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Dr. Conrad D. Festa
Executive Director

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MEMORANDUM

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

From: Dr. Vermelle Johnson, Chairman, Committee on Academic Affairs and Licensing, and Members *VJJ by r/k*

Consideration of Annual Evaluation of Associate Degree Programs
FY 2002-2003

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 the sixteen technical colleges, the four two-year regional branches of the University of South Carolina, and the four four-year campuses of the University of South Carolina. Last year's report indicated that the four-year regional campuses of the University of South Carolina at USC-Aiken, USC-Beaufort, and USC-Upstate were pledged to discontinue all associate degree programs. Thus, by academic year 2005-2006, all associate degrees in public institutions of higher education in the state were anticipated to be offered in two-year institutions with the sole exception of the AA/AS at Fort Jackson offered by USC-Columbia. This year, because of an agreement brokered with the Commission on Higher Education, USC-Beaufort will continue to offer the AA/AS at the military bases in Beaufort, owing to a request from the military leadership in the Beaufort area.

The associate degree programs in the State's public institutions were evaluated using Fall 2003 enrollment data and academic year 2002-2003 graduation and employment data. Seven associate degree programs in the two-year USC campuses, four associate degree programs in the four-year USC campuses, and 331 associate degree programs in the technical college system were evaluated. The four associate degree

programs which were still in 2002-2003 offered by the four four-year campuses of USC were: 1) the Associate Degree in Nursing (USC-Aiken); 2) the Associate Degree in Nursing (USC-Upstate); 3) the Associate in Arts degree in Beaufort's military locations by USC-Beaufort; and 4) the Associate in Arts degree (USC-Columbia at Fort Jackson.)

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 Campus, USC-Beaufort, and USC-Columbia

All USC regional campuses designated as "two-year," USC-Beaufort (approved for four-year status in September 2002 by the CHE), and USC-Columbia at Fort Jackson, offer the Associate of Arts/Associate of Science degree programs. USC-Beaufort's approval as a four-year institution originally had carried with it a proviso that the AA/AS would be eliminated simultaneously with the institution's initiation of four-year programming. However, in 2004, in response to a request from the military authorities in Beaufort, the Commission approved amending this position upon USC-Beaufort's request to continue the program for the sake of the military population in Beaufort.

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 requested an approved revision of its mission statement so that implicit recognition of its Associate of Arts degree offering 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.

On the other hand, USC-Aiken and USC-Upstate have indicated that they are removing all associate degree programs from their curriculum. Thus, after the academic year of 2005-2006, USC-Columbia and USC-Beaufort will be the only four-year institutions in the State to offer the associate degree in any field.

Each of the AA/AS programs at these campuses is now enrolling and graduating students in satisfactory numbers for meeting productivity standards. However, over the past three 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 self-reported data for 2002-2003 show all USC campuses offering the AA/AS program have experienced decreases in graduates for 2002-2003 over the 2001-2002 academic year. Data from the

National Center for Educational Statistics show that students who complete an AA/AS degree prior to transferring to a four-year institution are twice as likely to complete a B.A. or B.S. degree than those who do not. Thus, the two-year USC regional campuses should consider preparation of a master plan to increase the numbers of AA/AS degree recipients each year for the next decade. The actual graduation figures for each two-year regional campus of USC for the past four years are recorded below:

Table 1
USC-System AA/AS Program Graduates

	1999-2000	2000-2001	2001-2002	2002-2003
USC-Columbia	12	14	19	14
USC-Beaufort	87	63	72	71
USC-Lancaster	74	86	96	81
USC-Salkehatchie	93	83	90	80
USC-Sumter	152	160	161	119
USC-Union	51	35	52	41
TOTAL	469	508	546	453

Source: USC annual reports on associate degree data

In addition to the NCES data on baccalaureate degree completion related to prior associate degree completion, the regional campuses' missions to promote transfer make it important that they maximize enrollments in and graduates of the AA/AS degree program. Research reports from the Commission on Higher Education, the Palmetto Institute and other contemporary assessments of need conclude that increased production of B.A. and B.S. recipients will be increasingly important to the sustained economic and civic development of the state. 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 opportunity, challenge and responsibility to increase the numbers of AA/AS degree completers and to prepare them for entry into a four-year program.

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

Until the end of Spring semester 2004, the Associate Degree in Nursing, was offered at two of the *four-year* regional campuses of the USC system (i.e., Aiken and

Upstate). 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-Upstate 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. However, as stated above, both USC-Aiken and USC-Upstate subsequently changed their positions on this program. As of May 2004, USC-Upstate has entirely divested itself of an associate degree program in nursing; the neighboring technical college, Spartanburg Technical College, has implemented a similar program that is anticipated to be twice the size of the USC-Spartanburg associate degree program. USC-Aiken has begun a similar process of divestiture in favor of the neighboring technical college. This process at Aiken is expected to be completed by the time of next year's report on associate degree programs.

A different situation occurs for occupationally-specific degree program offerings on the two-year regional campuses of the University of South Carolina. Although neither the authorizing legislation for these campuses nor Act 359 prohibits the offering of occupational degrees at two-year regional campuses of USC, among them only USC-Lancaster offers occupationally-specific degree programs. 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-Upstate are listed below for 2002.

Table 2
USC System Graduates of Two-Year Occupationally-Specific
Programs of Study
(Academic Year 2002-2003)

	Nursing	Criminal Justice	Business
USC-Aiken	47	---	---
USC-Lancaster	14	11	15
USC-Upstate	71	---	---

Given the needs for economic development in the mostly-rural counties that the two-year regional USC campuses serve, the inclusion or increase of two-year occupationally-related degree programs in the curricula of the four remaining two-year regional USC campuses (i.e., Lancaster, Union, Salkehatchie, and Sumter) should be explored.

Summary of USC System Offerings in Associate Degrees

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) 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.

Nevertheless, productivity standards for these occupationally-related programs of study are being met. The three associate degree programs in nursing are showing growth. In the past four years, the Associate Degree in Nursing programs of the USC system have graduated 115 in 1999-2000; 120 in 2000-2001; 111 in 2001-2002; and 132 in 2002-2003. Despite institutional decisions at USC-Upstate and USC-Aiken to cease to offer the associate degree in nursing, it is heartening to see the increased numbers of graduates at these campuses in the ADN programs.

There has been a decrease in the numbers of graduates in the AA/AS programs at the two-year regional campuses of USC for the 2002-2003 academic year over the prior two years. The phenomenon should be studied by the University, since the state needs more baccalaureate degree holders and because national studies show baccalaureate degree completion is positively associated with AA/AS degree completion among transfer students. It is important for the University to know what is causing fewer AA/AS graduates from their two-year campuses and to establish a ten-year master plan for increasing graduates in this program.

Likewise, because most of the two-year USC regional campuses are in economically underdeveloped and rural, isolated counties, to promote economic development in these communities (as long as there is no unnecessary duplication of efforts with near-by technical colleges), two-year regional USC campuses should explore adding occupationally-related associate degrees. Especially the three two-year regional campuses in rural counties (Union, Salkehatchie, and Lancaster) should be proactive in this regard as a mechanism for attracting and retaining business and industry.

General Analysis of Associate Degree Programs in the Technical Colleges

A summary of the number of programs evaluated over the past 21 years in various categories at the technical colleges is found in **Table 5** of this report.

Overall, 19 programs of study (out of a total of 331 which were analyzed) at the technical colleges are on probation during the current reporting period. By comparison, last year's report showed a total of 26 degree programs on probation; and the previous

year 22 programs were on probation. For this reporting year, the 19 programs on probation can be found in **Table 6**.

Engineering and Industrial Technology programs: Biggest numbers of Probationary Programs

For the first time in several years, the number of Engineering Technology programs on probation (n=5) is smaller than the number of Industrial Technology programs on probation (n=7). Fewer programs are on probation in Health (n=2), Business (n=2), Computer Technology (n=1), and Public Service (n=2). This year's smaller number of Engineering Technology programs on probation is the result of at least three factors: 1) seven formerly probationary Engineering Technology programs now on suspension; 2) three Engineering Technology programs which the State Technical College System office requests be removed from "probation" to "Good-justified" because of institutional reporting omissions for last year's graduation statistics; and 3) actions, as reported by the State Technical College System, of several technical colleges to consolidate several low-productivity Engineering Technology programs to produce a smaller number of Engineering Technology programs but with higher productivity.

Despite the reduction of the number of Engineering Technology programs on probation, the ability of the state's industries to prosper in manufacturing and high-tech sectors depends increasingly upon the availability of expertise in engineering-related support fields. In an era when high tech development is the underpinning of a vibrant state economy, the Technical College System should plan for no probationary designations among Engineering Technology programs. The major factors in eliminating probationary status for enrollments and graduations in these programs are to strengthen academic preparation of high school students who are ready to enter such programs (to lessen their drop-out rates after entry) and to supplement traditional white and male student populations in these programs with enhanced numbers of women and minorities.

Any statewide plan by the Technical College system for overcoming probationary status based upon enrollments and program completions, therefore, should assure that the programs in the Engineering Technologies—as well as in the Industrial Technologies—are recruiting stronger academic students from the high schools and that they are proactively open to both genders and all racial/ethnic groups. The workforce of today already is considerably more "gendergrated" and racially/ethnically integrated than ever before. The workforce of tomorrow will demand even higher levels of both of these values. It is not too early now to help assure that South Carolina is prepared to meet that challenge. Studies such as the CHE's path-breaking *Foundations for the Future* report and reports from groups such as The Palmetto Institute, have unfailingly commented on the close relationship between increasing enrollments and graduation rates in technical and industrial degree programs and attracting information-based and "smart manufacturing-based" industries.

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. AA/AS programs were begun in the 1970s in response to the needs of persons from groups which for reasons of finance, geography, and/or historical underrepresentation 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. Only in the reports of 1998, 2001, and 2002 (and, in the latter two reports, only on a technicality) did one of the 16 technical colleges fail to meet the productivity standards for the AA/AS. For this reporting year, all AA/AS programs in the Technical College System are in the "good" category.

In short, the AA/AS programs in the Technical College System have been an unmitigated success in opening up the possibilities of a four-year degree to many South Carolinians. The data for 2002-2003 show that there was an 8% increase of graduates in the AA/AS programs of the Technical College system over the three-year average of 2000-2001, 2001-2002, and 2002-2003. This shows increasingly students are becoming more aware of the desirability of getting a degree from the technical colleges before proceeding to the B.A. or B.S. at a four-year institution. A review of catalogs and semester course schedules in the technical colleges continues to suggest that more frequent scheduling of courses and more course choices by technical colleges would contribute further to quickening time to degree and increasing the number of graduates of these programs. Such a strategy will further enhance both accessibility to and affordability of baccalaureate degrees for the state's residents. Distance education offerings of this degree are at 100% in at least two technical colleges. While this is commendable as a mechanism for increasing access to higher education, distance education can never substitute entirely for the desire of many students to have the experience of real time, on-site coursework.

The Importance of the Associate Degree Nursing Programs

For the past four years, this report has pointed out two issues which continue to characterize the nursing profession. 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 desirable for initial

employment. The associate degree-prepared graduates in South Carolina, as in many other states, account for about two-thirds of all first-time nursing graduates eligible to take the NCLEX examination to practice as Registered Nurses.

The current nursing shortage is the second issue confronting the profession. There are many reasons for this shortage, including a failure of the profession to open its doors affirmatively to men and minorities; 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. To relieve the shortage in the fastest time possible will require sustained commitment to enroll and graduate increasingly larger numbers of nurses annually. In that latter capacity, only the associate degree programs can be expected to be leaders.

Last year, the report of the graduates of the technical college's eleven Associate Degree in Nursing programs showed a decrease of 3.6% over the previous year's graduation numbers. This year's report (2002-2003) shows a 6% increase of graduates from these 11 programs over the 2001-2002 academic year. (See Table 3). This is an encouraging increase for a time period when the demand for Registered Nurses is rising. If the number of graduates is to rise to meet reported demand, the state's associate degree programs need to sustain significantly increased graduation rates for at least the next ten years to prevent a worsening demand deficit in the coming decade. This is especially true because so many young nurses are exiting the profession quickly and because so many of the older nurses are at or quickly reaching retirement age. Thus, both the technical colleges and the regional campuses of the University of South Carolina should make the growth of enrollments and graduation rates in their ADN programs an institutional priority.

Table 3
Total Number of Graduates from Technical Colleges'
Associate Degree in Nursing Programs for Years
1999-2000 through 2002-2003

1999-2000	580
2000-2001	725
2001-2002	706
2002-2003	748

Degree Programs No Longer on Probation

For the current reporting year, a total of 14 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. Three of these programs are Engineering Technology programs. In all three cases, the reason given for removing the programs from probationary status to "Good-Justified" is the addition of one graduate to each of the programs' graduate numbers submitted for the prior year. These programs are:

Table 4
Degree Programs Returning to
"Good" Status from "Probation" 2002-2003

<u>College</u>	<u>Degree</u>	<u>Program</u>
Williamsburg Tech	BUS	General Business
Spartanburg Tech	HEA	Medical Laboratory Technology
Trident Technical College	IND	Aircraft Maintenance Technology
Florence-Darlington Tech*	ENGR	Engineering Graphics Technology
Florence-Darlington Tech	IND	Automotive Technology
Midlands Technical College*	ENGR	Civil Engineering Technology
Central Carolina Tech*	ENGR	Civil Engineering Technology
Trident Technical College	ENGR	Civil Engineering Technology
Orangeburg-Calhoun Tech	ENGR	Electronics Engineering Technology
Spartanburg Technical College	ENGR	Mechanical Engineering Technology
Trident Technical College	ENGR	Mechanical Engineering Technology
Florence-Darlington Tech	IND	Machine Tool Technology
Piedmont Technical College	IND	Heat, Vent, AC Technology
Tri-County Technical College	IND	Heat, Vent, AC Technology

*removed from probation because of corrections of data reporting errors of one graduate for each institutional program from prior year's report.

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 5
Twenty-one Year Summary
Annual Associate Degree Program Evaluation
In the Technical Colleges

<u>Year</u> <u>Evaluated</u>	<u>Good</u> <u>Standing</u>	<u>On</u> <u>Probation</u>	<u>Under</u> <u>Suspension</u>	<u>Cancelled</u>	<u>Total</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
2002	294	26	10	2	332
2003	297	19	14	1	331

Table 6
Associate Degree Programs on Probation
in Fall 2003

<u>College</u>	<u>Degree</u>	<u>Program</u>
Greenville Technical College	BUS	Supply Chain Management
Tech College of Lowcountry	BUS	Office Systems Technology
Tri-County Technical College	COM	Computer Technology
Florence-Darlington Tech	HEA	Medical Laboratory Technology
Trident Technical College	HEA	Physical Therapist Assistant
Midlands Technical College	IND	Automotive Technology
York Technical College	IND	Automotive Technology
Horry-Georgetown Tech	ENGR	Electronics Engineering Technology
Tri-County Technical Colleg	ENGR	Electronics Engineering Technology
Denmark Technical College	ENGR	Electro-mechanical Engineering Tech.
Piedmont Technical College	ENGR	Mechanical Engineering Technology
Tech College of Lowcountry	IND	Building Construction Technology
Aiken Technical College	ENGR	Computer Engineering Technology
Northeastern Technical College	IND	Industrial Electronics Technology
Aiken Technical College	IND	Machine Tool Technology
Trident Technical College	IND	Machine Tool Technology
Florence-Darlington Tech	IND	Heat, Vent, AC
Aiken Technical College	PSER	Criminal Justice Technology
Tech College of Lowcountry	PSER	Criminal Justice Technology

Table 7

**Associate Degree Programs To Be Suspended
(or Continued for 2nd or 3rd Year Suspension) in Fall 2003**

<u>College</u>	<u>Degree</u>	<u>Program</u>
First Year:		
Central Carolina Tech	BUS	Marketing
Midlands Tech	HEA	Pharmacy Technology
Central Carolina Tech	ENGR	Engr. Graphics Technology
Aiken Technical College	ENGR	Electro-Mech. Engr. Tech.
Spartanburg Tech College	PSER	Interpreting
Second Year:		
Midlands Tech	BUS	Court Reporting
Orangeburg-Calhoun Tech	ENGR	Engr Graphics Tech
Midlands Tech	ENGR	Mechanical Engr Tech
Greenville Tech	ENGR	Envir. Health&Safety Mgt
Third Year:		
Midlands Tech	ENGR	Engr Graphics Tech
Aiken Tech	ENGR	Nuclear Engr Tech
Greenville Tech	IND	Industrial Electronics Tech
Horry-Georgetown Tech	IND	Machine Tool Technology
Spartanburg Tech	IND	Heat, Vent, AC Tech

Table 8

Associate Degrees Cancelled In Fall 2003

<u>College</u>	<u>Degree</u>	<u>Program</u>
Horry-Georgetown Tech	IND	Heat, Vent, AC Tech

Summary

All 11 of the associate degree programs in the University of South Carolina system and 297 (89.7 %) of the 331 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. Because the productivity standards are modest and because supply and demand ratios for various careers vary over time, for a program to meet the state's productivity standards is not synonymous with meeting marketplace demand. Chief among the programs at this time which meet productivity standards, but do not meet the state's marketplace demand for graduates are the Associate Degree in Nursing programs. Although the number of Nursing graduates is 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.

Likewise, the AA/AS programs are critical in efforts to meet South Carolina's needs for an increasingly baccalaureate-educated citizenry in order to attract economic development. Both the technical colleges and the USC regional two-year campuses should promote the enrollment of students in these programs and make it an institutional and system priority to graduate increasing numbers and percentages of students from the AA/AS program for purposes of transfer into baccalaureate programs within the state.

Finally, programs in engineering technology should continue to be reviewed in terms of the type of curriculum they offer, the quantity of credit hours required, and their ability to recruit and retain adequate numbers of students, particularly women and minorities. These programs afford their graduates high pay and multiple technical opportunities. They are critical to underpinning South Carolina's efforts to attract business and industries that depend upon a qualified supply of technical personnel capable of supporting engineering employees. Recruiting, retaining, and graduating women and minorities should be a priority for planning processes at institutions with these programs.

Recommendation

The Committee on Academic Affairs and Licensing recommends that the Commission approve this report's designation of programs for the current reporting year as shown in **Tables 5, 6, 7, and 8**. Because of the importance of certain associate degree programs to economic development in South Carolina, the Committee further recommends that the technical colleges and two-year regional USC campuses be requested to continue efforts to increase the total numbers of and racial/ethnic/gender mix

of enrolled students in and graduates from their associate degree programs of nursing, the engineering technologies, and the AA/AS transfer programs.

The Committee further suggests that the State Technical College System and the USC two-year Regional Campus group develop plans to increase the yield of enrolled students graduating from AA/AS programs over the next ten years; and for the two-year USC Regional Campuses to consider a plan to increase the numbers of non-duplicative, occupationally-related associate degree programs to assist economic development.