


MEMORANDUM

TO: Dr. Sandy Pfeiffer
Vice President for Academic Affairs

FROM: Timothy W. Zeigler 
Program Head

DATE: April 16, 2003

Subject: University System of Georgia Comprehensive Program Review for
Bachelor of Science, Civil Engineering Technology Degree

Please find enclosed the University System of Georgia Comprehensive Program Review for the Civil Engineering Technology Program (BSCET). An action plan addressing all concerns is included on the last two pages of the *Comprehensive Program Review*.

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Enclosure: 1

Agreement with Action Plan

President Lisa Rossbacher

Dean Bill Barnes, ACC

Dr. Sandy Pfeiffer, VPAA



Timothy W. Zeigler, Program Head

University System of Georgia Comprehensive Program Review

Bachelor of Science, Civil Engineering Technology

A. All Program Reviews

Institution: Southern Polytechnic State University

Date: 03/25/2003

Degree/Major Name: Bachelor of Science/Civil Engineering Technology

Degree Acronym: BSCET

CIP Code: 240101

Degree Level: Bachelors

College/School/Division: School of Architecture, Civil Engineering
Technology and Construction (ACC)

Department: NONE

Were other closely related programs reviewed as part of this program review? No

Were external reviewers used to evaluate the results of the program's self-study?
Yes

If yes, please describe their role.

A team of seven reviewers representing the Accreditation Board for Engineering and Technology (ABET), Technology Accreditation Commission (TAC), visited Southern Polytechnic State University on November 3-5, 2002 to thoroughly review all the B.S. Engineering Technology programs, among which is the Civil Engineering Technology Program. One of the reviewers was specifically assigned to Civil Engineering Technology. The team chair manages the team of reviewers and provides input to the entire program under review. Prior to arriving on campus, the team was sent a Self-Study Report on the Civil Engineering Technology Program. On campus the team interviewed administrators, faculty and students; and assessed the library, office, classroom and laboratory facilities. Following the visit the team prepared a draft report of their findings dated February 10, 2003, which was sent to Dean Richard Aynsley, School of Engineering Technology and Management.

Year of Next Scheduled Program Review: 2008

Accreditations Obtained: Accreditation by the Accreditation Board for Engineering and Technology (ABET), Technology Accreditation Commission (TAC).

Year of initial accreditation or last program reaccreditation review: 1973

Faculty Resources. Describe the faculty resources associated with this degree program by describing the faculty dedicated to the specific program, to the general education program, to services courses for other programs, etc. Include in your discussion the use of full-time and part-time faculty.

Full-Time Faculty

There are eight full-time faculty (including the Program Head) dedicated to the Civil Engineering Technology Program. Among them, all have Master of Science degrees, three have PhD's, five are Licensed Professional Engineers, and two are Licensed Professional Land Surveyors. The full-time faculty and their basic credentials are as follows:

Timothy W. Zeigler (Program Head), and (Associate Professor)
BSCE 1968, MSCE 1969
20 years teaching experience
14 years technical experience
Licensed Professional Engineer

Samuel J. Beadles (Professor)
BSCE 1982, MSCE 1987
15 years teaching experience
5 years technical experience
Licensed Professional Engineer

Thomas R. Currin (Professor)
BSCE 1972, MSCE 1977, Ph.D. CE 1982
14 years teaching experience
9 years technical experience
Licensed Professional Engineer

David E. Hornbeck (Professor)
BSCE 1969, MSCE 1971, Ph.D. CE 1982
31 years teaching experience
4 years technical experience
Licensed Professional Engineer
Licensed Profession Surveyor

Mehrdad Mesbahi (Associate Professor)
BSCE 1979, MSCE 1981
12 years teaching experience
17 years technical experience
Licensed Professional Engineer

Michael Orlandella (Associate Professor)

BSCE 1970, MSCE 1971

27 years teaching experience

10 years technical experience

Carlos A. Ortiz (Associate Professor)

BSCE 1977, MS Environmental Engineering, 1981, and Ph.D. Environmental Engineering, 1987

7 years teaching experience

13 years technical experience

Matt Wilson (Associate Professor)

BSCET 1991, MS Surveying 1999

7 years teaching experience

6 years technical experience

Licensed Professional Surveyor

Use of Part-time Faculty

The Civil Engineering Technology Program uses three to five part-time faculty each semester to teach courses within the Civil Engineering Technology discipline. The part-time faculty teach an average of 15 to 20 percent of the total course credit hours offered each semester.

Service Courses to Other Program

The Civil Engineering Technology Program provides two courses (total of 8 hours) which serve other SPSU programs. These courses are offered each semester and are taught by full-time or part-time faculty in Civil Engineering Technology.

General Education Faculty

The Math, Science, and all other required core general education courses are taught by the SPSU faculty in the School of Arts and Sciences which includes the faculty in the following programs:

- Humanities and Technical Communications
- Mathematics
- Physics, Chemistry, and Biological Sciences
- Social and International Studies

For more information on this program review, contact

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Title Program Head

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Was this review Scheduled or Triggered? Scheduled

B. Scheduled Reviews of Programs – Major Findings and Recommendations

General

Overall the Civil Engineering Technology Program is a quality, viable, productive program with a strong enrollment, excellent faculty, high quality laboratories and classrooms, and a consistent production of graduates. Graduates of the BSCET program continue to be in demand and serve the State of Georgia well. A recent survey of past graduates indicated that 96-percent of graduates had a job within 3-months of graduation and 87-percent were presently working within the State of Georgia. The number of BSCET graduates produced each year does fluctuate with enrollment; however, the numbers remain strong as show below.

<u>YEAR</u>	<u>Number of BSCET Graduates</u>
1998	61
1999	39
2000	55
2001	46
2002	35

Enrollment has declined 23-percent since 1998; however, since Fall 2000, the enrollment has increased slightly and remains stable as shown below.

BSCET Enrollment

Fall 2002	Fall 2001	Fall 2000	Fall 1999	Fall 1998
250	257	241	294	325

This enrollment reduction reflects the national trend; however, the BSCET program at SPSU remains one of the top two highest enrollments among BSCET programs across the United States. The CET faculty recognize the need to maintain a healthy enrollment in the CET program. The CET faculty are presently developing a recruitment plan to be initiated beginning Spring 2003. Recruitment efforts by CET faculty will supplement SPSU's normal recruitment activities.

Findings of ABET Review Team

The major findings and recommendations of the ABET Accreditation review team as per their draft report (dated February 10, 2003) is summarized as follows:

Strengths

- Students at Southern Polytechnic State University are exceptional. Students interviewed by the program evaluators were cited as demonstrating clarity, insight, and excellent communication skills. Students exhibited a high level of maturity and focus.
- The large number of Civil Engineering Technology faculty with credentials in diverse areas of Civil Engineering Technology assures that program continuity and frequency of course offerings is maintained to assure that high quality graduates are produced.
- The classrooms are equipped with state-of-the-art audio/video equipment which enhances instruction and learning

Concerns and Action Plan Statements

- A process of continuous improvement with assignment of responsibility was not clearly defined for all the engineering technology programs. It was recommended that the institute develop a detailed continuous improvement process documenting data collection and analysis and implementations of actions for improvement.

Action 1 The Civil Engineering Technology Program completed a detailed written Continuous Improvement Plan in May 2002. Continuous improvement has always been implemented in the Civil Engineering Technology Program; however, this Continuous Improvement Plan will assure that each step in the process is well defined and implemented in a timely manner following a set schedule. All facets of the Continuous Improvement Process will be thoroughly documented. The institution is also establishing data analysis, collection, and recording procedures to assist all the engineering technology programs with assessment.

- Financial cutbacks at SPSU have not caused problems in instruction and facilities at this time; however, multiple years of reduced funding could eventually have a negative effect in key areas. It was recommended that the institution investigate sources of funding to supplement the State of Georgia budget allocation.

Action 2 SPSU has begun to make formal arrangements with business and industry to obtain additional resources. Formally this process is the "Business and Industry Partnership Program". The Civil Engineering Technology Program is presently maintaining high quality instruction, office, and laboratory facilities. To supplement state funding, a fund raising

campaign has been initiated by the CET program's Industrial Advisory Board in cooperation with the SPSU Office of Development. Opportunities for research funding are also being pursued by CET faculty members.

- Only one service technician is available to service five Civil Engineering Technology laboratories. The present technician's specialty is computers and duties also include laboratories in the architecture and construction programs. It was recommended that additional technician assistance to meet the needs of all the CET laboratories be employed.

Action 3 The present budget situation at SPSU will not support hiring an additional technician in CET. The present CET technician has recently retired. The existing technician assigned to the School of ACC will be assigned 50 percent of his time to CET. Also, SPSU IT services will provide additional assistance in maintaining all instructional technology equipment (computers, printers, etc.).

- Students in Civil Engineering Technology under the present 2002-03 curriculum are not required to complete a Senior Project course. It was recommended that the existing Senior Project Course (CET 4480) be changed from an optional elective to a required course in the CET curriculum.

Action 4 In Spring 2003 the SPSU Curriculum Committee approved a change in the CET curriculum to require that all CET majors complete CET 4480 (Senior Project) prior to graduation. This requirement will be published in the SPSU 2003-04 Academic Catalog.

- Some computers in the CET laboratories are low-speed machines and should be replaced with high-speed computers capable of running current industry-standard CET software.

Action 5 The CET program has initiated plans to incorporate a powerful computer server to service two CET computer laboratories. The server will accommodate student's personal laptop computers as well as fixed laboratory computers. The server will accommodate the most current industry standard software and eliminate the need to continuously replace computers in the CET laboratories.