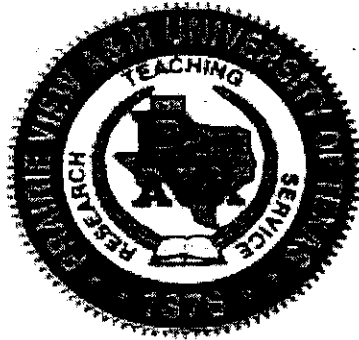


**PRAIRIE VIEW A&M UNIVERSITY**  
**CORE CURRICULUM EVALUATION REPORT AND PLAN**



**PRESENTED TO**

**THE TEXAS A&M UNIVERSITY SYSTEM**

**FOR SUBMISSION TO**

**TEXAS HIGHER EDUCATION COORDINATING BOARD**

**OCTOBER 1, 2004**

# CORE CURRICULUM EVALUATION REPORT AND PLAN

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## PREFACE

### THE CORE CURRICULUM: THE MISSION AS FRAMEWORK

Undergirding the core curriculum at Prairie View A&M University are the major tenets of its mission. It is a land-grant university committed to teaching, research and service. A more salient feature is the commitment to provide a high quality education to students from diverse ethnic and socio-economic backgrounds. While the University admits and graduates an impressive number of students whose parents, grandparents and/or siblings are college educated professionals with solidly middle class life styles, it is important to note that the vast majority of the students come from low income families. Annual incomes below \$15K are not uncommon. In fact, forty percent come from families whose annual income is below \$20K. By contrast, beginning salaries of 2002-2003 bachelor's degree recipients ranged from \$30K to \$42K. Some graduates in nursing, engineering, computer science and accounting earn initial salaries of over \$60K. Clearly, the University raises expectations and produces success.

Containing the major lower level liberal arts courses taken by all students, the core or general education component of the undergraduate curriculum may very well be the determinant of how well graduates perform in the out years. Will they be promotable? Will they qualify to lead in education, the arts, business, nursing, engineering, architecture, biological sciences, computer engineering, drama, music, or other areas? In the March/April 2003 issue of *Trusteeship*, William G. Durden posited the following relative to the significance of liberal learning for persons other than the wealthy:

Liberal education is not defined by practicality or the immediacy of occupational goals--which would do little to change prejudice, bias or authority. But a liberal education is ultimately useful; it gives students the strong sense of self and habits of mind and action to become leaders.

And . . . minority, first-generation, immigrant otherwise disenfranchised students most desperately need an educational environment that builds identity and gives them the confidence even to attempt leadership (p.26)

The extent to which the undergraduate degree recipients are successful academically, personally, and socially will likely impact how their siblings, parents/guardians and family in general will be able to advance educationally and cycle out of circumstances that reduce life chances. Attachment 1 is the Core Curriculum Table for Prairie View A&M University. It displays the core courses by core component, exemplary outcomes, and Texas Common Course Numbering System (TCCNS).

## **I. CORE CURRICULUM MATRIX**

See attachment 1, Core Curriculum by Exemplary Outcomes, and Texas Common Course Numbering Systems.

## **II. PURPOSE AND SUBSTANCE**

The University's (42) SCH general education curriculum is designed to provide students a foundation in the broad knowledge and skills which will enhance study in the major areas; to prepare students to change and grow with their own needs and the needs of society; and to enable students to function as contributing members of a democratic society and of the global community. The underlying assumption embodied in the curriculum is that specialized knowledge changes, but the process of thought and the ability to apply the thought in a variety of contexts continues throughout one's life.

A solid and meaningful general education curriculum should consist of more than basic courses taken during the freshman and sophomore years. For example, the humanities and social science requirements may extend throughout the undergraduate experience; thereby, enriching coursework in the junior and senior years. Such an approach provides for the development of additional competencies essential to the optimal development of the individual.

In planning course content and selecting sequences, core curriculum committees at the University have subscribed to James L. Ratliff's concept of coherence, the deliberate sequencing of coursework leading to useful and long-lasting skills and insights about the world (Gaff and Ratliff, *Handbook of the Undergraduate Curriculum.*)

### III. ANALYSIS OF CORE CURRICULUM REQUIREMENTS

At Prairie View A&M University, there are general education course requirements in the basic (42) semester credit hour transferable core curriculum as well as in school/college core requirements. The basic core includes the following: nine (9) Semester Credit Hours (SCH) in communications, (6) SCH of English and (3) SCH of speech); (3) SCH of mathematics; (6) SCH of natural science; (6) SCH of humanities including (3) SCH from visual and performing arts; (15) SCH in social and behavioral sciences; and (3) SCH in computing.

Upon entry, over three-fifths of the first time in college freshmen are in need of academic strengthening in the basic skill areas as measured by the state mandated Texas Higher Education Assessment (THEA) formerly the Texas Academic Skills Program (TASP). . Since 1998, when the University established a very focused, well defined developmental education program, the academic strengthening of its first-time in college freshmen has increased their retention rate from 42% in 1996 to 64% in 2002. In short, the University cannot assume college readiness at the point that students begin taking courses in the core curriculum. For most, some remediation is required in reading, writing, and mathematics. While a quick review of the results on the Educational Testing Service (ETS) General Education Battery does not reveal major gains from the freshman to the junior year, there is improvement at a level that increases the student's chances of remaining in college. Because it is important to extend the time for arrival at an acceptable level of proficiency, the University began directing faculty to identify in their courses core content that could be

reinforced or taught through directed study, referrals to tutorials, or other methods. A sample standard format for the course syllabus is shown in Attachment 3 of this document.

Given the University's strong focus upon engineering, nursing, educator preparation, business, and pre-professional science and social science, students' gaining proficiency in the quantitative and verbal skills becomes paramount to their quest to remain in the pipeline leading to degrees in those fields. An example of core course strengthening is the restructuring of the so-called gate keeping courses in mathematics, chemistry, and physics as part of a \$3.8 million National Science Foundation grant to improve undergraduate education. Expected outcomes are reiterated throughout the program by students and faculty and time is devoted to closing gaps in learning achievement when noted and not months into a course.

**Communications.** Among the intellectual skills, the capability to express one's thoughts, feelings, aspirations, attitudes, and aptitudes is undoubtedly the most important of the core competencies. Many students who attend the University have been in communities and schools where mastery of standard conventions of linguistic expression were either devalued or not associated with success in the professional arena. While only (6) SCH in this area are required by state statute, an additional (3) SCH in speech were selected from chat II of Chapter 5 to increase the total requirement to (9) SCH due to the emphasis the faculty believed essential to place on educating students to function effectively in a society that values mastery of standard grammatical construction; utilization of logical and critical thinking skills; and clear, concise sending of oral messages that effectively inform, persuade, describe, or illustrate. To augment the curriculum, the University promotes student engagement in organizations, attendance at general University performances/events, and

enrollment in paid and unpaid internship/cooperative education experiences. The University College, the College of Arts and Sciences, and the College of Business have staffed writing laboratories. There is a chapter of Toastmaster's International, a debate/forensic team, the Honda All Star Competition, essay contests and other venues for student practice of communication skills. While the popular media competes firmly with the standard conventions taught in the college setting, students evidence an understanding of the advantages of being bi-dialectic, thus using language appropriate to the setting or context.

**Mathematics.** Computational adeptness is fundamental to the understanding of abstract reasoning and problem solving. Given the strong science and engineering oriented curriculum at the University, it is important to help each student to build a solid foundation of numeracy skills needed in the conduct of personal affairs as well as advanced mathematical skills needed for selected major fields of study. According to Texas Higher Education Assessment (THEA) data for students entering the University, over sixty-five percent of those requiring remediation, require it in mathematics. So severe is the problem that multiple levels of developmental math courses are offered and tutorials are made available in virtually every school/college. The shortage of certified mathematics teachers in the K-12 classroom has been cited as a primary reason for such poorly prepared students who possess ability but lack achievement in mathematics. At Prairie View A&M University, several faculty have become near legendary for their success in developing the capability through the use of graphing calculators, web-assisted course delivery, early and late day tutorials, software programs such as MAPLE and personal motivation strategies to build competence and diminish students' fear of mathematics. In one instance, a faculty member

has created a full video program that begins with basic mathematics and extends through differential equations.

**Natural Sciences.** Trial and error, mistake and correction are inherent in the learning of the scientific method. To grasp the nature of proofs, the evaluation of scientific thought, the interrelatedness of ideas, the formulating of hypothesis, and the uses of generalizations is to develop one's critical thinking faculties fully. It is desirable for students to experience both a lecture (theory) and laboratory (practice) in their core science courses. Due to limited facilities and faculty, the requirement was reduced to (6) SCH rather than the longstanding (8) SCH. Even so, courses are designed to provide students with some experiential learning via simulation and other methods made possible by technology. Most students enroll in biology or physical science, areas with which they are most familiar.

**Humanities.** (including visual and performing arts): Whether in literature, cultural studies, or the arts, the humanities are viewed as instruments of perspective, balance, reflection, and reasoned assessment of human capability, motivation, and range of behavior. One might add flexibility as a defining characteristic of the lessons taught by the humanities. As a historically black university largely populated by low-income, underserved populations, coping mechanisms for many have been gleaned from exposure to poetry, music, drama, and other forms of reflection and action that helped to analyze and interpret the meaning of life's perils and promises. Even so, too few students have an understanding of the arts and humanities representing other cultures. This is yet another area in which campus life augments the core curriculum for it is enriched by a world class thespian troupe, the Charles Gilpin Players; highly respected musical ensembles such as the Marian Anderson String Quartet which is in residence at both Prairie View A&M University and Texas A&M

University; a student literary journal, and a vast array of cultural events in which students may participate to broaden their perspective.

**Social and Behavioral Sciences.** Understanding change and becoming acclimated to adapting to or rejecting it for clearly defensible reasons are at the heart of a social and behavioral science education. It is important that students at Prairie View A&M University learn to differentiate between basic principles of free enterprise and comprehend the components of competition as well as the rules of the individual and government. Without exception, all professions and communities revolve around a set of beliefs, values, and attitudes. This must be understood if the graduate is to contribute substantively to a diverse society where rights, protections, and responsibilities are to be not only understood but respected. Evidence of students' maturation in this component of the core curriculum is the resurgence of interest in voting in local, state, and national elections, as well as, interest in pursuing careers in public service. In another area, student governance, it is apparent that decades of general apathy about leadership and special training for it has shown signs of waning. This has been most notable during the past three years. Over two hundred students (200) are signing up for Panther Advisor Leaders (PALS) training each summer. These young people become leading campus and community change agents.

**Computing.** A contemporary tool of learning, conducting work, and entertainment has impacted all of human life and will have an even greater impact in future years. Effective performance related to each of the other areas of the core curriculum—namely, communication, mathematics, natural science, humanities, and social and behavioral science—depends upon one's possessing adequate computing skills. During the 1997-2002 review cycle, the University piloted the "laptop university" concept starting in the School of

Architecture and, to a limited extent, expanded to the Colleges of Business and Nursing. Despite the rapid acceleration in student and faculty computing skills, costs to students were estimated to be too great for absorption by financial aid awards or by parents so, the University did not proceed with the plan to require all students to purchase laptops. Fortunately, as the cost per laptop continues to decline, more and more students are arriving in college with their own. Additionally, there are more than thirty laboratories on campus. Those in the library, schools and colleges, and the Memorial Student Center are available to students. Over sixty percent of the undergraduates reside on campus and some new residence halls will have access to the internet without using a dial-up feature in the Spring of 2005. Based upon assessment of usage, a full internet café featuring laptops that can be checked out for use anywhere in the five-story library will open mid Fall semester 2004.

While the computing requirement was instituted at a time when students were arriving in college with limited skills, the University has not yet elected to eliminate the requirement. It will phase in a certification of proficiency program that will allow students to “place out” if their entering computing proficiency is rated satisfactory or above.

#### **IV. EVALUATION PROCESS AND PROCEDURES**

Targeted curriculum development and review are initiated by the President, managed by the Provost and Senior Vice President for Academic and Student Affairs as well as the Deans. Actual design and shaping of the curriculum’s character is the responsibility of faculty. There is a college-wide curriculum committee supported by departmental/division committees who periodically initiate, with input from students and publics served, a review of the institutional mission, the purposes and performance of each degree program and the

core curriculum. Changes in design and content are recommended depending upon the focus of the review.

Discussions target questions that follow:

- What do students most need to know in order to qualify for college graduation, and the demands and expectations they will have as professionals, citizens, parents, community contributors, leaders, et cetera?
- What mix of courses and experiences can reasonably be expected to develop the requisite knowledge, skills, habits of mind, and perspectives essential to quality living?
- What are the general university core requirements at benchmark institutions and how do they compare with those at Prairie View A&M University?
- What additional (extended) core requirements are there for students who plan to major in degree programs in a specific department?
- How do those additional (extended) core requirements compare with those required in the same degree program at the benchmark University?

As shown in Attachment 2, the curriculum review process, adopted in 1998, features college-wide curriculum committees that synthesize the work of departmental committees; enlarge the conversation about design, outcomes, and methodologies; link input to that being generated across the University; and contribute to the recommendations to be forwarded to the University Academic Council and, finally, to the Provost who will make recommendations to the President.

## **V. UTILIZATION OF RESULTS TO IMPROVE THE CORE CURRICULUM**

In 2001-2003, a broad cross section of faculty, staff, and administrators discussed making radical changes in the core curriculum requirements, the distribution and the delivery methods. Following instructional level administrative changes, the decision was made to postpone major changes in the core curriculum until the new administration was in place.

Since Fall 2003, attention has focused more on how instruction in core courses is being delivered, and how effectively academic enhancement programs are performing.

As indicated in Section III, analysis of the primary methods of evaluating the core curriculum have been the following:

1. Administration of the General Education Battery published by the Educational Testing Service (ETS).
2. Comparison of the University's core requirements with those of benchmark universities.
3. Encouragement of faculty to reinforce, as appropriate, the development of knowledge, skills, and habits of mind inherent in the core curriculum.  
(Attachment 3)

Prairie View A&M University administered ETS General Education Battery to first time freshmen and juniors in 2001 and 2004. Disaggregated data of the core credit testing (see Attachment 4) reveals PV-FR in 2001 had a mean of 422 as compared to the PV-JR who had a mean of 446 in 2001. The PV-JR, having been exposed to the University core, scored 22 points higher than the PV-FR. PV-JR in 2004 had a mean of 435 as compared to the PV-FR who had a mean of 425 in 2004. These data reveals a 10 point gain. Whereas the academic performance of both PV-FR and PV-JR is below the performance of their counterparts in Comprehensive Institutions, the data indicates that the academic performance of PV-FR and JR is consistent with the performance trends for freshmen and juniors in comprehensive universities. Even so, the low to moderate performance is below institutional expectations and the plan described in Attachment 5 is designed to effect steady improvement.

More effective delivery of instruction appears to be the single variable with greatest potential to positively impact improved learning, thus larger gains as measured by the ETS

General Evaluation Battery and upper level faculty's rating of student's proficiency. Toward that end, the University has acquired Title III funding to establish for the first time, a Faculty Development Program featuring paid sabbaticals and instructional improvement workshops and seminars. The latter will focus on increasing student-faculty engagement in and outside the classroom and (2) infusing more technology into course design and delivery.

Effective faculty professional development must include activities for faculty members that are tied to program development which enhance their competencies as teachers and Scholars. During the 2004-2009 review process the following will guide professional development activities in an effort to:

1. Reinforce Exemplary Educational Objectives in the upper level classes to further enhance the academic achievement of PVAMU Graduates.
2. Increase faculty understanding of the concepts of Problem-Based Learning (PBL) which promotes learning through inquiry.
3. Encourage instructors at the undergraduate level to incorporate authentic assessment methods that require students to utilize and demonstrate a cluster of skills (i.e. oral expression, writing, critical thinking, technical presentation, organizational proficiency, etc.).
4. Provide workshops that focus on pedagogy and instructional methods across the campus.

Among priorities will be granting of sabbatical leave to persons who will create new teaching models that can be adopted by a department/school/college with the expectation of increasing student learning outcomes.

Because the integrity of the process and the sufficiency of the core curriculum offerings have been reaffirmed, there is not at this time a plan to eliminate or otherwise modify the content of existing courses or the concomitant outcome expectations. However,

there is a concern that the core may very well need to be expanded to (45) SCH or (48) SCH so that two (2) of the previous four (4) SCH physical activity courses will be restored. Given findings of the report, *Healthy People 2000*, failure to require students especially those of African-American and Hispanic ethnicity to engage in physical activity could increase their chances of developing chronic diseases including but not limited to diabetes, hypertension, osteoporosis, heart disease, and certain types of cancers.

Given the conclusion that lower than acceptable scores on the ETS General Education Battery are directly related to inadequate reading skill development and limited exposure to a broad array of types of reading materials, it has been proposed that a one (1) SCH course similar to the course defined by THECB as the "learning framework course," be added as a strategy to strengthen reading substantially. Other plans for improving the core curriculum are imbedded in the plan included in Attachment 5 for continued review and feature the following additional methods of evaluating the core curriculum: (1) self-reports of perceptions of general education by exiting graduates; (2) post graduation reports on general education proficiency of graduates; (3) surveys of faculty's assessments of students' level of proficiency upon entering upper level courses; (4) surveys of employers' and graduate/professional schools' assessments of graduates' proficiency in general education related competencies; and (5) aggregation and monitoring of general education assessments by specialized accrediting agencies.

As we move into the 21st Century, both continuity and change are required to prepare degree recipients who are skilled academically, personally and socially. Graduates in the years ahead must be able to react creatively to cultural, racial, and gender-based diversity, and to cope effectively with problems and potentialities stemming from technological

advances and environmental crises. As the rate of change accelerates, colleges and universities must evaluate and assess learning outcomes of graduates to ensure that they obtain a liberal education that gives them both a sense of tradition and a connection to core values that tend to remain constant. Competence in dealing with newly-arising challenges will be non-negotiable as today's college graduates prepare for several changes and myriad socio-cultural challenges.

There is no single way to assess student learning. But student learning outcomes assessment informs curriculum change by directing the reviewer to values, knowledge, abilities, and skills to look for in students' work. Outcomes that matter most require multiple assessment strategies.

During the 2004-2009 review cycle, Prairie View A&M University will use as a general assessment framework the principles of good assessment practice set forth by the *American Association for Higher Education (AAHE)*. The AAHE principles, which provide an excellent framework for thinking about assessment follow:

1. The assessment of student learning begins with educational values.
2. Assessment is most effective when it reflects an understanding of learning as multidimensional, integrated, and revealed in performance over time.
3. Assessment works best when the programs it seeks to improve have clear, explicitly stated purposes.
4. Assessment requires attention to outcomes but also and equally to the experiences that lead to those outcomes.
5. Assessment works best when it is ongoing, not episodic.
6. Assessment fosters wider improvement when representatives from across the educational community are involved.
7. Assessment makes a difference when it begins with issues of use and illuminates questions that people really care about.
8. Assessment is most likely to lead to improvement when it is part of a larger set of conditions that promote change.
9. Through assessment, educators meet responsibilities to students and to the public.

The standard techniques that follow and that are reflected in the plan in Attachment 5 will be useful for assessing student learning outcomes and ensuring mastery of Exemplary Educational Objectives at Prairie View A&M University: student portfolios; videotapes of performances; capstone courses; exit interviews or surveys of seniors; surveys of alumni; surveys of employers; internship evaluations; examinations; standardized and certification exams.

**ATTACHMENT I**  
**CORE CURRICULUM MATRIX**

Prairie View A&M University

Core Curriculum Matrix

Chart I – 36 SCH		
Core Course by Component Area	Course Equivalent	Exemplary Educational Objectives
<p><b>Communication</b> (6-SCH)  <i>(Composition, Speech, Modern Language)</i>                      ENGL 1123 Freshman Composition                      ENGL 1133 Freshman Composition II                      ENGL 1143 Technical Writing                      ENGL 2143 Advanced Composition</p>	<p>ENGL 1301, 1304                      ENGL 1032                      ENGL 2311, 2314, 2315                      ENGL 1313</p>	<p><b>Communications (composition, speech, modern language)</b>                      The objective of a communication component of the core curriculum is to enable the student to communicate effectively in clear and correct prose in a style appropriate to the subject, occasion, and audience.</p> <p><u><b>Exemplary Educational Objectives</b></u></p> <ol style="list-style-type: none"> <li>a. to understand and demonstrate the writing and speaking processes through invention, organization, drafting, revision, editing, and presentation;</li> <li>b. to understand the importance of specifying audience and purpose and to select appropriate communication choices;</li> <li>c. to understand and appropriately apply modes of expression, i.e., descriptive, expository, narrative, scientific, and self-expressive, in written and oral communication;</li> <li>d. to apply the principles of communicating as process and the analysis of audience and purpose to assignments;</li> <li>e. to participate effectively in groups with emphasis on listening, critical and reflective thinking, and responding;</li> <li>f. to understand and apply basic principles of critical thinking, problem solving, and technical proficient in the development of exposition and argument; and</li> <li>g. to develop the ability to research and write a documented paper and/or to give and oral presentation.</li> </ol>

**Chart I – 36 SCH**

<b>Core Course by Component Area</b>	<b>Course Equivalent</b>	<b>Exemplary Educational Objectives</b>
<p><b>Mathematics</b> (3-SCH)</p> <p>Options:            MATH 1113 College Algebra            MATH 1123 Trigonometry            MATH 1124 Calculus and Geometry I            MATH 1153 Finite Math            MATH 2003 Elementary Statistics            MATH 2024 Calculus and Analytical Geometry II            MATH 2034 Calculus and Analytical Geometry III; or a course above the level of College Algebra.</p>	<p>Options:            MATH 1314, 1316, 1324, 1342, 1348, 1442, 2314, 2313, 2320, 2318, 2305, 2312, 2315, 2316, 2412, 2414, 2415, 2413, and 2513.</p>	<p><b>Mathematics</b>            The objective of the mathematics component of the core curriculum is to develop a quantitatively literate college graduate. Every college graduate should be able to apply basic mathematical tools in the solutions of real-world problems.</p> <p><b>Exemplary Educational Objectives</b></p> <ul style="list-style-type: none"> <li>a) to apply arithmetic, algebraic, geometric, and statistical methods to modeling and solving real-world problems;</li> <li>b) to represent and evaluate basic mathematical information numerically, graphically, and analytically;</li> <li>c) to expand mathematical reasoning skills and develop convincing mathematical arguments;</li> <li>d) to use appropriate technology to enhance mathematical thinking and understanding and to solve mathematical problems and judge the reasonableness of the results;</li> <li>e) to interpret mathematical models such as formulas, graphs, tables and schematics, and draw inferences from them;</li> <li>f) to recognize the limitations of mathematical and statistical models;</li> <li>g) to develop the view that mathematics is a growing discipline, interrelated with human culture, and understand its connections to other disciplines.</li> </ul>

