

Status Report: Applied Baccalaureate Programs in Texas

Texas Higher Education Coordinating Board

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Introduction

The Texas higher education plan, *Closing the Gaps by 2015*, outlines a clear vision for Texas higher education: "Every Texan educated to the level necessary to achieve his or her drams; no one is left behind, and each can pursue higher education; colleges and universities focus on the recruitment and success of students while defining their own paths of excellence; education is of high quality throughout; and all levels of education, the business community, and the public are constant partners in recruiting and preparing students and faculty who will meet the state's workforce and research needs."

As a part of the Texas Higher Education Coordinating Board's initiatives to meet the goals of *Closing the Gaps*, Commissioner Raymund Paredes established the Applied Baccalaureate Task Force in 2007. The task force was charged with conducting a study on the prevalence and use of Applied Baccalaureate degree programs in the public universities and community colleges of Texas.

Coordinating Board staff have worked closely with members of the task force and have written the following internal report based upon their findings and recommendations. The task force examined the following issues:

- 1. The state of applied baccalaureate degree programs in Texas, including an examination of program types and degree production;
- 2. The purpose of applied baccalaureate programs;
- 3. The relationship between applied baccalaureate programs and the state higher education goals contained in *Closing the Gaps;*
- 4. the employer/society need for graduates of applied baccalaureate programs;
- 5. The strengths and weaknesses of existing applied baccalaureate programs in Texas; and
- 6. The future role of distance education in the delivery of applied baccalaureate programs.

Coordinating Board staff are appreciative of the task force's work, and their names and institutional affiliations appear in the Appendix.

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I. Definition of Applied Baccalaureate Programs

Applied baccalaureate degrees are generally flexible degrees that usually involve large transfers of credit, sometimes in the form of an associate's degree. Usually the credit transferred in with the student is in the applied arts and sciences (i.e., business administration, computer application, etc.) and may include a combination of previous coursework and experiential credit. Generally, these degrees are tied closely to specific workforce needs of a region or state.

The applied baccalaureate program is flexible and often appeals to adult students who wish to remain in their jobs while completing their degrees. It is an inverse of the traditional model of undergraduate education, where general education courses are taken during the first two years and specialized courses in the field of the major are taken during the last two years. With an applied baccalaureate degree, the first two years of college are in a specific career/technical field and may have been taken elsewhere (e.g., community or technical college, out-of-state college/university), and the last two years are spent with a variety of general education courses and the remaining upper-division major courses taken at a university. Many times, the first two years of college-level credit have been in an applied arts (e.g., computer science, management) or sciences (e.g., agriculture, aerospace) area.

There is some inconsistency in the terminology used by institutions in Texas and across the country when referring to these programs. Depending upon institutional preferences and the subject matter of the programs of study, applied baccalaureate programs may be referred to as Bachelor of Applied Sciences, Bachelor of Applied Technology, or Bachelor of Applied Arts and Sciences programs. This report uses the term "applied baccalaureate program" (ABP) as an umbrella term for all of the variations.

Types of Applied Baccalaureate Programs

ABPs can generally be classified as either *inverted* or 2+2 programs.

- Inverted programs are sometimes called "upside-down" degrees. They are four-year baccalaureate degrees, in a career/technical field, where students typically complete their general education requirements in the last half of their study and frontload the technical courses during the first half of their study. The final part of students' programs is focused on general education and upper-division courses as opposed to technical courses. Credit is sometimes granted for life experience in the military or professional workplace through portfolios and detailed evaluation. This type of program allows students to be trained in their career field and remain employed while completing their degree.
- 2+2 programs are designed to provide a seamless transition from an applied associate's degree program to an applied baccalaureate program. Students who complete an associate's degree can transfer much if not all of their credit as a block to a four-year institution where they will complete the remaining upper-level coursework. These types of programs are more common in Texas than the more complex and customized inverted programs.

Inverted programs can work with multiple combinations of courses and institutions, whereas 2+2 programs are usually formally articulated agreements between two institutions where preselected courses are bundled together into a transferrable package.

II. History and Theory of Applied Baccalaureate Programs

ABPs have been a part of Texas higher education for over 30 years. They have proven increasingly popular as they have become more widely known and available, and they appear to be well positioned for future growth in Texas and in other states. The number of awarded AB degrees has risen by over 58 percent since 1989. One of the reasons this degree has gained popularity is because it is generally seen as a flexible degree program that appeals to non-traditional students. Adult students who have family responsibilities often do not have the option of abandoning their careers while they return to school for two or more years to complete their bachelor's degree. According to the Lumina Foundation for Education's study, *Returning to Learning: Adults' Success in College is Key to America's Future*, adult learners have unique circumstances that make attendance at a traditional baccalaureate degree-granting institution challenging, if not impossible. Non-traditional students who are older than traditional college age, working part- or full-time, and have family responsibilities that limit their ability to travel or relocate to attend college, often find ABPs particularly amenable to their needs. While adult students are not the exclusive target of ABPs, they are often uniquely positioned to benefit from them.

ABPs are also designed to be directly responsive to employer demand and need. ABPs provide an opportunity for students to remain current or advance to management positions in their careers, upgrading their existing associate's degree to a bachelor's. ABPs allow students to get training in a career field first, rather than last, and continue working in that field while they take their remaining general education courses and upper-level subject content courses.

III. Applied Baccalaureate Programs and Closing the Gaps

Texas has set a 2015 goal to increase enrollment at public and independent institutions by 630,000 students. While enrollment has increased every year since 2000, the new students account for only 37 percent of the 630,000 additional students needed by 2015. Despite substantial early growth, statewide enrollment growth began slowing in fall 2004 for each of the three major ethnic groups in Texas: White, Hispanic, and African American.

To reach *Closing the Gaps* goals for participation, the state will need to aggressively recruit individuals who have completed their associate's degree but have not completed a full baccalaureate degree—exactly the candidate pool targeted by ABPs. Since existing efforts have only recruited 37 percent of the total number of new students needed by the Board's 2015 deadline, it is unlikely that the *Closing the Gaps* targets can be reached without significant growth in the number of students who build upon their existing associate's degrees. The pool of potential applicants is enormous, according to the United States Census Bureau's 2007 *American Community Survey*, there are over 10.9 million Texans over the age of 25 (75.3 percent) who have not earned a baccalaureate degree or higher.

The state is doing somewhat better in meeting its targets for the number of degrees awarded. By 2015, the goal is to increase the number of bachelor's and associate's degrees and certificates (BACs) to 210,000 at public and independent institutions. While the number of BACs have increased every year since 2000 at public and independent institutions, the total increase through fiscal year 2007 is only 38 percent of the increase needed by 2015. Undergraduate degrees and certificates in computer science, engineering, math, and physical science have steadily declined since fiscal year 2003. Degrees awarded in science and technology must almost double by 2010 to meet the *Closing the Gaps* target.

Texas is behind national averages in every measure of adult education compiled by the Council for Adult and Experiential Learning, and the payoffs for investment in adult education are clear. Working-age residents with college degrees are 32 percent more likely to participate in the workforce than those with less than a high school diploma, and their earnings over a lifetime are twice as high. In 2006, the median annual income difference between those who completed an associate's degree and those who completed a bachelor's degree was \$10,615. According to Adult Learning in Focus, a study conducted by the Council for Adult and Experiential Learning and the National Center for Higher Education Management Systems and funded by the Lumina Foundation for Education, "increasing adult attainment of the baccalaureate degree will produce the highest individual and social returns." Because many institutions do not accommodate the complexity of adult students' lives, the National Commission on Adult Literacy (2008) described current practices of preparing adults for the workforce as "putting our country in great jeopardy and threatening our nation's standard of living and economic viability." For Texas, becoming globally competitive will require educational advances far beyond even the *Closing the Gaps* goals. According to the Report of the Select Commission on Higher Education and Global Competitiveness (2009), "Texas must more than double the annual degree production to reach the level of the best performing country of 55 percent of the population ages 24-64 with an associate degree or higher by 2025." The report further states, "After accounting for increases in the population with bachelor's and associate degrees resulting from population increase and net migration from 2005 to 2025, Texas must realize an additional 2,509,881 degrees between 2005 and 2025, an average annual increase of 125,494 or 102.6 percent beyond the 2005 level of 122,269 for every year through 2025. The requirement to meet the challenge of global competitiveness requires an annual level of degree production of nearly 100,000 higher than the target of 168,000 bachelor's and associate's degrees set by Closing the Gaps by 2015."

IV. Applied Baccalaureate Programs in Texas

Coordinating Board Standards

Coordinating Board guidelines apply to ABPs as they apply to any other baccalaureate degree program. Chapter 5 of the *Coordinating Board Rules and Regulations* governs the approval of mission statements and tables of programs for public universities and selected public colleges (i.e., those public two-year institutions that are authorized to offer baccalaureate degrees). General guidelines for all baccalaureate programs include the requirement that they should contain at least 24 semester credit hours of upper-level coursework, meet the Texas general education core requirement, and ensure that all courses be taught by properly credentialed faculty as defined by Standard 3.7.1 in the Commission on Colleges of the Southern Association of Colleges and Schools' *The Principles of Accreditation*.

Participating Institutions

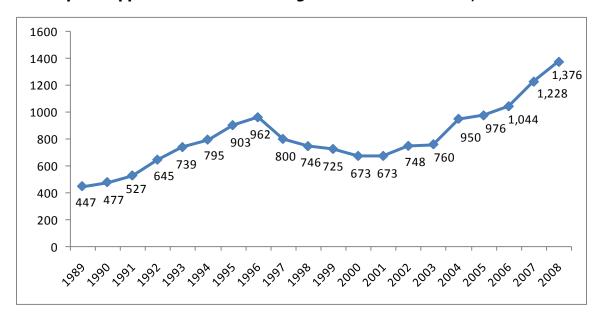
There are currently 21 public universities that have authority to offer ABPs:

- Lamar University
- Midwestern State University
- Sam Houston State University
- Stephen F. Austin State University
- Tarleton State University
- Texas A&M University-Commerce
- Texas A&M University-Corpus Christi
- Texas A&M University-Kingsville
- Texas A&M University-Texarkana
- Texas A&M International University
- Texas State University-San Marcos
- Texas Woman's University
- University of Houston-Downtown
- University of Houston-Victoria
- University of North Texas
- The University of Texas at Brownsville
- The University of Texas-Pan American
- The University of Texas of the Permian Basin
- The University of Texas at San Antonio
- The University of Texas at Tyler
- West Texas A&M University

There are also three public community colleges that were granted authority to offer ABPs as a result of House Bill 1544, 80th Texas Legislature (2003):

- Brazosport College
- Midland College
- South Texas College

In 2008, the most recent year for which data are available, a total of 1,376 applied baccalaureate degrees were awarded in Texas. This is a record high, as the following graph demonstrates:



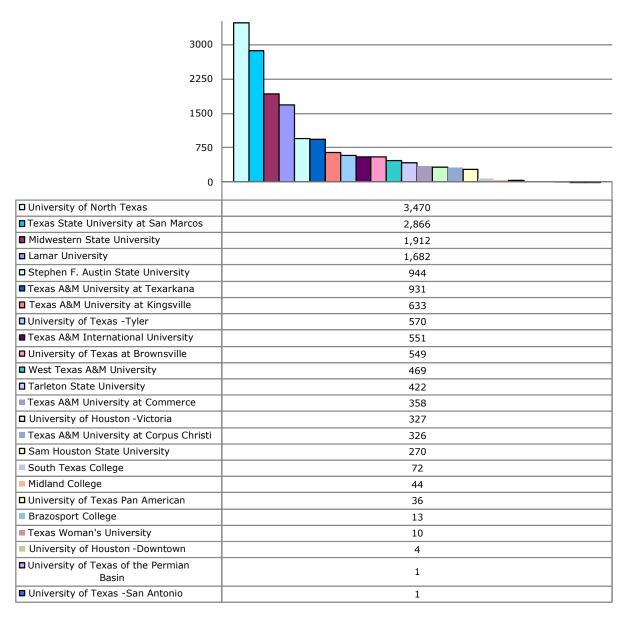
Graph 1: Applied Baccalaureate Degrees Awarded in Texas, 1989-2006

Source: Texas Higher Education Coordinating Board

Graph 1 includes all of the applied baccalaureate degrees awarded in each of the relevant CIP codes for all of the participating institutions. The sharp rise from 2006 to 2007 is largely attributed to increased enrollments in the ABPs at the University of North Texas and the first graduates from the three community college ABPs in 2007.

As shown in Graph 2, from 1989 to 2008, the top four ABP institutions awarded significantly more degrees than the other participating institutions. The University of North Texas has the largest program, having awarded 3,470 degrees. The next three institutions awarding the most degrees between 1989 and 2008 are Texas State University-San Marcos (2,866), Midwestern State University (1,912), and Lamar University (1,682). All other participating institutions granted 944 or fewer applied baccalaureate degrees between 1989 and 2008.

Graph 2: Applied Baccalaureates Awarded by Institutions, 1989-2008



Source: Texas Higher Education Coordinating Board

<u>Degree Programs and Areas of Concentration</u>

Degree programs at the 24 institutions that have the authority to offer ABPs take the form of either a Bachelor of Applied Arts and Sciences (BAAS), a Bachelor of Applied Sciences (BAS), or a Bachelor of Applied Technology (BAT).

These applied baccalaureate degrees include areas of concentration in general Applied Arts and Sciences, Applied Technology and Performance Improvement, Liberal Arts, Applied Business Technology, Agricultural Occupations, Technical Occupations, Industrial Occupations, Business

Occupations, Emergency Management Administration, Bicultural/Mexican American Studies, Criminal Justice, Children/Family/Community, Early Childhood Language and Literacy, and Safety Management, Cancer Information Management, and Polysomnography. The BAT includes areas of concentration in Chemical Process Technology, Organizational Management, Business Administration, Computer Information Systems Technology, Applied Engineering Technology/Training, Health Services Technology, and Workforce Leadership/Supervision.

For a representative example, the University of North Texas is the institution that grants the most applied baccalaureate degrees. They have two programs, and the most popular program is in the College of Public Affairs and Community Service with 272 applied baccalaureate degrees awarded in 2007-08. The areas of concentration in the College of Public Affairs are aimed at non-teaching careers in anthropology, applied economics, applied gerontology, behavior analysis, community service, criminal justice, emergency administration and planning, non-profit management, public administration, rehabilitation studies, sociology, social work, and other fields. The other program at the University of North Texas is in the College of Information, and it awarded 46 applied baccalaureate degrees in 2007-08. The areas of concentration include corporate and teaching work in technical fields.

Because of the highly interdisciplinary and individually customized nature of many applied baccalaureate degrees, it has proven difficult to assign them precise Classification of Instructional Programs (CIP) codes. Each academic area of concentration is assigned a code so that institutions across the state and nation can compare similar programs. The most common CIP code used for applied baccalaureate degrees is 30.9999.40: "Applied Arts and Sciences," defined as "the study of subject matter that enhances the general education and the professional competence, in an area such as education or management, of individuals with technical or vocational skills." This is an overly broad category and specifies only the degree and student type, not the specific subject matter of the area of study. However, there are many ABPs with very specific tracks (see Appendix B), and institutions may better serve their students who wish to transfer between institutions if they were to adopt more specific CIP codes designed to apply to their particular programs.

Baccalaureate Degrees at Two-year Colleges

One of the most recent developments in applied baccalaureate programs is the delivery of these degrees by community colleges. The first community college to offer a baccalaureate degree was the Fashion Institute of Technology in New York in the 1970's. A majority of the current community college baccalaureates have been added in a period of rapid growth that began when Florida started establishing programs in the early 2000's. There are now 36 community colleges in 17 states across the nation that offer applied baccalaureate degrees. Although Florida has the largest number of such programs (11), there are currently three community colleges in Texas that offer full applied baccalaureate degrees: Midland College, Brazosport College, and South Texas College. They began offering the degree in 2005 after receiving both legislative authority and the required Level II accreditation from the Commission on Colleges of the Southern Association of Colleges and Schools.

There are three primary rationales for community college ABPs. First, because community colleges have historically had a greater emphasis on workforce development and training, they are positioned to more readily create baccalaureate programs that are tailored to meet regional

workforce needs. Second, costs are lower than they would be at a four-year university. Third, community college ABPs enable a greater number of students, especially non-traditional students and those living far from established four-year institutions, to complete a baccalaureate degree.

There is skepticism about community colleges offering baccalaureate programs. This is sometimes seen as a pathway for college expansion into four-year status, driven by a desire for prestige, at the expense of the affordability and accessibility that are the traditional trademarks of the community college system. Baccalaureate degrees offered at two-year institutions are viewed as a threat to the long-established articulation agreements between community colleges and universities. There is concern that community colleges do not have the human and fiscal resources in place to successfully achieve accreditation and the ability to offer the degrees without harming existing programs. Community colleges with baccalaureate programs respond that without this alternative baccalaureate degree, many citizens will never have the opportunity to achieve a bachelor's degree.

Online Course Offerings

Institutions are increasingly incorporating online course offerings into their ABPs as part of their efforts to make the degrees appealing to non-traditional and working students. Currently, at least 16 institutions with applied baccalaureate degrees offer at least some of their courses online. Eight of the institutions offer at least one of their applied baccalaureate tracks entirely online: Lamar University, Midwestern State University, Tarleton State University, Texas A&M University-Commerce, the University of Houston-Downtown, the University of Houston-Victoria, The University of Texas at Brownsville, and the University of North Texas. The University of Texas at Brownsville, is offering three of their four Bachelors of Applied Technology tracks online.

For those institutions which offer at least some of their ABP courses online, a variety of cited factors influence the selection of online courses: the appropriateness of course content, faculty ability and availability, and student interest. Some ABP programs are restricted from being offered wholly online. For example, the ABP at the University of Houston-Victoria has all of the courses offered on-line except for required labs which must be taken on campus. The University of Houston-Downtown's ABP in Criminal Justice offers all courses online except for four required introductory courses.

Institutions may offer different courses in different online platforms. Blackboard is by far the preferred vehicle for online course delivery (14 institutions), followed by the U.T. Telecampus (2 institutions), and web-based delivery (2 institutions). Only one institution reported using closed-circuit television, and one uses eCollege.com.

Online offerings are likely to increase in the future and become a more dominant part of applied baccalaureate curricula and culture. Five institutions (Texas A&M University-Commerce, the University of Houston-Victoria, The University of Texas at Tyler, The University of Texas of the Permian Basin, and West Texas A&M University) plan to expand their on-line course offerings to cover one or more of their entire ABPs. Eight more institutions plan to increase their online offerings, four do not plan to expand at this time, and three are unsure.

V. Supply and Demand

Students are becoming more interested in applied baccalaureate degrees, as demonstrated by the steadily increasing numbers of graduates (see Graph 1). Applied baccalaureate degrees are still not widely known among the student populations who may be most likely to take advantage of them. There is reason to expect that the enrollment figures will continue to grow as these degrees are more aggressively advertised and institutions expand their offerings.

ABPs are likely to continue growing as word spreads about the opportunities. As unemployment rates rise in the current economy, many adults from the workforce who choose to return to college may be reluctant to give up their existing jobs while they complete their degrees.

One such group of adult learners are veterans returning from military duty. According to the Chronicle of Higher Education, veterans tend to prefer community colleges and for-profit institutions because of costs and because such schools are more convenient and cater to veterans' needs more than four-year institutions. Another reason they prefer community colleges and distance-education programs is because they tend to be older, have families to support, and therefore simply want to obtain credentials necessary for employment. Veterans frequently major in subject areas that expand on knowledge or training they received in the military. In 2008, according to the Chronicle, nearly three out of five students who used GI bill benefits at the top 500 institutions that serve such students enrolled in a community college or a for-profit institution. It is likely that students with these priorities would find applied baccalaureate programs very attractive, since some of them allow credit for life experience earned in the military (see section on Texas State University-San Marcos below) and most are flexible with the timetables and delivery technologies that allow students to balance their academic and personal lives. Texas community colleges are prominent in the top 25 institutions that serve veterans using their federal education benefits: Central Texas College (ranked 5th), San Antonio College (14th), Austin Community College (16th), El Paso Community College (23rd), and Tarrant County College (24th).

Regional Need

Because applied baccalaureate degrees can be narrowly defined with a single area of concentration, or they can be very general with wide applicability to several professions, it is difficult to measure precisely if a specific region of Texas may or may not be underserved by the availability of ABPs. Areas with no or few ABPs may also be adequately serving their constituencies with their community colleges and comprehensive universities.

What follows is a list of Texas universities that offer ABPs, the labor workforce region they occupy, and the top 10 in-demand career fields as projected by the Texas Workforce Commission for 2006-2016. Career fields that require licensure and specialized educational requirements not met through ABPs, such as medical professions (including nursing) and teaching, are not considered "covered" by ABPs. In practice, however, applied baccalaureate graduates may be at no disadvantage compared to any other baccalaureate graduate in applying to graduate school in these fields. Careers such as janitor or waiter are also not "covered" by ABPs since they do not require college degrees and have no mid-level management track for advancement.

The listing below uses the 29 smaller labor workforce development areas (LWDAs) as defined by the Texas Workforce Commission, as opposed to the 10 larger population regions as defined by the Texas Higher Education Coordinating Board, because ABPs are specifically designed to appeal to students who are continuing their existing careers and are unlikely to travel across the state in order to take classes. There are 12 LWDAs that have no institutions offering ABPs: South Plains, North Central Texas, Tarrant County, Dallas, Upper Rio Grande, Concho Valley, Heart of Texas, Capital Area, Brazos Valley, Texoma, Central Texas, and Middle Rio Grande.

REGION	UNIVERSITIES/PROGRAMS	LWDA NEED
North Central	University of North Texas	Covered: Accountants, general operations managers, first- line construction supervisors, computer system analysts, sales representatives, police officers
		Not covered: Medical assistants, personal care aides
Rural Capital	Texas State University-San Marcos	Covered: Computer system analysts, secondary school teachers, general operations managers, sales representatives, first-line construction supervisors, operating engineers, accountants Not covered:
North Texas	Midwestern State University	None Covered: General operations managers, medical service managers, first-line construction supervisors, computer system analystss
		Not covered: Personal care aides, medical assistants, home health aides, pharmacists, clergy

South East Texas	Lamar University	Covered: First-line construction supervisors, general operations managers, carpenters, food service managers, welders, civil engineers, construction managers Not covered: Medical assistants
Deep East Texas	Stephen F. Austin State University	Covered: Police officers, food service managers, general operations managers, business operations specialists
		Not covered: Home health aides, nursing aides, medical assistants
North East Texas	Texas A&M University- Texarkana	Covered: General operations managers, medical services managers
		Not covered: Personal care aides, home health aides, medical assistants, nursing aides
South Texas	Texas A&M International University	Covered: General operations managers, customer service representatives, compliance officers
		Not covered: Personal care aides, nursing aides
East Texas	The University of Texas at Tyler	Covered: General operations managers, food service managers, medical services managers Not covered: Personal care aides, medical
Cameron County	The University of Texas at Brownsville	assistants, home health aides Covered: Medical services managers, general operations managers, police officers
		Not covered: Personal care aides, home health aides, medical assistants, nursing aides

Coastal Bend	Texas A&M University-	Covered:
	Kingsville	General operations managers,
		medical care managers
		Not covered:
		Personal care aides, home
		health aides, medical
		assistants, nursing aides
Panhandle	West Texas A&M University	Covered:
		Accountants, general
		operations managers, first-
		line construction supervisors,
		computer system analystss,
		police officers
		Not covered:
		Medical assistants, personal
		care aides
West Central	Tarleton State University	Covered:
		General operations managers,
		food service managers
		Not covered:
		Personal care aides, medical
Golden Crescent	University of Houston Victoria	assistants Covered:
Golden Crescent	University of Houston-Victoria	General operations managers,
		first-line construction
		managers
		Not covered:
		Personal care aides
Gulf Coast	Sam Houston State University	Covered:
		General operations managers,
		software engineers,
		accountants, computer
		system analystss, computer
		systems administrators,
		business operations
		specialists
		Not covered:
		None
Lower Rio Grande	The University of Texas-Pan	Covered:
	American	General operations managers,
		medical services managers,
		police officers
		Not covered:
		Personal care aides, home
		health aides

Permian Basin	The University of Texas of the Permian Basin	Covered: General operations managers, machinists, welders, heating and air conditioning mechanics, child care workers
		Not covered: Personal care aides, home health aides, medical assistants
Alamo	The University of Texas at San Antonio	Covered: Computer system analystss, general operations managers, computer systems administrators, customer service representatives, food service supervisors, business operations specialists
		Not covered: Personal care aides, medical assistants

VI. Challenges

The nature of ABPs introduces several recurring challenges for program administrators who wish to establish or expand their programs: faculty credentials, and transfer of credit.

Faculty Credentials

Comprehensive Standard 3.7.1 of the Commission on Colleges of the Southern Association of Colleges and Schools' *The Principles of Accreditation* states, "The institution employs competent faculty members qualified to accomplish the mission and goals of the institution" and references the Commission's separate "Faculty Credential Guidelines." This document stipulates that faculty should have different levels of minimum qualifications depending upon whether or not a course is designed to apply toward a baccalaureate degree. A course taught at a community college counting toward only an applied associate's degree (also called a workforce education course, as listed in the *Workforce Education Course Manual*) may be taught by an instructor with a baccalaureate in the teaching discipline, or an associate's degree with demonstrated professional competence. However, if a course is to count toward a baccalaureate degree, it is recommended that the course be taught by an instructor with at least a master's degree, including a minimum of 18 graduate semester credit hours in the teaching discipline.

A potential conflict may occur when credits for courses taken at a community college are transferred to a four-year institution with an applied baccalaureate program. For example, it is possible that the same course, with the same syllabus and content, would have to be taught by two different instructors with different credentials, depending on whether any of the students intended to pursue an AB degree. For four-year institutions with established articulation agreements or 2+2 programs with area community colleges, the credentials of a stable faculty

may be pre-approved for easy transfer of credits. For four-year institutions transferring courses from community colleges one at a time for customized interdisciplinary applied baccalaureate degrees, there may be verification difficulties for admissions staff, and surprises for transferring students who erroneously assume that a class with the same course name and number from the same institution would always be treated the same way.

SACS also requires that at least 25 percent of the discipline course hours in each major at the baccalaureate level be taught by faculty members holding a terminal degree (or equivalent) in the discipline. This could be a problem if more than 75 percent of the discipline course hours are taken at the community college level or are credited as life experience. Most of the applied baccalaureate degrees in Texas are given the general CIP code 30.9999.40 ("the study of subject matter that enhances the general education and the professional competence . . . of individuals with technical or vocational skills"), so there is considerable flexibility in defining the "discipline" in which faculty must hold the terminal degree. As the CIP becomes less precise in defining the subject of the degree, however, it becomes less useful for institutions to compare programs or facilitate transfers of students and their credits across institutions.

One possible solution is to transfer entire blocks of credit hours, not individual courses. This is an approach used by The University of Texas at Brownsville, Stephen F. Austin State University, South Texas College, and Sam Houston State University. When hours are transferred from SACS-accredited colleges as distinct blocks of up to 36 technical hours, the ABP institution does not have to investigate every individual course and ensure that each instructor is qualified.

Transfer of Credit

There are two types of associate's degrees: academic associate's and applied associate's. Each one has a different number of core general education courses. This could create problems when students transfer to four-year institutions to complete an applied baccalaureate degree. The academic associate's degree is the program of choice for those students who know they will be completing a baccalaureate at a four-year institution, and there are 42 hours of core general education courses which are sure to transfer. The applied associate's degree is for students primarily interested in moving straight into the workforce, and there are at least 15 hours of core general education courses. If students with an applied associate's degree decide to enter an applied baccalaureate program, they may have difficulties completing the remaining core courses required by the four-year institution (the number can vary), plus any remaining required upper-division subject courses, within two years.

There could also be challenges as four-year institutions work out their articulation agreements with area community colleges. For example, at Texas A&M University-Corpus Christi, there is a stipulation that 33 credit hours is the maximum number that can be transferred for credit toward a baccalaureate degree. However, Texas A&M University-Corpus Christi also stipulates that a baccalaureate degree requires at least 45 hours of upper-division courses. This means that there will be at least 12 more hours of upper-division courses for each applied baccalaureate student to take, in addition to any remaining prerequisites and core general education courses. It is unlikely that a student could complete the degree in two years without attending summer school. (Texas A&M University at Corpus Christi is working on the problem by

eliminating inconsistencies between similar courses between the institutions which could transfer as acceptable prerequisites for the upper-division courses.)

The University of Texas-Pan American's difficulties with transferred credit hours have all but closed their applied baccalaureate program. The University of Texas-Pan American's ABP requires 51 hours of advanced coursework and 18-24 hours of core courses, on top of the required 48 hours for technical courses a student transfers in from a community college. This was making it almost impossible for students to graduate within four years, particularly if an applied baccalaureate student was trying to stay in their job and attend school part-time. Also, as student enrollment dropped, South Texas College started an applied baccalaureate program where students could get a similar degree in less time and for less money than at The University of Texas-Pan American. The ABP program at The University of Texas-Pan American is still operational to graduate its existing students and to remain available to faculty who may wish to reinvent it at a later date, but it is no longer accepting new students.

As four-year institutions work out their articulation agreements and other relationships with area community colleges, they may need to give close attention to the maximum number of hours that can transfer and reconcile this with their minimum number of required upper-division courses.

VII. Success Stories

Despite the challenges presented by applied baccalaureate degrees, there are several Texas institutions that have built very strong programs that serve as models for other institutions nationwide. With degrees as complex and varied as applied baccalaureates, it would be misleading to present an over-simplified list of "best practices" that suggests that they would all work, in all cases, in every institution, for every student demographic. What may be more useful are four brief case studies of Texas institutions that address some of the recurring difficulties of applied baccalaureate programs with determination and creativity.

Responding to Regional Workforce Needs: The University of Texas at Brownsville

The University of Texas at Brownsville has graduated 549 students from their applied baccalaureate programs between 1989 and 2008, and the institution has a 100 percent placement rate of graduates from their two main tracks of the Bachelor of Applied Technology degree: Computer Information Systems and Health Science Technology. High placement rates have been achieved by carefully tailoring the applied baccalaureate programs to the highly specific workforce demands of this region. The resulting programs may initially appear different, but the placement rates speak for themselves. For example, workforce needs in area medical clinics revealed a need for sleep deprivation specialists. The University of Texas at Brownsville has worked out an arrangement with area clinics for students placed in their clinics to have practical experience while they take online classes through the university, and both the clinics and the university benefit; every graduating student found work. Another example is a track in Cancer Information Management. Students are trained in cancer registration and analysis and are prepared to take a state licensing exam upon graduation. By investigating where the jobs are, what knowledge base and degrees are required to get them, and how these degrees can be offered online and work seamlessly with courses from community college courses throughout

Texas, The University of Texas at Brownsville has provided significant career opportunities for hundreds of students.

<u>Adult Degree Completion: University of North Texas</u>

The University of North Texas (UNT) has awarded more applied baccalaureate degrees than any other Texas university, and most of them are to adult students. Their numbers are large because of the size of the Metroplex area, the number of feeder community colleges, and the relatively low tuition rates. They are one of the top-ranked schools in the state for the number of transfer students, in part because they provide ample opportunities for adult learners looking to upgrade their associate's degrees. UNT has also made a special effort to appeal to veterans. These adult students sometimes have difficulties getting their life experiences and training credits from the military recognized by universities, and UNT is one institution that has established transfer protocols and a welcoming culture of student support. The UNT program is already the largest program in Texas, and it is projected to continue growing. According to UNT Program Director Brenda McCoy, now that the Dallas campus has achieved independent status as UNT-Dallas, the applied baccalaureate program is projected to be the largest single degree program there, appealing to the specific adult demographics of its work-oriented region.

Advertising and Promotion: Midwestern State University

Midwestern State University provides a constructive example for the importance of advertising. From 1991 to 2004, enrollments in ABPs quintupled from 37 students to 184 students. According to Applied Baccalaureate Program Director Charles Olson, this growth was primarily student-driven. The program was advertised not only on campus, but also in professional magazines to reach a non-academic audience already in the workforce. The best advertising, says Olson, is from the students who have been through the program. They often report that they have never been treated so courteously, in contrast to other education experiences they have had. This sentiment is also echoed by Program Director Brenda McCoy at the University of North Texas—students respond positively to the program because they are treated politely and made to feel respected for their work experience.

<u>Credit for Work Experience: Texas State University-San Marcos</u>

Offering college credit for life or work experience (often referred to as "experiential learning") is a problematic issue. Employers and graduate schools are sometimes highly skeptical, and distrust lingers from abuses to the system often made by unscrupulous for-profit "diploma mills" that have few or no standards for what kind of experiences earn credit.

Texas State University-San Marcos has highly rigorous and established standards for experiential learning, and the result has been high enrollments, respect for a distinguished program, and students who have profited from taking a hard look at their lives and professional aptitudes. Texas State University-San Marcos requires all of its applied baccalaureate students to take Occupational Education (OCED) 4350, an intensive course that teaches methods for evaluating one's life and professional qualifications. Students are required to write a 20-page articulation of their life history and compile a 70-100 page portfolio with comprehensive evidence of their professional competencies. For students who do not wish to apply for college credit on the basis of their life experience, the course is sometimes a sobering exercise in

personal assessment that many adults need but may have never had as part of their professional life. They are therefore in a much stronger position to achieve professional success and personal satisfaction in their careers after earning their applied baccalaureate degree. For those who apply to have credit assigned for their life experience, the instructor of OCED 4350 provides feedback on the creation of the portfolio and makes a recommendation.

Some universities would stop here, or would pass the recommendations on to a committee that would make decisions on a course-by-course basis, but Texas State University-San Marcos ensures the integrity and reputation of the experiential credits by taking several additional steps. The portfolios are reviewed by one or two blind reviewers who work from established evaluation sheets, and their recommendations are passed on to a program administrator who compares all of the portfolios within similar professional areas and makes a final recommendation. No outside references are requested or reviewed. The average number of semester credit hours awarded is 15, and the hours are not transferrable to any other major in the university if the student chooses to leave the applied baccalaureate program. No experiential learning credit is offered for any of the core courses. Credit is only offered for professional and technical experience which is defined according to the *Dictionary of Occupational Titles*, and it is arranged in blocks for consistency and clarity. A student's portfolio and all evaluations are kept on file for at least five years after graduation in the event there are any questions or challenges from future employers.

VIII. Summary and Recommendations

- Applied baccalaureate programs (ABP) can be important vehicles for reaching the
 Closing the Gaps goals for degree completion and adult education. These programs may
 be good options for students who have already completed an associate's degree since
 the programs usually allow working adult students to remain in their jobs and contribute
 to the economy while they are attending school to advance their careers. Nationally, the
 median annual income difference between workers with associate's degrees and
 baccalaureate degrees is \$10,615.
- Online degree completion may be an excellent option for some adult learners who have professional or family responsibilities that limit their opportunities to travel to a physical campus.
- Current community college applied baccalaureate programs should be analyzed before
 the addition of any new programs. The Coordinating Board was directed to undertake
 this analysis during the 81st legislative session. That report will analyze the current
 community college baccalaureate programs as well as determine regional need for
 applied baccalaureates and examine a number of alternative delivery methods including
 community college programs, higher education centers, and distance education.
- If ABPs expand or create tracks within their degrees, they should carefully consider the workforce needs and employment opportunities of their region. Various areas and levels of health care appear to be in demand in almost every economic region of Texas.
- Issues of SACS standards for faculty credentialing and the mechanics of credit transfer should be carefully considered by institutions offering applied baccalaureate degrees. Questions regarding different SACS faculty credentialing standards for career and vocational credit and academic credit as well as rules regarding the transfer of career and vocational credit as independent courses or blocks of credit from applied associate

programs to applied baccalaureate programs may need to be addressed. Some institutions have expressed confusion about the current SACS standards regarding faculty credentialing and transfer of credit in this area.

Appendix A: Texas Colleges That Have Articulation Agreements With Four-Year Institutions Offering An Applied Baccalaureate Program

- 1. Alamo Colleges-Northwest Vista College
- 2. Alamo Colleges-Palo Alto College
- 3. Alamo Colleges-San Antonio College
- 4. Alamo Colleges-St. Philip's College
- 5. Amarillo College-Washington
- 6. Amarillo College-West
- 7. Amarillo College-East
- 8. Amarillo College-Polk
- 9. Amarillo College-Monroe
- 10. Amarillo College-Community Link
- 11. Amarillo College-Hereford
- 12. Angelina College
- 13. Austin Community College-Cypress Creek
- 14. Austin Community College-Eastview
- 15. Austin Community College-Northridge
- 16. Austin Community College-Open Campus
- 17. Austin Community College-Pinnacle Campus
- 18. Austin Community College-Rio Grande Campus
- 19. Austin Community College-Riverside Campus
- 20. Blinn College-Brenham
- 21. Blinn College-Bryan
- 22. Blinn College-Schulenburg
- 23. Blinn College-Sealy
- 24. Cisco College-Abilene Educational Center
- 25. Cisco College-Cisco Campus
- 26. Coastal Bend College-Alice
- 27. Coastal Bend College-Kingsville
- 28. Coastal Bend College-Pleasanton
- 29. College of the Mainland
- 30. Collin County Community College District-Central Park Campus
- 31. Collin County Community College District-Courtyard Center
- 32. Collin County Community College District-Preston Ridge Campus
- 33. Collin County Community College District-Spring Creek Campus
- 34. Dallas County Community College District-Brookhaven Campus
- 35. Dallas County Community College District-Cedar Valley Campus
- 36. Dallas County Community College District-Eastfield Campus
- 37. Dallas County Community College District-El Centro Campus
- 38. Dallas County Community College District-Mountain View Campus
- 39. Dallas County Community College District-North Lake Campus
- 40. Dallas County Community College District-Richland Campus
- 41. Del Mar College-East Campus
- 42. Del Mar College-West Campus
- 43. Hill College-Cleburne Campus
- 44. Hill College-Clifton Campus

- 45. Hill College-Johnson Campus
- 46. Hill College-Hillsboro Campus
- 47. Hill College-Glen Rose Campus
- 48. Houston Community College System
- 49. Howard College-Big Spring
- 50. Howard College-Lamesa
- 51. Howard College-San Angelo
- 52. Howard College-SWCID
- 53. ITT-TI-San Antonio
- 54. ITT-TI-Houston
- 55. Laredo Community College-First Campus Downtown
- 56. Laredo Community College-South Campus
- 57. McLennan Community College
- 58. Lone Star College System-CY Fair
- 59. Lone Star College System-Kingood
- 60. Lone Star College System-Montgomery
- 61. Lone Star College System-North Harris
- 62. Lone Star College System-Tomball College
- 63. South Texas College
- 64. Temple College
- 65. Texas State Technical College-Harlingen
- 66. Texas State Technical College-Marshall
- 67. Texas State Technical College-Waco
- 68. The University of Texas at Brownsville/Texas Southmost College
- 69. The Victoria College
- 70. Weatherford College

Appendix B: Inventory of Applied Baccalaureate Programs at Texas Public Institutions

Institution	Degrees	On-line	CIP Codes	Subject Tracks
Brazosport College	BAT	partially	52.0200.10	Business Management; Process Operations Management; Safety, Health, and Environmental Management
Lamar University	BAAS	completely	30.9999.40	Interdisciplinary
Midland College	BAT	completely	52.0201.00	Organizational Management
Midwestern State University	BAAS	completely	30.9999.40	Interdisciplinary; Liberal Arts; Criminal Justice
Sam Houston State University	BAAS	partially	30.9999.40	Interdisciplinary
South Texas College	BAT	partially	52.0201.00	Computer and Information Technologies; Technology Management
Stephen F. Austin State University	BAAS	partially	30.9999.40	Interdisciplinary
Tarleton State University	BAAS BSAS	partially	30.9999.40	Business Occupations Business Administration
Texas A&M University- Commerce	BAAS	no	30.9999.40	Interdisciplinary (with Business Management emphasis)

Texas A&M University- Corpus Christi	BAS	no	30.9999.40	Applied Leadership; Child Development/Early Childhood Education; Community and Mental Health; Criminal Justice; Digital Information Mapping; Emergency Response; Environmental and Occupational Safety; Industrial Electronics and Manufacturing; Informational Technology; Legal Studies; Technical Communication
Texas A&M University- Kingsville	BAAS	no	30.9999.40	Interdisciplinary; Business
Texas A&M International University	BAAS	no	30.9999.40	Interdisciplinary
Texas State University-San Marcos	BAAS	partially	30.9999.40	Occupational Education; Professional Development
Texas State University- Texarkana	BAAS	partially	30.9999.40	Occupational/Vocational; Professional Development; Liberal Arts; Science; Administrative Leadership; Public Administration
Texas Woman's University	BAS	no	19.0505.00	Nutrition and Food Sciences
University of Houston- Downtown	BAAS	partially	30.9999.40	Criminal Justice; Safety Management
University Houston-Victoria	BAAS	partially	30.9999.40	Biotechnology; Biology; Communication; Computer Information Systems; Digital Gaming and Simulation; General Business; Leadership and Enterprise Studies; Legal Assistance and Administration; Networking and Security; Marketing; Psychology; Web and Media

University of North Texas	BAAS in Applied Technology and Performance Improvement (College of Information)	partially	30.9999.40	Corporate Business; Teaching in Technical Education
	BAAS (College of Public Affairs and Community Service)			Interdisciplinary
The University of Texas at Brownsville	BAT	partially	30.9999.40 52.0201.00 15.0612.00 11.0401.00 51.0000.00	Workforce Leadership/Supervision; Technology Application/Training; Computer Information Systems Technology; Health Services Technology
	BAAS			Interdisciplinary; Applied Business Technology
The University of Texas-Pan American	BAAS	no	30.9999.40	Business Technology; Interdisciplinary
The University of Texas of the Permian Basin	BAAS	partially	30.9999.40	Industrial Technology
The University of Texas at San Antonio	BAAS	partially	30.9999.40	Children, Family, and Community; Criminal Justice; Infancy and Childhood Studies; Mexican American Studies
The University of Texas at Tyler	BAAS	partially	30.9999.40	Interdisciplinary
West Texas A&M University	BAAS	partially	30.9999.40	Fire Safety and Protection; Interdisciplinary

Appendix C: Members of the Applied Baccalaureate Task Force

Chair: Peter Gawenda: Interim Dean, College of Applied Technology and General Studies, The University of Texas at Brownsville

Vice-chair: Richard Jolly: Executive Vice President, Midland College

Members:

Brian Berry: Dean, School of Economic, Political and Policy Sciences, The University of Texas at Dallas

Charles Cook: Vice Chancellor of Instruction, Houston Community College

Maribeth McAnally: Department Head, Applied Sciences, Texas A&M University at Commerce

Juan Mejia: Vice President for Academic Affairs, South Texas College

Charles Olson: Program Director, Applied Arts and Sciences Program, Midwestern State University

Rob Stewart: Provost and Senior Vice President for Academic Affairs, Texas Tech University

Ken Tasa: Dean, Educational Programs and Services, Brazosport College

Douglas Ullrich: Associate Professor, Agricultural Education, Sam Houston State University

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