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November 7, 2002

MEMORANDUM

To: Mr. Dalton B. Floyd, Jr., Chairman, and Members, Commission on Higher Education

From: Ms. Dianne Chinnes, Chairman, Committee on Academic Affairs and Licensing

**Consideration of Annual Report on Evaluation of Associate Degree Programs
FY 2001-2002**

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. The purposes of this annual review remained unchanged by Act 359. Those purposes have been and remain 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.

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.

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.

Programs such as General Technology, Vocational Technical Education, and General Engineering Technology have historically been considered "justified" for continuation regardless of whether they met the evaluation requirements.

Distribution of Associate Degree Programs by System and Sector

For this reporting period, associate degree programs exist in all the technical colleges, all the two-year regional branches of the University of South Carolina, and all three of the four-year campuses of the University of South Carolina. The programs were evaluated using Fall 2001 enrollment data and academic year 2000-2001 graduation and employment data. Eight associate degree programs in the two-year USC campuses (including that AA/AS degree at USC-Beaufort), three associate degree programs in the four-year USC campuses, and 307 associate degree programs in the technical college system were evaluated. The three associate degree programs offered by the three four-year campuses of USC are: 1) the Associate Degree in Nursing (USC-Aiken); 2) the Associate Degree in Nursing (USC-Spartanburg); and 3) the Associate in Arts degree (USC-Columbia at Fort Jackson.) The Nursing programs are discussed in greater detail in the section on the USC system's associate degree programs.

New associate degree programs (i.e., those implemented within the past three years) in the Technical College system have been excluded from this analysis. No new associate degree programs have been added at any of the USC two-year campuses or four-year campuses during the past three years.

General Analysis of the Programs of Study in the USC System

The AA/AS Degree Program at USC Two-year Regional Campuses and at USC-Columbia

All of the University of South Carolina's campuses which had been designated as "two-year" (until USC-Beaufort was approved to move to four-year status by the Commission in June 2002), as well as USC-Columbia at Fort Jackson, offer the Associate of Arts/Associate of Science degree programs. In February 1998, in response to the requirements of Act 359 and to earlier concerns about the perceived inappropriateness of one of the state's three research institutions offering an associate degree, USC-Columbia proposed a revision of its mission statement so that explicit recognition of its offering of the Associate of Arts degree at Fort Jackson would be included in its mission. The Commission's acceptance of this revision has now made the offering of this associate degree by USC-Columbia an official part of the institution's mission.

Each of the AA/AS programs at these campuses is enrolling and graduating students in satisfactory numbers for meeting productivity standards. However, USC-Beaufort will cease to offer the AA/AS degree as part of its conversion to a four-year institution. Instead, USC-Beaufort will begin to offer a new four-year program known as the Bachelor of Arts in Liberal Studies at the same time that it phases out the AA/AS. Over the past three years the numbers of graduates from the AA/AS programs in the University of South Carolina system rose in the second year and fell again in the third year, creating a pattern of relatively static multi-year growth. The self-reported data for the most recent year show that three of the AA/AS programs offered within the University of South Carolina system (i.e., those at USC-Beaufort, USC-Salkehatchie, and USC-Union) have experienced decreases of graduates for the year under analysis. The figures for each campus are recorded below:

USC-System AA/AS Program Graduates

	1998-1999	1999-2000	2000-2001
USC-Columbia	17	12	14
USC-Beaufort	61	87	63
USC-Lancaster	72	74	86
USC-Salkehatchie	94	93	83
USC-Sumter	157	152	160
USC-Union	25	51	35
TOTAL	426	477	438

Source: USC annual reports on associate degree data

Because the two-year regional campuses all have a mission to promote transfer, and because of the importance which Act 359 has placed on timely degree completion, it will continue to be important for the University's two-year regional campuses to maximize the numbers of students enrolling in and graduating from an AA/AS degree program. According to the work of the Palmetto Institute, it will become increasingly crucial to the sustained development of the state to increase the production of B.A. or B.S. degree graduates. Given the relatively low percentage (22.9% according to the Federal Census of 2000) of baccalaureate degree holders in the state's adult population and the recent national report showing that South Carolina has dropped in its production of baccalaureate degree-holders, the State's public two-year campuses have a significant challenge to increase the numbers of AA/AS degree completers and assure them entry into a four-year program.

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

Occupationally specific associate degrees are offered at two of the four-year campuses of the USC system (i.e., Aiken and Spartanburg). In both of these four-year campuses of the University, the Associate Degree in Nursing is the only associate degree still being offered. In order to comply with Act 359, which appears to limit the offering of two-year programs to two-year campuses, during academic year 1997-1998 the mission statements of USC-Aiken and USC-Spartanburg were revised by the USC Board of Trustees and approved by CHE to permit the continued offering of the two-year nursing programs at both these institutions. USC-Lancaster is the only one of the four remaining two-year campuses of the University which offers occupationally-specific degree programs, although legislation permits the offering of these kinds of degrees at all the two-year regional campuses.

The occupational programs at USC-Lancaster are nursing, criminal justice, and business. Graduates from the occupationally specific two-year programs at USC-Lancaster, USC-Aiken, and USC-Spartanburg are listed below for 2001.

**USC System Graduates of Two-Year Occupationally-Specific
Programs of Study
(2001)**

	Nursing	Criminal Justice	Business
USC-Aiken	67	---	---
USC-Lancaster	9	15	11
USC-Spartanburg	44	---	---

Summary

The graduation numbers 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) are now meeting the productivity requirements for two-year programs. The three occupational programs at USC-Lancaster are producing relatively small numbers of graduates, which in part reflects the relatively sparse population of the area served.

While the productivity standards for these occupationally-related programs of study are being met, the three campus Associate Degree in Nursing programs are failing to increase the numbers of their graduates to meet the growing demand for Registered Nurses in the marketplace. In the past three years, the Associate Degree in Nursing programs of the USC system have graduated 122 in 1998-1999; 115 in 1999-2000; and 120 in 2000-2001. This static multi-year rate of graduates will not contribute to closing the gap between the supply and demand for Registered Nurses.

General Analysis of Associate Degree Programs in the Technical Colleges

A summary of the number of programs evaluated over the past nineteen years in various categories at the technical colleges is found in **Table 1** of this report. Overall, for this reporting year 22 programs of study (out of a total of 307 which were analyzed) at the technical colleges are on probation during the current reporting period. Of these, nine are in the first year of probation; five are in the second year of probation; and five are in the third year of probation. Three are in extraordinary fourth years of probation, as declared "justified" by the Technical College System. These programs are Construction Engineering Technology at Greenville Technical College; Electronics Engineering Technology program at Orangeburg-Calhoun Technical College; and (Deaf) Interpreter Program at Spartanburg Technical College.

By comparison, last year's report showed a total of 30 degree programs on probation; and the previous year 31 programs were on probation. For this reporting year, the programs on probation and the number of years they have been on probation can be found in **Table 2**.

Engineering Technologies

Historically and again this year, a large number of the programs on probation (13 or 59% of the total of 22) are found in the program clusters of the Engineering Technologies. Smaller numbers of programs on probation are to be found in Health (n=3), Industrial Technologies (n=2), Business (n=2), and one each in two other areas (i.e., Interpreting for the Deaf and one AA/AS program.)

This year's report continues the long-standing pattern of overrepresentation of engineering technology programs on probation for lack of adequate enrollments and/or graduations. This situation is a national trend and not unique to South Carolina.

The reports of the Commission on Higher Education have mentioned several problems associated with this entire group of programs. Most importantly, these refer to the existence of programs with discrete names but very similar curricula, an inability to attract large numbers of academically prepared students, and—related to the second point—an inability to attract large numbers of women and minority students. Possible options to address the probationary status quo of this family of academic programs, include: 1) consolidation of continuing programs; 2) converting degree programs to certificates or diplomas; 3) reworking the Engineering Technology programs to curricula of the Associate in Occupational Technology degree with lesser requirements in mathematics and engineering and more applied academic work; 4) decreasing the high number of course credit requirements which make it difficult to complete this "two-year" degree in two years; and, finally, 5) closing the degree program entirely when all these other avenues have been exhausted. Each of these options should be considered seriously, given the long-running record of the Engineering Technology programs in failing to meet the modest requirements for program productivity.

Viability for these programs could be enhanced in both enrollments and graduation rates by implementing a statewide plan to increase the numbers of minorities and women to be recruited into, retained in, and graduated from engineering technology programs. Historically, both groups have been underrepresented in these programs.

The Palmetto Institute, concerned about the need for South Carolina to invest in its human resources, has commented on the critical relationship between attracting information-based and "smart manufacturing-based" industries in the 21st century and increasing enrollments and graduates in programs which contribute to these industries' needs. Likewise, the mix of students by gender and ethnicity must begin to reflect more accurately the mix of gender and ethnicity in South Carolina's population base.

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

The AA/AS is the transfer degree program in the public two-year institutions meant to prepare students for baccalaureate study. That is its sole reason for being. Programs in the AA/AS area were begun in the 1970s as a response to needs of persons from groups which for reasons of finance, geography, and/or historical under-representation in higher education (especially older women

and African-Americans) found it much more possible to begin a baccalaureate degree program by taking the first two years of coursework at a technical college.

In 1998, for the first time, the nine technical colleges with the most recently approved AA/AS programs had their programs reviewed for productivity. In 1998's report, 15 of 16 of the technical colleges' AA/AS programs (including 8 of the 9 new ones) were in the "good" category with respect to enrollments, graduates, and placements. In 1999 and 2000, all 16 of the AA/AS programs were in the "good" category. In the 2001 report, one of the 16 programs (i.e., Florence-Darlington Technical College) was placed on probation, because of the institution's inability to supply data to show where the graduates were placed. This year, for the same reason, only the Florence-Darlington Technical College AA/AS program is again on "probation."

The increased enrollment and graduation successes of the AA/AS programs, their ability to create access to higher education, their potential for increasing upper-division enrollments in South Carolina's public four-year institutions, and their low cost to students and the state underscore the importance of assuring their continuation. Because these programs hold the promise of low-cost access to higher education for those who historically have been underrepresented, both the technical colleges and USC campuses offering the AA/AS need to provide appropriate course offerings and scheduling which will expedite the time between enrollment and transfer to a four-year institution for students in these programs.

Distance education modes for providing increasing numbers of course scheduling opportunities are of growing importance for addressing the needs of large numbers of AA/AS-seeking students. The Technical College System's "Tech-on-line" courses offer one alternative through distance education for helping to meet this need. Several technical colleges are in their third year of programming to increase numbers through distance education coursework in the AA/AS degree. At present, two technical colleges, Florence-Darlington Technical College and Piedmont Technical College, are offering the entire Associate in Arts program through distance education learning. Both programs are also available through the Southern Regional Education Board's Electronic Campus. The use of distance education to expand course offerings should contribute positively to promoting the completion of the AA/AS degree and broadening access to undergraduate higher education to as many South Carolinians as can benefit from it.

The Importance of the Associate Degree Nursing Programs

As stated in this report for the past three years and in the statewide review of the baccalaureate and graduate programs in nursing which the Commission

issued in 2001, the nursing profession continues to face two major problems. The first of these is an issue of professional identity, centered on the question of whether the associate or baccalaureate degree should be required for entry-level as a professional nurse, i.e., "Registered Nurse" (R.N.) Thus far, the marketplace has found both degrees relatively equally qualified at the R.N. level, but hired many more of the associate degree-prepared graduates. In South Carolina, as in many states, at any given time about two-thirds of all first-time nursing students preparing for the R.N. are in an Associate Degree program; and about two-thirds of those entering the field of nursing after having completed their academic degrees are Associate Degree-prepared nurses.

The second issue confronting the profession is the existence of a shortage of all levels of nursing from the Licensed Practical Nurse (a one-year, non-degree program) through the doctorate level. This problem is owed to many factors, including a failure of the profession to attract men and minorities in significant numbers; a large and growing number of late-middle-aged nurses preparing to retire; and an inability to attract the traditionally large pool of female students from high school into the profession.

As was reported last year in this report and in the nursing profession's "Colleagues in Caring" report on the state of nursing in South Carolina, like the rest of the country South Carolina is confronted with a growing nursing shortage. Many reasons for this shortage are discussed in prior reports of the Commission. To relieve this shortage in the fastest time period possible will require sustained commitment to enroll and graduate increased numbers of associate degree nurses annually.

The technical colleges' eleven Associate Degree in Nursing programs demonstrate **an increase of 8%** in graduates from 1999-2000 to 2000-2001. The three-year average of graduates is 668. Thus, the increase in graduates in the current year needs to be sustained and increased in the next ten years.

**Total Number of Graduates from Technical Colleges'
Associate Degree in Nursing Programs for Years
1998-1999 through 2000-2001**

1998-1999	699
1999-2000	580
2000-2001	725

In light of heavy demand and relatively stable numbers of new Associate Degree-prepared nurses, the recommendation in the South Carolina "Colleagues in Caring" report to stabilize at present levels the enrollments and graduates of Associate Degree in Nursing programs becomes a moot point. Until the gap

between supply of and rising demand for Registered Nurses can be adequately addressed, the Technical College System—like the Associate Degree in Nursing programs of the USC system--should be strongly encouraged to increase enrollments and graduates.

Recently, the State Tech system and the South Carolina Hospital Association have received a grant to provide mentoring to young persons in high school and in hospitals to increase enrollments in nursing. This commendable initiative, which has not yet been implemented, deserves to be followed for what it might produce in terms of increased student interest and enrollments in nursing programs.

Degree Programs No Longer on Probation

For the current reporting year, a total of eleven programs which had been on probation in the technical colleges for last year's reporting period are in good standing for the current reporting period. These programs are:

<u>College</u>	<u>Degree</u>	<u>Program</u>
Orangeburg-Calhoun Tech	ENGR	Engineering Graphics
Spartanburg Tech	ENGR	Engineering Graphics
Greenville Tech	ENGR	Environmental Health & Safety
Florence-Darlington Tech	HEA	Health Info Management
Midlands Tech	HEA	Health Info Management
Orangeburg-Calhoun Tech	HEA	Medical Laboratory Technology
Trident Technical College	HEA	Medical Laboratory Technology
Trident Technical College	HEA	Occupational Therapy Assistant
Midlands Tech	HEA	Physical Therapy Assistant
Tech College of Lowcountry	IND	Building Construction Technology

Tabular Analysis of Associate Degree Programs

The following tables provide a succinct quantitative analysis of the programs of the technical colleges for this period.

Table 1
Nineteen Year Summary
Annual Associate Degree Program Evaluation
In the Technical Colleges

<u>Year</u> <u>Evaluated</u>	Total	Good <u>Standing</u>	On <u>Probation</u>	Under <u>Suspension</u>	<u>Cancelled</u>
1983		198	30	10	12
	250				
1984		206	33	2	9
	250				
1985		214	16	17	9
	256				
1986		212	30	11	9
	262				
1987		216	29	11	6
	262				
1988		204	44	15	4
	267				
1989		215	41	13	5
	274				
1990		254	44	12	8
	318				
1991		244	46	6	10
	306				
1992		251	36	11	4
	302				
1993		247	36	16	1
	300				
1994		260	31	16	5
	312				
1995		275	35	5	5
	320				
1996		267	25	14	6
	312				
1997		262	29	11	6
	308				
1998		270	18	9	7
	304				
1999		261	31	7	2
	301				
2000		264	30	7	5
	306				
2001		269	22	9	7
	307				

Table 2
Associate Degree Programs on Probation
(Or Remaining on Probation 2nd or 3rd Years)
in Fall 2000

<u>College</u>	<u>Degree</u>	<u>Program</u>
Florence-Darlington Tech	AAAS	AA/AS degree program (2)
Midlands Tech	ABUS	Court Reporting (3)
Williamsburg Tech	ABUS	Office Systems Tech (1)
Greenville Tech	ENGR	Architectural Eng Tech (3)
Midlands Tech	ENGR	Architectural Eng Tech (3)
Trident Technical College	ENGR	Civil Eng Tech (1)
Central Carolina Tech	ENGR	Civil Eng Tech (1)
Spartanburg Tech	ENGR	Civil Eng Tech (2)
Aiken Tech	ENGR	Computer Eng Tech (1)
Greenville Tech	ENGR	Construction Eng Tech (J)*
Aiken Tech	ENGR	Electro-Mechanical Eng Tech (2)
Orangeburg-Calhoun Tech	ENGR	Electronics Eng Tech (J)*
Central Carolina Tech	ENGR	Engineering Graphics Tech (2)
Greenville Tech	ENGR	Mechanical Eng Tech (1)
Midlands Tech	ENGR	Mechanical Eng Tech (3)
Trident Tech	ENGR	Mechanical Eng Tech (1)
Spartanburg Tech	HEA	Medical Laboratory Tech (1)
Midlands Tech	HEA	Pharmacy Tech (2)
Trident Technical College	HEA	Physical Therapy Assistant (1)
Florence-Darlington Tech	IND	Automotive Tech (3)
York Technical College	IND	Automotive Tech (1)
Spartanburg Tech	PSER	Deaf Interpreting (J)*

*Extraordinary 4th year of probation "justified" by State Technical College System

Table 3
Associate Degree Programs To Be Suspended
(or Continued for 2nd or 3rd Year Suspension) in Fall 2000

<u>College</u>	<u>Degree</u>	<u>Program</u>
Florence-Darlington Tech	ENGR	Chemical Eng Tech (2)
Horry-Georgetown Tech	ENGR	Electronics Eng Tech (2)
Midlands Tech	ENGR	Engineering Graphics Tech (1)
Aiken Tech	ENGR	Nuclear Eng Tech (1)

Horry-Georgetown Tech	IND	Heat, Vent, AC (2)
Spartanburg Tech	IND	Heat, Vent, AC (1)
Greenville Tech	IND	Industrial Electronics Tech (1)
Horry-Georgetown Tech	IND	Machine Tool Tech (1)
Spartanburg Tech	IND	Nuclear Service Tech (3)

Table 4

Associate Degrees Cancelled In Fall 2000

<u>College</u>	<u>Degree</u>	<u>Program</u>
Orangeburg-Calhoun Tech	AGR	Forest Products Tech
Spartanburg Tech	ABUS	Marketing
Orangeburg-Calhoun Tech	ABUS	Transportation and Logistics
Trident Tech	ENGR	Chemical Engineering Tech
Orangeburg-Calhoun Tech	ENGR	Electronic Instrumentation Tech
Spartanburg Tech	ENGR	Textile Management Tech
Florence-Darlington Tech	IND	Aircraft Maintenance Tech

Summary

All 11 of the associate degree programs in the University of South Carolina system and 269 (88.0 percent) of the 307 technical college programs evaluated for this report meet the "good" status requirements for this reporting year.

Meeting "good" requirements for program productivity is important for the efficient use of campus resources including faculty, facilities, and library information systems. It is not synonymous, however, with producing the numbers of graduates in particular fields for which demand is growing. Chief among these programs at this time are the Associate Degree in Nursing programs. Although Nursing graduates are relatively stable in both systems and have increased in the past year, more needs to be done on a long-term basis to assure a larger supply of prepared graduates ready to become Registered Nurses.

The AA/AS programs, too, are critical to the State's needs for more persons prepared for upper-division baccalaureate degree programs. All AA/AS programs should be in "good" standing, especially those able to meet enrollment and graduation program standards. Likewise, students in these programs need to be assured that the USC campuses and the technical colleges which offer the AA/AS are providing appropriate numbers of sections and variety of course offerings to allow for completion of their two-year degree and transfer to a four-year institution in the shortest possible time.

Finally, programs in engineering technology need to be reviewed in terms of the type of curriculum they offer, the quantity of credit hours required for their completion, and their ability to recruit and retain students.

Recommendation

The staff recommends that the Committee on Academic Affairs and Licensing commend favorably to the Commission this report's designation of programs for the current reporting year as shown in **Tables 1, 2, 3, and 4**, and further recommend that the Committee request

1. that the Technical College System and the University of South Carolina System consider exploring ways of expanding resources, including qualified faculty, clinical sites, and funding, to expand program capacity, increase enrollments, and improve retention in their Associate Degree in Nursing programs, and
2. that the Technical College System consider the revision of appropriate Engineering Technology programs in terms of required semester hours, level of preparation, and possible consolidation or elimination in favor of certificate and diploma programs.

The Committee will consider this item at its meeting on November 6 and will make its recommendation to the Commission on November 7.