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**Commission on
Higher Education**

Agenda Item 3.02 C

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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 *VJ/gm*

**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 are 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. However, this is the first year in the twenty-year history of this report that the four-year regional campuses of the University of South Carolina at USC-Aiken, USC-Beaufort, and USC-Spartanburg are 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 are anticipated to be offered in two-year institutions with the sole exception of the AA/AS at Fort Jackson offered by USC-Columbia.

The associate degree programs in the State's public institutions were evaluated using Fall 2002 enrollment data and academic year 2001-2002 graduation and employment data. Eight associate degree programs in the two-year USC campuses (including the AA/AS degree at USC-Beaufort), three associate degree programs in the four-year USC campuses, and 332 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.)

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-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 carried with it a proviso that the AA/AS would be eliminated simultaneously with the institution’s initiation of four-year programming.

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. Similarly, USC-Aiken and USC-Spartanburg had their missions approved to allow for the offering of associate degree programs in nursing. However, each of those institutions is in the process of phasing out its ADN program and transferring it to the neighboring technical college. Thus, after the academic year of 2005-2006, USC-Columbia will be the only four-year institution in the State to offer the associate degree in any field.

Each of the AA/AS programs at these campuses is enrolling and graduating students in satisfactory numbers for meeting productivity standards. USC-Beaufort will simultaneously cease to offer the AA/AS degree as part of its conversion to a four-year institution when it gains approval as a four-year institution from the Southern Association of Colleges and Schools. 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 the most recent year show that the AA/AS programs offered at USC-Columbia, USC-Beaufort, USC-Lancaster, USC-Salkehatchie, and USC-Union have all experienced increases in graduates for the year under analysis. The figures for each campus are recorded below:

Table 1
USC-System AA/AS Program Graduates

	1999-2000	2000-2001	2001-2002
USC-Columbia	12	14	19
USC-Beaufort	87	63	72
USC-Lancaster	74	86	96
USC-Salkehatchie	93	83	90
USC-Sumter	152	160	161
USC-Union	51	35	52
TOTAL	469	441	490

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. Research from the Palmetto Institute and other contemporary assessments of need conclude that increased production of B.A. and B.S. recipients will be increasingly crucial to the sustained 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 and challenge to increase the numbers of AA/AS degree completers and to assure them entry into a four-year program.

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

The Associate Degree in Nursing is offered at two of the *four-year* campuses of the USC system (i.e., Aiken and Spartanburg). 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. However, as stated above, both the four-year regional campuses at Aiken and Spartanburg have served notice that they are in the process of divesting themselves of their associate degree programs in nursing. In each case, the neighboring technical college plans to take on this responsibility.

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 any of the two-year regional campuses, only USC-Lancaster of this group of institutions offers occupationally-specific degree programs. Occupational programs at USC-Lancaster are offered in 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:

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

	Nursing	Criminal Justice	Business
USC-Aiken	56	---	---
USC-Lancaster	11	8	21
USC-Spartanburg	44	---	---

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.

While the productivity standards for these occupationally-related programs of study are being met, the three associate degree programs in nursing are showing stagnant growth. In the past three years, the Associate Degree in Nursing programs of the USC system have graduated 115 in 1999-2000; 120 in 2000-2001; and 111 in 2001-2002. Maintenance of this level of graduations will not help close the gap between the current supply of new Registered Nurses and the increasing demand for Registered Nurses in the state.

General Analysis of Associate Degree Programs in the Technical Colleges

A summary of the number of programs evaluated over the past *twenty* years in various categories at the technical colleges is found in **Table 5** of this report. Overall, for this reporting year 26 programs of study (out of a total of 332 which were analyzed) at the technical colleges are on probation during the current reporting period. Of these, 15 are in the first year of probation; five are in the second year of probation; and three are in the third year of probation. In addition, three are in "extraordinary" (i.e., two in fifth and one in fourth) years of probation, as declared "justified" by the Technical College System. Staff notes that five years probation is extraordinarily generous, especially given the fact that the next step after three years on probation is up to three years of "suspension." Thus, under current policy it may take up to six years to cancel a program. For that reason, staff suggests that programs failing to revert to "good" status after three years of probation (except for those categories which were originally exempted from the productivity requirements) should be suspended and canceled within the regular timeframe envisioned by the original plan for this report, unless there is clear evidence

that enrollment and degrees awarded standards will be met in the near future, as is apparently the case with the extended programs in this year's report.

By comparison with this year's counts, last year's report showed a total of 22 degree programs on probation; and the previous year 30 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 6**.

Engineering Technologies

Continuing a trend of many years, a large number of the programs on probation (11 or 42.3% of the total of 26) are found in the program clusters of the Engineering Technologies. This long-standing pattern results both from insufficient enrollments and insufficient numbers of graduates. Smaller numbers of programs on probation are to be found in Health (n=2), Industrial Technologies (n=10), Business (n=1), Computer Technology (n=1), and Public Service (n=1).

Past reports of the Commission on Higher Education have mentioned several issues associated with the Engineering Technology cluster of programs. Most importantly, these issues include a proliferation of programs by name (but very similar by curriculum), an inability to attract large numbers of academically prepared students, and—related to the second point—an inability to attract significant numbers of women and minority students. The Commission has suggested in recent years that there are options which should be explored to remedy this situation. These options include: 1) consolidation of similar programs; 2) conversion of certain 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) when all these other avenues have been exhausted, voluntary closure of the programs. This year's report from the State Tech Board's staff mentions two important signs of the technical colleges' interest in evaluating these programs. That paper reports that the Chief Instructional Officers of the technical colleges are considering the possibility of reducing the numbers of credits in certain Engineering Technology programs, and that they are investigating consolidation of certain degree programs in the Engineering Technology program cluster. These are welcomed developments for strengthening programs of this type.

To the extent that enrollments per se remain the issue for the viability of certain Engineering Technology programs, the Commission has regularly suggested in recent years that the offering institutions implement a statewide plan to increase the numbers of minorities and women to be recruited into, retained in, and graduated from engineering technology programs. Study groups, such as the Palmetto Institute, have consistently commented on the critical relationship between increasing enrollments and graduation rates in degree programs and attracting information-based and "smart manufacturing-based" industries. Part of any serious effort to increase enrollments must be attention to increasing the mix of students by gender and ethnicity which must begin to reflect more

accurately the mix of gender and ethnicity of the general population.

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. 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. 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.

For many students beginning their college careers through the AA/AS program the issue of timing of courses has been critical, since these are “time challenged” persons in terms of family and job responsibilities, as well as distances from campuses for those in rural areas. Distance education, especially through “S.C. TechOnline,” has contributed to meeting such students’ scheduling needs. Likewise, the fact that at least two of the technical colleges now have 100% of the AA/AS on-line will also contribute to faster time to degree completion. However, such technological innovation, while commendable, cannot be expected to supplant the need for regular and frequent offerings of certain core courses in the AA/AS if students are to be most advantaged in time toward degree and degree completion itself. A review of catalogs and course offerings in some of the smaller technical colleges suggests that—although it is an institutional challenge especially in these times—efforts to provide more course choices with more frequency would contribute further to increasing the number of graduates in a shorter time period from these smaller colleges.

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 remains beset with 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, in general, found both degrees 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. Thus, the importance of associate degree-prepared nurses can hardly be exaggerated for its capacity to erase the second issue confronting the profession, namely, the nursing shortage which is currently occurring.

While there are many reasons for this shortage, the failure of the profession to open its doors affirmatively to men and minorities is the second problem. Such an affirmative effort is especially needed because of a large and growing number of late-middle-aged nurses preparing to retire from the profession, and the nursing profession's inability to attract the large pool of young, talented high school-graduated female students who in times past were eager to train for careers as nurses. To relieve the nursing shortage in the fastest time possible will require sustained commitment to enroll and graduate increasingly larger numbers of associate degree nurses annually.

Last year, the report of the graduates of the technical colleges' eleven Associate Degree in Nursing programs showed an increase of 8% over the previous year's report. This year's report, despite significant individual increases at some technical colleges in the number of graduates, shows a *decrease* of 3.6% over last year. While it is small, this decrease shows that the technical college system as a whole was providing fewer new ADN nurse graduates to the marketplace in a time period when the demand for Registered Nurses is rising. The state's associate degree programs need to sustain and increase graduation rates for at least the next ten years if the shortage of nurses is going to be overcome within the coming decade. 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, as long as they sponsor these programs. In this regard, the transfer of the ADN program from USC-Spartanburg to Spartanburg Technical College carries with it a goal of increasing the numbers of associate degree graduates by more than double what it has been annually in that program in the past several years.

Table 3
Total Number of Graduates from Technical Colleges'
Associate Degree in Nursing Programs for Years
1999-2000 through 2001-2002

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

One noteworthy initiative for increasing growth in enrollments comes from a substantial grant which the State Technical College System received last year. This grant provided the basis for an agreement between the State Tech system and the South Carolina Hospital Association to provide mentoring to young persons in high school and on-site in hospitals to interest young people in nursing careers. This development should be monitored closely for what effect it might have in increasing student interest and enrollments in nursing programs over the next several years.

Another grant funded by the Work Incentive Act, which involves USC-Columbia, Clemson, and the Technical College system, also deserves to be monitored for its outcomes. This grant calls for the research institutions to educate increased numbers of masters-prepared nurses to become nursing faculty members at the Technical Colleges and, thereby, to increase the numbers of newly prepared associate degree nurses.

Degree Programs No Longer on Probation

For the current reporting year, a total of nine 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:

**Table 4
Degree Programs Returning to
"Good" Status from "Probation" 2001-2002**

<u>College</u>	<u>Degree</u>	<u>Program</u>
Florence-Darlington	AA/AS	AA/AS
Greenville Tech	AET	Architectural Eng. Technology
Greenville Tech	AET	Construction Engr. Technology
Greenville Tech	AET	Mechanical Engr. Technology
Midlands Tech	AET	Construction Engr. Technology
Spartanburg Tech	AET	Civil Engr. Technology
Trident Tech	HEA	Physical Therapist Technology
Williamsburg Tech	ABUS	Office Systems Technology
York Tech	AIT	Automotive Technology

Tabular Analysis of Associate Degree Programs

Tables 5-8 provide a succinct quantitative analysis of the programs of the technical colleges for this period.

Table 5
Twenty-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>	Total
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

Table 6
Associate Degree Programs on Probation
(Or Remaining on Probation 2nd or 3rd Years)
in Fall 2001

<u>College</u>	<u>Degree</u>	<u>Program</u>
Williamsburg Tech	BUS	General Business (1)
Tri-County Tech	COM	Computer Technology (1)
Central Carolina Tech	ENGR	Engineering Graphics Technology (3)
Florence-Darlington Tech	ENGR	Engineering Graphics Technology (1)
Midlands Tech	ENGR	Civil Engineering Technology (1)
Central Carolina Tech	ENGR	Civil Engineering Technology (2)
Trident Technical College	ENGR	Civil Engineering Technology (2)
Tri-County Tech	ENGR	Electronics Engineering Technology (1)
Horry-Georgetown Tech	ENGR	Electronics Engineering Technology (1)
Aiken Tech	ENGR	Electro-Mechanical Engr Technology (3)
Trident Tech	ENGR	Mechanical Engineering Technology (2)
Spartanburg Tech	ENGR	Mechanical Engineering Technology (1)
Aiken Tech	ENGR	Computer Engineering Technology (2)
Midlands Tech	HEA	Pharmacy Technology (3)
Spartanburg Tech	HEA	Medical Laboratory Technology (2)
Trident Tech	IND	Aircraft Maintenance Technology (1)
Technical College of the L'Ctr	IND	Building Construction Technology (1)
Northeastern Tech	IND	Industrial Electronics Technology (1)
Florence-Darlington Tech	IND	Machine Tool Technology (1)
Aiken Tech	IND	Machine Tool Technology (1)
Florence-Darlington Tech	IND	Heat, Vent, AC (1)
Piedmont Tech	IND	Heat, Vent, AC (1)
Tri-County Tech	IND	Heat, Vent, AC (1)
Florence-Darlington Tech	AIT	Automotive Technology (4-J)*
Orangeburg-Calhoun Tech	ENGR	Electronics Eng Tech (5-J)*
Spartanburg Tech	PSER	Deaf Interpreting (5-J)*

*Extraordinary year of probation beyond three years allowed by policy as "justified" by State Technical College System

Table 7
Associate Degree Programs To Be Suspended
(or Continued for 2nd or 3rd Year Suspension) in Fall 2001

<u>College</u>	<u>Degree</u>	<u>Program</u>
First Year:		
Midlands Tech	BUS	Court Reporting
Orangeburg-Calhoun Tech	ENGR	Engineering Graphics Technology
Midlands Tech	ENGR	Mechanical Engr. Technology
Greenville Tech	ENGR	Env'mental Health & Safety Mgt.
Second Year:		
Midlands Tech	ENGR	Engineering Graphics Technology
Aiken Technical College	ENGR	Nuclear Engineering Technology
Greenville Technical College	IND	Industrial Electronics Tech
Horry-Georgetown Tech	IND	Machine Tool Technology
Spartanburg Tech	IND	Heat, Vent, AC
Third Year:		
Horry-Georgetown Tech	IND	Heat, Vent, AC

Table 8
Associate Degrees Cancelled In Fall 2001

<u>College</u>	<u>Degree</u>	<u>Program</u>
Florence-Darlington Tech	ENGR	Chemical Engr Technology
Spartanburg Tech	IND	Nuclear Service Technology

Summary

All 11 of the associate degree programs in the University of South Carolina system and 294 (88.6%) of the 332 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 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.

Likewise, the AA/AS programs are critical to meeting 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 students. 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 to economic development in South Carolina of certain associate degree programs, the staff further recommends that the technical colleges and two-year regional USC campuses be requested to continue efforts to increase the numbers of enrolled students in and graduates from their associate degree programs in nursing, the engineering technologies, and the AA/AS transfer programs.