Academic Departments and Programs in the College of Arts & Sciences.

Appendix 11: Bucknell University's Baldrige/IHE Model for Institutional Quality and Effectiveness

Appendix 1.

Assessment Organizational Matrix: Student Learning Outcomes

	Are We Meeting Our Goals?	Are We Continuing to Improve?	Do We Compare Favorably to Others?	Do We Meet or Exceed External Standards & Public Expectations?
Level 1: Individually, within Courses	Instructor-assigned grades	Formative course evaluation		
Level 2: Individually, across Courses	Progression in major; general education; capstones.	Advising; longitudinal tracking of different cohorts.		Regional and specialized accreditor standards; CAS standards.
Level 3: Collectively, Within Courses	Achievement of class outcomes w/ embedded assessments, standardized tests, common assignments in multi-section courses.	Summative evaluation of successive cohorts.	Comparisons with other sections in multi-section courses.	Regional and specialized accreditor standards; CAS standards.
Level 4: Collectively, Within Programs & Majors	Assessments of learning goals for major; departmental contribution to curriculum and to University goals.	Longitudinal assessment of program outcomes over time.		Regional and specialized accreditor standards; CAS standards.
Level 5: Collectively in Each College & in Student Life	Assessment of college and student life learning and development goals.	Longitudinal tracking by deans of their respective learning & development goals.	Institutional survey data (CIRP, YFCY, CSS, NSSE, BCSSE, etc.)	Regional and specialized accreditor standards; CAS standards.
Level 6: Collectively, for Whole Institution	Assessment of learning goals for all students, including student learning goals in Mission & strategic plan.	Longitudinal tracking of cohort data; value-added comparisons vs. input data.	Benchmarking institutional survey data (CIRP, YFCY, CSS, NSSE, BCSSE)	Regional and specialized accreditor standards; CAS standards.

Appendix 2.

Assessment Organizational Matrix: Institutional Effectiveness

	Are We Meeting Our Goals?	Are We Continuing to Improve?	Do We Compare Favorably to Others?	Do We Meet or Exceed External Standards & Public Expectations?
Mission	General metrics for health of institution	Longitudinal tracking of core metrics	Benchmarking metrics against peer groups.	Regional and specialized accreditor and CAS standards
Vision	Performance metrics	Longitudinal tracking	Benchmarking peers	Regional and specialized accreditor and CAS standards
Strategic Plan	Performance metrics	Longitudinal tracking	Benchmarking peers	Regional and specialized accreditor and CAS standards
Unit Level	Unit performance metrics; periodic external reviews	Longitudinal tracking	Benchmarking peers	Regional and specialized accreditor and CAS standards
Governance System	Faculty self- and external reviews	Longitudinal tracking	Benchmarking peer practices	Regional and specialized accreditor and CAS standards
Board	Board self- and external review	Longitudinal tracking	Benchmarking peer practices	Regional and specialized accreditor and CAS standards

Appendix 3. Constituency Assessment Matrix: The Bucknell Community of Learners

Group	Internal Assessors					External Assessors			
	Current Students	Faculty	Staff	Senior Administration	Trustees	Alumni and Parents	External Reviewers	Accreditors	Employers & Graduate Schools
Students	Peer-to-peer evaluation in particular classes, multiple times per year; peer tutors	Grades (individual and collective, multiple times/year); formative classroom assessment; annual dept assessment plans	Student life staff; coaches; club advisers; Writing Center staff.	Assessment of institution-wide student outcomes by OPIR; college-wide assessments (e.g., ABET)					Career Development Center and department annual surveys; GRE, MCAT, LSAT; Licensure and credentialing exams.
Faculty and Dept.	Student evaluations of teaching; and input at promotion & tenure reviews	Pre-tenure reviews (3); yearly at dept. level; class lecture audits; merit/tenure recommendations		Tenure and promotion review (cyclical); merit review (annual); curricular, faculty development & summer research grants; course releases.	Approval of promotion and tenure recommendations and sabbaticals		Ongoing external reviews of tenure files, peer-reviewed publications, grants, conference papers; external reviewers of departments and programs	MSA decennial and 5-year reviews; specialized accretor reviews (ABET, CSAB, NASM, PA Dept. of Ed., NCAA, etc.)	
Staff and Admin Units	Planned: satisfaction surveys	Planned: satisfaction surveys	Participation in periodic dept reviews and in planned unit satisfaction surveys	Performance management system; merit reviews; periodic department reviews			External reviewers for departmental reviews	MSA decennial and 5-year reviews; specialized accretor reviews (ABET, CSAB, NASM, PA Dept. of Ed., NCAA, etc.)	
Senior Admin.	Planned: satisfaction surveys	Planned: satisfaction surveys	Support Staff & Administrative Forum; Admin Personnel Cmte; Planned: satisfaction surveys.		Annual review of President; Board review of institutional performance metrics 2 times per year	Alumni and development office surveys; annual participation rates as volunteers, donors; Web input	(See Accreditors column)	MSA decennial and 5-year reviews; specialized accretor reviews (ABET, CSAB, NASM, PA Dept. of Ed., NCAA, etc.)	
Trustees					Board self-review (episodic); annual review of members by Trustee Review Committee		Consultants for external review	MSA decennial and 5-year reviews; specialized accretor reviews (ABET, CSAB, NASM, PA Dept. of Ed., NCAA, etc.)	

Appendix 4.

The Plan for Bucknell: **Initiatives for Each Strategic Goal**

- **Strengthen the academic core:** Ensure that a Bucknell education is challenging and engaging, with openness to new idea and a culture of innovation.
 - Strengthen the individualized student learning experience.
 - Ensure the relevance of the University’s curricula and identify opportunities for innovation, cross-disciplinary studies, and creative expression within a student-centered learning environment.
 - Develop areas of programmatic excellence that build on Bucknell’s current and emerging strengths in liberal arts and professional programs.
 - Increase resources for faculty to engage in new developments in their fields of scholarship, instructional technology, and pedagogy.
 - Encourage and support student participation in academic activities representing high levels of challenge, engagement, and close interaction with faculty.
- **Deepen the residential learning experience:** Provide an integrated, close-knit learning and living experience that complements the academic program and promotes personal growth and development, and civic and ethical responsibility.
 - Encourage student to explore diverse and challenging curricula and campus and community activities.
 - Create a student affairs program that promotes the balanced integration of curricular and co-curricular programs.
 - Structure the programming of residence halls and other living spaces to support Bucknell’s myriad curricular and co-curricular programs.
 - Integrate Bucknell’s athletic and recreation program within the University’s residential learning and living environment.
- **Enhance diversity:** Commit to diversity in all its forms within a civil and supportive environment of open exchange and prepare Bucknell graduates to live and work in a globally integrated and intercultural world.
 - Further diversify the student body, faculty, staff, and Board of Trustees and enhance the campus climate for diversity.
 - Expand Bucknell’s pool of prospective students and attract high-quality achievers who exemplify our goal of diversity in all its forms.
 - Establish mutually supportive working partnerships with other educational institutions with significantly diverse student populations.
 - Support developments in curriculum, pedagogy, and scholarship that promote an academic atmosphere reflecting Bucknell’s commitment to diversity.
- **Build bridges:** Bring the world to Bucknell—through visiting scholars, international students and alumni, guest speakers, international focus semesters, and electronic communications—and bring Bucknell to the world through strategic partnerships and community engagement activities as well as opportunities for off-campus study and faculty research.
 - Enhance meaningful student programs for off-campus study and creative learning.

- Provide diverse opportunities for students to promote social change through their interactions in the broader community.
 - Establish distinctive curricular and co-curricular opportunities for students, alumni, parents, and friends to maintain ongoing and meaningful relationships with Bucknell.
 - Engage Lewisburg and the region in collaborative partnerships and enhance productive relationships with governmental agencies.
 - Enhance opportunities for students and alumni to make thoughtful and informed career decisions and integrate career goals with their academic and life experiences.
 - Advance Bucknell's strength as an employer of choice locally, regionally, and nationally.
- **Secure our financial future:** Secure resources necessary to engage new opportunities, lessen dependence on tuition, and ensure our financial future.
- Broaden the support base, especially alumni participation, to increase endowment per student.
 - Develop a culture of philanthropy among all stakeholders, including current students.
 - Commit to a comprehensive fee and financial aid plan that preserves access for students from diverse socio-economic circumstances.
 - Address the impact of major cost drivers to restrain budget growth and ensure future efficiency.
 - Link the capital and operational budgets to *The Plan for Bucknell*.
 - Revise the Campus Master Plan to reflect Bucknell's changing needs.

Appendix 5.

Institutional Assessment Survey Schedule

Constituency/ Instrument	FY07-08		FY08-09		FY09-10		FY10-11		FY11-12	
	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
First-Year Students										
BCSSE	X						X			
NSSE		X						X		
CIRP (HERI)			X		X				X	
YFCY (HERI)				X		X				X
Sophomores						TBD				TBD
Seniors										
NSSE		X						X		
Career Placement		X		X		X		X		X
Student Activities		X		X		X		X		X
CSS (HERI)				X		X				X
Faculty										
HERI Survey	X						X			
Short topical climate survey					TBD		TBD		TBD	
Staff										
Short topical climate survey					TBD		TBD		YBD	
Alumni										
Baccalaureate Outcomes (AICUP)						X				
BU Alumni Survey							X	X	X	X
Diversity										
CHAS					X					
Information Literacy										
RPS			X		X		X		X	

KEY

BCSSE	Beginning College Survey of Student Engagement
NSSE	National Survey of Student Engagement
CIRP	Cooperative Institutional Research Program
CSS	College Student Survey
TBD	To be developed
HERI	Higher Education Research Institute (UCLA)
AICUP	Association of Independent Colleges & Universities of Pennsylvania
CHAS	Consortium for High Achievement and Success
RPS	Research Practices Survey

Appendix 6.

Assessment Methodologies Employed by Academic Departments and Programs

Department/ Program	Course Embedded Assessments							Surveys Of:							
	In-Class exams/ Papers/ Labs	Student Portfolios/ Culminating Project	Evaluated Performance/ Presentation	Grad School & Job Placement Rates	Related co- curricular involvement	Writing Assignment	Cooperative Learning Activity	Current Student Surveys	Alumni Surveys	Employer & Recruiter Surveys	Internship Supervisor Surveys	Standardized/ Certification Exam	Focus Groups & Exit Interviews	Institutional Data	Descriptive Data
College of Arts & Sciences															
Animal Behavior						X	X								
Art/ Art History	X	X	X			X							X		X
Biology	X					X		X						X	
Cell Biology/ Biochemistry						X					X				
Chemistry	X					X		X			X				
Classics	X					X		X				X			X
Comparative Humanities	X					X									
East Asian Studies	X							X				X			
Economics	X					X		X				X			
Education	X	X	X			X	X			X	X				
English	X					X		X	X						X
Environmental Studies	X			X			X	X				X			
For. Language: French	X		X			X					X		X		X
For. Language: German	X		X					X							
For Language: Italian	X		X												
For Language: Russian Studies	X							X							X
Geography	X					X									
Geology	X		X												
History															X
International Relations	X				X	X	X	X	X			X			X
Latin American Studies						X									X
Management *	X		X	X	X	X	X	X	X	X	X	X			X
Mathematics	X											X			X
Music	X	X	X					X							X
Philosophy	X					X						X			X
Physics	X			X		X		X				X			X
Political Science	X			X		X		X		X					X
Psychology	X			X	X		X	X			X				X
Religion	X					X						X			X
Sociology/ Anthropology								X				X			X
Spanish	X					X						X			X
Theatre and Dance	X	X	X	X		X		X				X			X
Women's and Gender Studies								X				X			X
College of Engineering															
Biomedical Eng															
Civil & Environmental															
Chemical Eng															
Computer Eng															
Electrical Eng															
Mechanical Eng															

Appendix 7

Template for Academic Department and Program Assessment Reports

Department or Program _____
Assessment Contact Person _____
Date _____

Bucknell University Educational Outcomes Assessment Report Template

This template is designed to help you (1) update your department's assessment plan, and (2) report to the Assessment Committee on the changes that you have implemented based on assessment results. The report should demonstrate that the department is doing three things:

1. Asking meaningful questions about student learning;
2. Collecting data to answer those questions; and
3. Using that data to improve the quality of the education that students in your department receive.

The primary focus of this template is the major field, but this template also provides a starting point for organizing your department's thinking about other areas within your department—minors, service courses, advising, etc.

<p>Departmental Mission</p>	<p>Please confirm your department’s current mission. This should be consistent with the text in the Bucknell Catalogue, and should state the department’s general purpose in a few sentences. Why does it exist, and for whom?</p> <p>(Please enter your departmental mission here. The cell will expand to fit the text that you enter.)</p>
<p>Departmental Goals</p>	<p>Please confirm the current goals of the department in the context of its mission. Goals are general statements of the long-term intended purposes of an education in the department. Because of their generality, they are typically assessable only through their component learning outcomes.</p> <p>(Please enter you departmental goals here. The cell will expand to fit the text that you enter.)</p>
<p>Departmental Learning Outcomes</p>	<p>Please list all of the educational outcomes that your department seeks.</p> <p>How many educational outcomes should a department have? There is no fixed rule. The correct number for your department depends on what coherent set of expectations you have for your students.</p> <p>If you have more than four departmental outcomes, and are not now assessing all of them, please identify the 3 or 4 outcomes that are the current focus of your assessment program.</p> <p>Outcomes are more specific than goals, and are framed carefully in language that makes them assessable. There are three types of outcomes:</p> <p>(1) Cognitive: What content will students in the major know upon graduation? (2) Affective: What will students value and what attitudes will they possess upon graduation? (3) Skills: What will students be able to do (intellectually or practically) upon graduation?</p> <p>NOTES:</p> <p>(1) By the time of the next on-campus accreditation review in 2013, you must be able to demonstrate to Middle States that you are assessing all of your department’s educational outcomes. For the forthcoming interim report to Middle States in June 2009, it is acceptable to be focusing on fewer outcomes as a way of make progress in the implementation of your assessment plan.</p> <p>(2) For the interim report in June 2009, Middle States expects student</p>

	<p>learning outcomes to be publicly available to all current and prospective students of the department. We plan to provide links on the Bucknell website to the list of learning outcomes of each department and program.</p>
	<p>(Please enter here <u>all</u> of your departmental learning outcomes, and indicate which outcomes you are currently assessing. The cell will expand to fit the text that you enter.)</p>

<p>Assessment Techniques</p>	<p>Your choice of assessment techniques should be guided by one overriding question:</p> <p><i>What are the things that we would really like to know about how students learn in our department?</i></p> <p>For EACH of the learning outcomes that you are currently assessing, describe the different assessment techniques (plural) that you are employing.</p> <p>The most persuasive evidence of student achievement comes from:</p> <ol style="list-style-type: none"> (1) The use of multiple measures for each outcome (2) Including at least one direct measure for each outcome (direct measures focus on actual work products or performance). <p>Direct measures may also be combined with indirect measures (e.g., asking students about their accomplishments).</p> <p>Assessment techniques may include quantitative as well as qualitative measures (focus groups, interview, etc.).</p>
	<p>(Please describe here the assessments that you are using for Learning Outcome #1. The cell will expand to fill the text that you enter.)</p>
	<p>(Please describe here the assessments that you are using for Learning Outcome #2. The cell will expand to fill the text that you enter.)</p>
	<p>(Please describe here the assessments that you are using for Learning Outcome #3. The cell will expand to fill the text that you enter.)</p>
	<p>(Please describe here the assessments that you are using for Learning Outcome #4. The cell will expand to fill the text that you enter.) (Insert rows for additional outcomes.)</p>
<p>Using</p>	<p>For EACH learning outcome that is being assessed:</p>

<p>Assessment Data</p>	<p>(1) What has your department learned from the data it has collected (you do not need to provide the actual data);</p> <p>(2) What actions have actually been taken or are planned;</p> <p>(3) What have been the results of those actions (your evaluation of the effectiveness of the changes)?</p> <p>Some possible actions include:</p> <p>(a) Dissemination of the results of assessment to students or other stakeholders</p> <p>(b) Changes in pedagogy</p> <p>(c) Modifications of the curriculum</p> <p>(d) Testing of hypotheses with additional assessments</p> <p>(e) Revision of the department’s assessment plan</p> <p>(f) Changes in advising</p> <p>(g) Reallocation of resources</p> <p>(h) Revision of departmental goals to make them more coherent with institutional strategic goals or college- or university-wide learning goals.</p> <p>(i) Modification of service courses to prepare students better for follow-up courses in their major.</p> <p>NOTE: The responses that you provide below are examples of how departments have used the results of assessment, and may be included in accreditation reports to Middle States.</p> <p>(For Learning Outcome #1, please describe here the actions taken based on assessment data, and the results of those actions. The cell will expand to fill the text that you enter.)</p> <p>(For Learning Outcome #2, please describe here the actions taken based on assessment data, and the results of those actions. The cell will expand to fill the text that you enter.)</p> <p>(For Learning Outcome #3, please describe here the actions taken based on assessment data, and the results of those actions. The cell will expand to fill the text that you enter.)</p> <p>(For Learning Outcome #4, please describe here the actions taken based on assessment data, and the results of those actions. The cell will expand to fill the text that you enter.) (Insert rows for additional outcomes.)</p>
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Appendix 8

Bucknell Administrative Departments and Available Standards from Council for Advancement of Standards in Higher Education (CAS)

Academic Advising	CAS 01	Multicultural Student Svcs.	CAS 25
Administrative Services		Parents Fund/Family Programs	
Admissions	CAS 02	Planning & Institutional Research	CAS 27
Affirmative Action		Pre-Health Professions	
Alumni Relations		President's Office	
Annual Fund		Principal Gifts	
Arts & Sciences, Office of Dean		Procurement Services	
Athletics & Recreation	CAS 28	Provost	
Bookstore		Psychological Services	CAS 13
Bucknell Press		Public Safety	
Bucknellian Adviser		Registrar	CAS 29
Campaign Administration		Reservations/Info/ Conference Services	CAS 05,12
Campus Activities/Programs	CAS 04	Residential Colleges	
Campus Box Office		Safety Services	
Career Development Center	CAS 07,22	Samek Art Gallery	
Chaplains/Religious Life	CAS 06	SBDC	
Communications		Service Learning	CAS 30
Community Health Promotion	CAS 19	Stadler Center for Poetry	
Constituent Relations		Strategy Implementation	
Corporate/Foundation Relations		Student Health Services	CAS 08
Craft Center		Teaching & Learning Ctr.	
Dean of Students Office		Weis Center	
Development/Alumni Relations		West Branch Publishing	
Enrollment Management		Women's Resource Center	CAS 34
External Relations		Writing Center	
Facilities		Honor Societies	CAS 09
Finance & Administration		Greek Life	CAS 18
Finance		Orientation	CAS 26
Financial Aid	CAS 17	Student Conduct	CAS 31
General Counsel		Student Leadership	CAS 32
Gift Planning		Disability Support Svcs.	CAS 14
Golf Club		Drug & Alcohol Education	CAS 03
Graduate Studies			
Housing & Residential Life	CAS 20		
Human Resources			
Library and Information Technology			
International Education	CAS 16		
International Student Services			
Lesbian/Gay/Bisexual/Trans- gender Awareness	CAS 24		
Major Gifts			

Appendix 9

Student Goals in Bucknell's Mission and Relevant "Frameworks for Assessment Learning & Development Outcomes" (FALDO's) From the Council for Advancement of Standards in Higher Education (CAS)

Mission Element	FALDO's
Intellectual Maturity	"Intellectual Growth"
Continued Intellectual Exploration	
Critical Thinking	
Creativity and Imagination	
Strong Leadership	"Leadership Development"
Personal Conviction & Strength of Character	"Clarified Values," "Enhanced Self-Esteem," "Independence"
Understand Differences in Cultural Perspectives	"Appreciating Diversity"

Appendix 10

College of Arts and Sciences Schedule for External Review of Departments/ Programs (revised 10/08)

Academic Year	Department/ Program
2003-04	MIDDLE STATES ACCREDITATION REVIEW
2004-05	Economics (90) Environmental Studies (93) Music (92)
2005-06	Geography (93)
2006-07	Women's and Gender Studies Animal Behavior * (93) East Asian Studies (94)
2007-08	International Relations (96) Education* (96)
2008-09	English* (97)
2009-10	Mathematics*(98) Theatre and Dance (97) Philosophy (97) Modern Languages/Spanish (98)
2010-11	Biology (99) Classics (99) Comparative Humanities
2011-12	Psychology*(00) Religion (00) Chemistry*(00) Physics (00)
2012-13	Political Science (01) Sociology/Anthropology (01) Geology (01) Writing Center (01)
2013-14	Art and Art History (02) History (02) Cell Biology/Biochemistry (02)

Notes: Previous review dates in parentheses. * Denotes departments with graduate programs which will be evaluated at the same time as the undergraduate programs. College of Engineering and Music programs are reviewed under separate processes.

Appendix 11

