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MEMORANDUM

To: Mr. R. Austin Gilbert, Jr., Chairman, and Members,
Commission on Higher Education

From: Ms. Dianne Chinnes, Chairman, *DC/cmvr*
Committee on Academic Affairs and Licensing

Follow-Up Report to CHE Consultants'
Evaluation of Physical Science Programs (FY 1997-98)

In 1998, the Commission accepted the evaluation of external consultants of the physical sciences in South Carolina's public institutions. The report was conducted for the Commission by a team of consultants selected from a pool of experts nominated and ranked by the institutions themselves. This follow-up report summarizes changes which have occurred in South Carolina's programs in the physical sciences since 1998.

**Bachelor of Science in Physics and the Bachelor of Science in Health Physics,
Francis Marion University**

The program leading to the B.S. degree in Physics at Francis Marion was granted full approval by the Commission. On the recommendation of the consultants, another related program, Health Physics, received a commendation for excellence from the Commission. Nevertheless, the consultants had expressed concern over the relatively low enrollments in both these programs and suggested that they be considered for merger to promote more integrated administration and to prevent either program from failing to meet the state's program productivity standards for baccalaureate programs.

In responding to the concerns of the consultants, Francis Marion University notified the Commission on November 16, 1999, that the institution has merged the two degrees into one program leading to the B.S. degree in Physics with two tracks (i.e., Computational Physics and Health Physics), effective Spring 2000.

Bachelor of Science in Chemistry, South Carolina State University

Concerns about safety because of the physical conditions, lack of adequate equipment and the funds to finance equipment acquisition, and the lack of a full-time, tenure-track analytical chemist on the faculty all contributed to the consultants' recommendation that the B.S. in Chemistry program at South Carolina State be granted Provisional Approval. In order for the program to be granted Full Approval, the University was expected to complete a safety inspection and come into compliance with that inspection; hire a full-time, tenure-track analytical chemist; and provide for at least \$100 thousand to upgrade equipment for laboratory use.

In its institutional response, South Carolina State University has reported to the staff that it has carried out an extensive renovation of facilities which includes the imposition of all significant safety features recommended by the team. The University has also responded to the staff that the state DHEC has continued to make safety inspections of the facility. A storage facility has been established in the building for all chemicals. All old and excess chemicals have been removed under a contract with a private corporation.

In addition, a full-time, tenure-track analytical chemist has been hired. A federal grant for \$400,000 has permitted the purchase of necessary equipment in the Chemistry department for the major.

All of this institutional response appears to be highly encouraging from the point of view of the consultants' report. It is important, nevertheless, that the institution find ways to assure the continuation of the upgrade of equipment. Budgeting for these upgrades, rather than dependence on the availability of grants, would be highly desirable.

Bachelor of Science, Textile Science; Master of Science, Textile Science; Master of Science, Textile Chemistry; and Ph.D., Textiles and Polymer Science: Clemson University

The recommendation of the team was to grant all four of the above listed programs at Clemson University Provisional Approval, largely owing to the inadequate numbers of enrollments in and graduates in these programs for meeting the Commission's degree productivity standards. The Commission adopted a recommendation that required Clemson to provide a plan to the Commission addressing the need to increase enrollments in and graduates of these programs as well as a plan for strengthening the programs to make them attractive to students.

In response to the recommendations adopted by the Commission, Clemson University now reports that three of the four programs have achieved the required enrollments and graduates annually since the visit of the consultants. The B.S. in Textile

Science has not achieved these benchmarks; and, as a result, Clemson will terminate the program, with no new students accepted into it after Fall 2000. The final graduates of the program are anticipated in Summer 2003. (Two other textile-related undergraduate majors will continue to exist at Clemson, so that students have choices in this important field.)

The programs leading to the M.S. degree in Textile Science and to the M.S. degree in Textile Chemistry were reviewed by the faculty and combined into a single degree program, the M.S. in Textiles, Fiber, and Polymer Science. The two degrees that formed the new one have been terminated. All students in the former M.S. in Textile Chemistry program immediately chose to enter the new program. By the end of Spring 2000 semester, University officials expect that no students will remain in the old M.S. in Textile Science program. The Ph.D. in Textiles and Polymer Science program was renamed Textiles, Fibers, and Polymer Science, a name change which in the opinion of the Administration has contributed to the healthy change in student numbers in the program. By 2002 Clemson University is anticipating four to six graduates in the Ph.D., a figure considerably above what is required for meeting the statewide program productivity requirements for a doctoral program.

One new faculty member has been hired in the School in August 1999. A second faculty search is underway. When the second search has been successfully completed, still a third search will be initiated.

Finally, the programs of the School have made considerable progress in financing equipment and new space. More than \$850,000 of new equipment has been purchased for the School of Textiles, Fibers, and Polymer Science since 1997. The funds for these purchases have come from an increasingly diverse set of sources, including state funds and several private grants. The University placed a new building for the School as its top priority for state funding this year. The CHE gave this project a high score and the General Assembly is now considering the proposal.

Recommendations

The Committee recommends that the Commission:

1. Grant full approval to the following programs:
 - the new M.S. in Textiles, Fiber, and Polymer Science (created by program merger) , Clemson University
 - the newly renamed Ph.D. in Textiles, Fiber and Polymer Science, Clemson University

- the B.S. in Chemistry, South Carolina State University.

2. Accept as information the following:

- Francis Marion University's decision to merge its two physics majors into a single program leading to the B.S. degree in Physics with two tracks (i.e., Computational Physics and Health Physics).
- Clemson's decision to terminate:
 - a) the B.S. in Textile Science, to be effective at the end of Fall Semester 2000 (with students able to complete the program through Summer 2003);
 - b) the M.S. in Textile Chemistry to be effective immediately (with no students remaining in the program); and
 - c) the M.S. in Textile Science to be effective at the end of Spring Semester 2000 (with no students remaining in the program).

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