



South Carolina Commission on Higher Education

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MEMORANDUM

To: Mr. Ken Wingate, Chair, and Members, S.C. Commission on Higher Education
From: Dr. Bettie Rose Horne, Chair, and Members, Committee on Academic Affairs and Licensing

Consideration of Annual Evaluation of Associate Degree Programs FY 2009-2010

Background

The South Carolina 1979 Master Plan requires the annual review of associate degrees in the State's public higher education institutions. In 1996, the passage of Act 359 underscored the importance of program accountability by focusing on questions related to time to degree and graduates' first-time passing rates on professional licensure examinations. Over time, the concept of accountability of institutions of higher education has grown on the national agenda.

The purposes of this study remain relevant as part of the focus of both state and national governments on institutional accountability. The language of Act 359 maintained the purposes of this annual review as they had been articulated in earlier legislation and Commission policy as follows:

- 1) to insure that programs demonstrate responsiveness to employment trends and meet minimum standards of enrollment, graduation, and placement; and
- 2) to identify programs which need to be strengthened.

Given the preponderance of associate degree programs which are employment-related to specific occupations or occupational sectors, this report has for many years sought to provide insight into specific programs which are *either exceptionally achieving their ends or are underperforming* in relationship to the state's current and future economic development needs.

The procedures for this review require each program's productivity to be evaluated in terms of enrollment, number of graduates, and percent of graduates placed in a related job or continuing their studies full-time. The following criteria apply:

1. Each program must produce at least six graduates during the evaluation year or an average of at least six graduates over the most recent three-year period.
2. At the most recent fall term, each program must enroll at least 16 students who generate 12 full-time equivalents.
3. At least 50 percent of the graduates available for job placement must be placed in a job related to their education or continue their education on a full-time basis.

Programs which fail to meet the above criteria must be canceled, suspended, or put on probation unless their continuation is justified to the Commission. Justification for programs may take into consideration such factors as manpower requirements, funding, and employment "stop outs" of students. In addition, three programs—General Technology, Vocational Technical Education, and General Engineering Technology—have historically had different and much more flexible standards of evaluation because of the unique needs they have filled and the low enrollments which they were expected to produce. Programs such as General Technology, Vocational Education, and General Engineering Technology have historically been considered "justified" for continuation regardless of whether they met the evaluation requirements.

When a program is placed on probation, the institution may continue to offer the program but must provide a plan for the program to meet all criteria within three years. Suspension means that the program's inability to meet the minimum criteria is serious enough to discontinue temporarily the enrollment of new students in the program until the institution can study the need and demand for the program. A program may remain on suspension for three years.

Distribution of Associate Degree Programs by System and Sector

For this reporting period, associate degree programs exist in all sixteen technical colleges and the four two-year regional branches of the University of South Carolina. In addition, AA/AS associate degrees are offered at Fort Jackson by USC-Columbia and by USC-Beaufort at the Marine Corps Air Station. Both of these are offered at the request of the military base administration and commanders.

The associate degree programs in the state's public institutions were evaluated using Fall 2010 enrollment data and academic year 2009-2010 graduation and employment data. Nine (9) associate degree programs in the two-year USC campuses and 309 associate degree programs in the technical college system were evaluated. New associate degree programs (those implemented within the past three years) are always excluded from this analysis.

General Analysis of the Programs of Study in the USC System

As stated above, all USC regional campuses designated as "two-year" as well as USC-Beaufort at the Marine Corps Air Station and USC-Columbia at Fort Jackson continue to offer Associate of Arts/Associate of Science degree programs. USC-Beaufort, formerly a two-year

institution which was approved to become a four-year institution in June 2002, has been permitted by the Commission on Higher Education to continue to offer the Associate of Arts/Associate of Science degree program at the military bases in Beaufort. The number of graduates from the program at USC-Beaufort shows a downward trend over the past eight years (see **Table 1**). According to USC-Beaufort officials, the dramatic decline in the on-base AA program has been precipitated at least in part by the fact that once USC-Beaufort became a four-year institution it charged tuition and fees for the two-year program at the four-year rate. Given the presence of other providers on the military base with significantly lower charges, enrollments have suffered. USC-Beaufort has recently adopted a new “military rate” for active military personnel; along with other resources that will be allocated to the program, USC-Beaufort is working proactively to revitalize this program.

In February 1998, USC-Columbia requested and received approval to revise its mission statement so that its ongoing offering of the Associate of Arts degree program at Fort Jackson would be officially included as part of its institutional mission. Enrollment and graduation data show (see **Table 1**) that this program is very small.

In the past, the Commission staff has held that, because it is small and peripheral to the mission of the state’s comprehensive *research* university, the AA/AS at Fort Jackson would be more appropriately offered by a two-year institution, either USC-Sumter or Midlands Technical College. The University administration has maintained historically that the program is important for carrying out the University’s community and humanitarian mission and has been strongly supported in this view by representatives of Fort Jackson, despite the small size of the program.

Over the past four years the numbers of graduates from the AA/AS programs in the University of South Carolina system have varied considerably as **Table 1** shows. The data reported from the USC-Columbia Institutional Research Office show that for 2009-2010 three of the six USC campuses, including Fort Jackson, offering the AA/AS program have experienced increases in graduates for 2009-2010 over the 2008-2009 academic year. Two USC campuses experienced a decrease in graduates in that year. In all, the total number of AA/AS graduates in the USC System increased from 309 to 342 from 2008-2009 to 2009-2010.

Completion of an AA/AS degree prior to transferring to a four-year institution has been shown to increase the rate at which transfer students complete the baccalaureate degree. That fact, linked with students’ eligibility for the Lottery Tuition Assistance Program while working toward their AA/AS degrees, suggests that the two-year USC regional campuses should consider promoting attainment of the AA/AS degree as a “best practice” to encourage progression toward completion of a baccalaureate degree.

Recently, two new developments in South Carolina have made the call to increase AA/AS graduates (and their subsequent successful transfers to baccalaureate programs) even more important. As a matter of state policy through legislation, the Education and Economic Development Act of 2005 has placed a premium on “seamless” transfer in higher education with the end of creating a better-prepared and better-credentialed work force in the state. More recently, the Higher Education Study Committee and the Commission on Higher Education have identified as the first goal in the *Leveraging Higher Education for Stronger South Carolina: Action Plan Implementation* making South Carolina one of the most educated states

in the next 15 years by increasing degree attainment.¹ This goal cannot be achieved without successful efforts, targeted to various elements of the population, to increase the numbers of persons with earned associate and baccalaureate degrees in South Carolina. Coupled with clear empirical evidence of the value added by baccalaureate-degree completers to the state's economic and civic development, this calls for state policy makers to make efforts to increase AA/AS production at all the technical colleges and the USC two-year campuses. These institutions have a significant opportunity, challenge, and responsibility to increase the number of AA/AS degree completers and prepare them for entry into a four-year program.

Table 1
USC-System AA/AS Program Graduates

	2002 -03	2003 -04	2004 -05	2005 -06	2006- 07	2007 -08	2008 -09	2009- 10
4-Year:								
USC-Columbia (Ft. Jackson)	14	12	4	8	11	11	5	8
USC-Beaufort	79	73	56	39	23	24	5	5
SUB-TOTAL	93	85	60	47	34	35	10	13
2-Year								
USC-Lancaster	81	69	71	91	108	99	119	112
USC-S'hatchie	80	84	92	76	62	52	85	109
USC-Sumter	119	70	74	62	45	81	50	64
USC-Union	45	55	49	51	46	57	45	44
SUB-TOTAL	325	278	286	280	261	289	299	329
TOTAL	418	346	346	327	295	324	309	342

Source: USC annual reports on associate degree data

¹*Leveraging Higher Education for a Stronger South Carolina: The Action Plan Implementation*, The Higher Education Study Committee, March 2009, 7.

Applied, Occupationally-Specific Two-Year Degrees in the USC System

The two-year campuses of the USC System present an important challenge to and opportunity for higher education institutions in South Carolina. Three of four of these two-year regional campuses are found in communities without a main campus of a technical college. These three campuses are USC-Lancaster, USC-Salkehatchie, and USC-Union. Of these three, only USC-Lancaster offers occupationally-specific degree programs, although neither their authorizing legislation nor Act 359 prohibits the others from offering such degrees. The occupational programs at USC-Lancaster are in nursing, criminal justice, and business. Graduates from the occupationally-specific two-year programs at USC-Lancaster are listed below in **Table 2** for the past two academic years. While the number of graduates has decreased in nursing and criminal justice, the number of graduates in business has increased. In the most recent year, all three of these occupational programs meet the CHE statewide productivity requirements. The USC-Lancaster occupational associate degree programs serve a small, but vital, set of counties in the state.

Table 2
USC-Lancaster Graduates of Two-Year Occupational Associate Degree
Programs of Study
(Academic Years 2008-2009 and 2009-2010)

	<u>Nursing</u>	<u>Criminal Justice</u>	<u>Business</u>
2008-2009	20	10	11
2009-2010	12	8	19

The Commission on Higher Education encourages collaborative efforts among the 2-year USC regional campuses and the technical colleges as an avenue to spur economic development. Both systems have responded with a variety of initiatives designed to meet the needs of rural areas. For example, a model for such collaboration which has existed for many years is the associate degree in nursing offered cooperatively by York Technical College with USC-Lancaster. USC offers the Bachelor of Science in Nursing-Generic (BSN-Generic) program through USC-Columbia at USC-Salkehatchie and at USC-Lancaster; the Bachelor of Arts in Liberal Studies degree; and the Bachelor of Arts in Organizational Leadership through USC-Columbia by traditional and distance education at the two-year regional campuses. York Technical College has reported significant enrollment growth in occupational courses/programs offered in Lancaster County through the Kershaw-Heath Springs Center. The Technical College of the Lowcountry is working closely with Colleton County to build a Quick Jobs Center to offer technology training; is collaborating with the Thunderbolt Career and Technology Center; and has partnered with Hampton County to renovate and expand technology training at the Mungin Center.

Another collaborative effort of note is a training center opened in Union in Fall 2009 in which USC-Union offers general education courses and Spartanburg Community College offers technical education courses. We commend this effort.

In summary, graduation rates and student enrollment data for the current review period show that all the two-year programs in the USC system (AA/AS and occupational programs) meet the productivity requirements for two-year programs.

General Analysis of Associate Degree Programs in the Technical Colleges

A summary of the number of programs evaluated over the past 10 years in various categories at the technical colleges is found in **Table 3**.

**Table 3:
Ten Year Summary Annual Associate Degree Program Evaluation
In the Technical Colleges**

Year Evaluated	Good Standing	On Probation	Under Suspension	Cancelled	Total
2001	269	22	9	7	307
2002	294	26	10	2	332
2003	297	19	14	1	331
2004	265	22	11	5	303
2005	276	13	8	4	301
2006	277	15	5	4	301
2007	281	15	4	4	304
2008	274	28	2	2	306
2009	275	29	5	0	309
2010	270	30	2	0	309

In the data for the current annual report, 30 (9.7%) programs out of a total of 309 which were analyzed at the technical colleges are on probation. By comparison, last year's report showed a total of 29 (9.3%) degree programs on probation; and the previous year 28 (9.1%) programs were on probation. For this reporting year, the specific programs (by degree and institution) on probation can be found in **Table 4**.

Table 4
Associate Degree Programs on Probation
in Fall 2010
(N=30)

<u>College</u>	<u>Degree</u>	<u>Program</u>
Aiken Technical College	MKT	Marketing
Aiken Technical College	FIN	Accounting
Aiken Technical College	LAW	Criminal Justice Technology
Aiken Technical College	BUS	Administrative Office Technology
Central Carolina	MFG	Electronics Technology
Central Carolina	STEM	Environmental Engineering
Central Carolina	AGR	Natural Resources Management
Denmark	BUS	Administrative Office Technology
Denmark	STEM	Electro-mech Engineering Technology
Denmark	BUS	General Business
Denmark	MFG	Electronics Technology
Florence-Darlington	HEA	Dental Hygiene
Florence-Darlington	HEA	Health Information Management
Greenville	STEM	Mechanical Engineering Technology
Greenville	STEM	Engineering Graphics Technology
Horry-Georgetown	HOS	Hospitality/Tourism Management
Midlands Technical College	BUS	Management
Midlands Technical College	MFG	Machine Tool Technology
Midlands Technical College	MKT	Marketing
Orangeburg-Calhoun	HEA	Medical Laboratory Technology
Piedmont Technical College	AGR	Horticulture Technology
Spartanburg	STEM	Civil Engineering Technology
Tech College of the Lowcountry	STEM	Civil Engineering Technology
Tech College of the Lowcountry	IT	Computer Technology
Tri-County	HEA	Respiratory Care
Tri-County	ARTS	Radio and Television Broadcasting
Tri-County	STEM	Electronics Engineering Technology
Tri-County	MFG	Heating, Ventilation, Air Conditioning Technology
Trident	STEM	Electronics Engineering Technology
Trident	STEM	Mechanical Engineering Technology

Engineering and Industrial Technology programs

In last year's report, Engineering Technology programs were at the top of the categorical list of programs on probation (N=13) with health programs second (N=4). This year Engineering Technology remains at the top of the probation category with nine programs on probation with business second (N=8) and industrial technology programs third (N=5). Programs in Law, Agriculture, Information Technology, Health Sciences and Arts complete the total of 30 probationary programs for this year's analysis.

The data showing low enrollments and graduates in Engineering Technology degree programs is long-standing. This report has shown that area of the curriculum to have had more programs on probation in every one of the past nine years. As a system, the Technical Colleges of South Carolina have been described as a model among the states for preparing the state workforce. However, the System needs to continue to work on developing a long term plan to remove Engineering Technology programs from the “probationary” group. These programs assist the state in attracting and retaining industries which want to locate in South Carolina. Such industries tend to be engines of major growth and innovation, attracting other corporations to enter into the state. BMW and Boeing are two examples of industries that have moved to South Carolina and provide extensive intangible benefits aside from jobs and income generated.

For ten years this report has cited the gulf between the often-stated need by the industrial/engineering community for Engineering Technology graduates and the small enrollments and graduates in these programs. Five years ago the Technical College System reported an initiative to address this issue more systematically by focusing on three areas:

- Elimination of excess coursework in some programs;
- Consolidation of multiple “engineering technology” programs at a single institution to concentrate resources and produce a more integrated curricular approach; and
- Vigorous recruitment of talented high school students—including the granting of college course credit through *Project Lead the Way*—into Engineering Technology programs.

Several institutions have developed initiatives aimed at increasing the numbers of student enrollment and graduation in the Engineering Technology programs. In September 2010, the SC Department of Education signed a formal agreement to work with technical colleges and public universities to promote engineering and mechatronics education after receiving a Rigorous Programs of Study grant from the US Department of Education to establish two pathways designed to positively impact the education of Science, Technology, Engineering, and Mathematics (STEM) professionals in the state. The partners include six technical colleges for Project Lead the Way and six technical colleges for mechatronics. Both PLTW and mechatronics are programs that begin in high school and allow students to take classes in which they receive dual credit. The University of South Carolina College of Engineering and Computing serves as the state’s Project Lead the Way (PLTW) University Affiliate for the grant.

Aiken Technical College has developed a dual-credit Pre-Engineering Academy in cooperation with Aiken County School District. As part of this program, Aiken Technical College provides the high school students with a dedicated advisor. The Pre-E Academy is based on the Project Lead the Way curriculum, humanities, and calculus as the foundation of courses. In Fall 2010, in addition to Teacher Cadets, the institution had 25 high school students enrolled in general education courses. Aiken Technical College and the University of South Carolina - Columbia have signed an articulation agreement pertaining to the Pre-Engineering program.

These efforts continue to meet with some success, since three engineering technology programs (**Table 7**) have moved from probation to good status. All the prevailing economic models for the state’s future assume that engineers supported by engineering technicians will together play an essential role in building South Carolina’s 21st century economy. To meet this goal, the decreasing numbers of students enrolled in and graduating from Engineering Technology programs in the state must be addressed.

Continuing Success of the AA/AS Programs in the Technical Colleges

The purpose of the AA/AS is to be the degree program in public two-year institutions which prepares students for transfer into baccalaureate programs. In South Carolina,

AA/AS programs were begun in the 1970s in response to the needs of persons who for reasons of finance, geography, and/or historical under-representation in higher education (especially mature students, women, and minorities) found it much more possible to begin a baccalaureate degree program by taking the first two years of coursework at a technical college.

For this reporting year, all AA/AS programs in the Technical College System are in the “good” category (see **Table 5**) although the program at Orangeburg-Calhoun remains small.

Table 5
Graduates of AA/AS Degrees by Technical College
2006-07 through 2009-10

<u>Technical College</u>	<u>Year</u>				
	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>
Aiken Tech	53	38	33	45	53
Central Carolina	28	33	35	42	31
Denmark	27	14	26	34	22
Florence-Darlington	50	49	29	36	59
Greenville	169	187	200	207	233
Horry-Georgetown	92	90	67	104	108
Midlands	238	260	267	308	285
Northeastern	38	39	32	28	41
Orangeburg-Calhoun	11	6	8	8	20
Piedmont	62	62	59	58	58
Spartanburg Community College	61	51	46	63	63
Lowcountry	19	21	26	28	54
Tri-County	65	62	69	78	86
Trident	342	323	302	342	313
Williamsburg	26	19	20	17	20
York	52	78	55	60	45
TOTAL	1333	1332	1274	1458	1491

As **Table 5** demonstrates, the AA/AS programs in the Technical College System have been a great success in opening up the possibilities for transferring into a four-year degree program for many South Carolinians. The data for 2009-2010 show that the programs continue to produce a significant number of graduates. Nine institutions graduated more students than

in the preceding year, five graduated fewer students, and two maintained the same number of graduates. The AA/AS program is of unique benefit to the state and the student because the program provides the first two years of a baccalaureate education at much lower cost than a generic four-year institution. As of Fall 2009, all degree designations in the Technical College System have been changed to the three nationally recognized ones: A.S. Associate in Science; A.A. Associate in Arts; A.A.S Associate in Applied Science.

The 2009 Higher Education Action Plan addresses the importance of institutions of higher education creating pathways for transfer students to transition successfully from two-year degree programs to four-year degree programs. In order to make South Carolina one of the most educated states in the country by the year 2030, the Action Plan recommends that the State “create incentives and requirements for seamless transitions between and among two-year and four-year institutions, including the implementation of a statewide initiative to monitor transfer.”² The CHE has implemented an on-line course transfer and articulation tool, SC TRAC, which helps transfer students identify course equivalencies and degree credit for transfer courses. Work is ongoing with the institutions to manage course equivalencies and transfer information so that up-to-date information related to course articulation and transfer is easily added and displayed.

Importance of the Associate Degree Nursing Programs

For a number of years this annual report has been grounded in two basic assumptions about the program of study leading to the associate degree in nursing:

1. In South Carolina the associate degree in nursing is accepted by employers as a legitimate degree for a Registered Nurse (RN), who is usually paid at the same rate as a baccalaureate-prepared nurse.
2. Meeting employers’ demands for a well-educated nursing workforce to provide safe care in hospitals and other healthcare settings requires the sustained commitment of each institution to enroll and graduate increasingly larger numbers of students. (As in many other states, South Carolina regularly graduates about two-thirds of all its new nurse graduates from associate degree programs.)

During the recession, demand for new nurses has declined, in part because of delayed retirements, but it is not possible to quantify the degree of decrease. The actual *level of employer demand* for nurses is unknown because no database has been made available to show what the actual level of employer demand might be. Currently, the South Carolina Technical College System reports a 90% nursing placement rate for ADN graduates. The recently established Office for Healthcare Workforce Research in Nursing in USC-Columbia’s S.C. Center for Nursing Leadership has set one of its priorities as collecting and disseminating supply and demand data. Anecdotal evidence suggests a decrease in employer demand as a number of graduates have reportedly been unable to find sustained employment in 2009. On the other hand, the *supply of graduates* from nursing programs in the Technical College System has grown significantly since the issuance of the *Colleagues in Caring* report in 2001.

²*Leveraging Higher Education for a Stronger South Carolina: The Action Plan Implementation*, The Higher Education Study Committee, March 2009, 18.

Among the 14 established ADN programs in the Technical College System, six graduated significantly more students in this year's reporting class, seven graduated fewer than last year, and one institution maintained the same number of graduates. The total of 1283 ADN nurses graduating from the Technical College system in 2009-2010 is the highest number ever. The significant growth in ten years (2000-01 to 2009-10) from 725 graduates per year in 2000-2001 to 1283 in 2009-2010 demonstrates the capacity of the technical college system to respond to market demand.

Table 6 shows the significant increase in the total number of graduates over the last nine years:

Table 6
Total Number of Graduates from Technical Colleges'
Associate Degree in Nursing Programs for Years
2000-2001 through 2008-2009

2000-2001	725
2001-2002	706
2002-2003	748
2003-2004	918
2004-2005	968
2005-2006	940
2006-2007	989
2007-2008	1156
2008-2009	1274

Degree Programs No Longer on Probation

For the current reporting year, a total of twelve programs which had been on probation in the technical colleges for last year's reporting period have been recommended by the State Technical College System for placement in good standing. In this group there are four programs in Health Science, three in Engineering Technology, three in Industrial Technology, and one each in, Criminal Justice, and the Combined AA/AS. The degrees and institutional locales of all the programs moving from Probation to Good are found below in **Table 7**. Health Science programs accounted for 30% (N=4) of the programs moving from Probation to Good status.

Table 7
Degree Programs Returning to
“Good” Status from “Probation” 2007-2008
(N=12)

<u>College</u>	<u>Degree</u>	<u>Program</u>
York Technical College	HEA	Dental Hygiene
Aiken Technical College	HEA	Radiological Technology
Trident Technical College	HEA	Physical Therapist Assistant
Tri-County Technical College	STEM	General Engineering Technology
Trident Technical College	STEM	Aircraft Maintenance Technology
Tri-County Tech	STEM	Engineering Graphics Technology
York Technical College	STEM	Computer Engineering Technology
Greenville Technical College	MFG	Machine Tool Technology
Tri-County Technical College	MFG	Machine Tool Technology
Tri-County Technical College	LAW	Criminal Justice Technology
Horry-Georgetown Tech	HEA	Emergency Medical Technology
Greenville Technical College	GEN	Combined AAAS

Tabular Analysis of Associate Degree Programs

Table 8 provides a succinct quantitative analysis of the programs of the technical colleges for this period which are on suspension. It is noteworthy that there are only two programs in this category, a fact which suggests that planning by the Technical College System for technical programs, based upon community and business demand for graduates in certain fields has minimized the need to suspend and cancel programs.

Table 8
Associate Degree Programs On Suspension in 2010
(or Continued for 1st or 2nd Year Suspension)
(N=2)

<u>College</u>	<u>Degree</u>	<u>Program</u>
First Year:		
Florence-Darlington Tech	STEM	Electro-mechanical Engr Technology
Second Year:		
Trident Technical College	MFG	Machine Tool Technology

Summary

All of the associate degree programs in the University of South Carolina system and 270 of the 309 technical college programs evaluated for this report meet the “good” status requirements for this reporting year. The associate degree programs in the USC system and the Technical College System are overwhelmingly meeting the modest statewide productivity standards which have been measured since 1983 in these annual reports.

A significant decline in enrollment and graduates in the AA program at USC-Beaufort will need to be monitored for improvement over the next few years. Similarly, analysis of programs in the Technical College System also suggests that despite improvement in five programs, efforts need to be continued to bolster enrollments and graduations in Engineering Technology, a field important to the State's economic development.

Recommendation

The Committee on Academic Affairs and Licensing commends favorably to the Commission this report's designation of programs for the current reporting year as shown in **Tables 1, 3, 6, 7, and 8**. Because of the importance of certain associate degree programs to economic development in South Carolina, the Committee recommends the Commission encourage the State Technical College system and the two-year campuses of the USC system to strengthen and foster current collaborative initiatives and continue to explore ways to increase enrollments and retention to graduation in all two year transferrable degree programs. The Committee further recommends that the State Technical College System particularly focus on retention and graduation rates in programs in Engineering Technology.