MINUTES

ADMINISTRATIVE UNIT OF THE SOUTHEASTERN SECTION
AMERICAN SOCIETY FOR ENGINEERING EDUCATION
APRIL 15, 1991

The annual business meeting of the Administrative Unit of the Southeastern Section of the American Society for Engineering Education was held at lunch on April 15, 1991 in the Citadel B room of the Charleston Sheraton, near the Citadel. In attendance were:

Ardis, Colby	Southern Illinois University
Braun, Ed	UNC - Charlotte
Chin, Robert A.	East Carolina University
Cole, Donald	University of Louisville
Cox, Virgil	Gaston College
Crossman, Gary R.	Old Dominion University
Evett, Jack B.	UNC Charlotte
Gunley, William Q.	University of Tennessee at Chattanooga
Jenkins, Leo	University of Louisville
LeFevre, E. W.	University of Arkansas
Mason, John T.	Tennessee Technological University
Morris, Don H.	Virginia Tech
Rey, William K.	University of Alabama
Reyes-Guerra, David	ABET
Sallah, Neil M.	Tennessee Technological University
Swisher, George	Tennessee Technological University
Tate, Boyce D.	Southern College of Technology

The meeting was called to order by the chairman, George M. Swisher at 12:50 p.m. The minutes of the 1990 meeting were read by the secretary, Donald L. Cole and approved.

Discussion was encouraged concerning the agenda for the meeting next year. It was suggested that several deans be requested to discuss their views about the relative importance of **Research and Teaching**. With regard to this, other comments were:

1. This could be done as a combined research and administrative session.

2. The session should start with an opening presentation.

3. The importance of service should also be worked into the discussion.

4. What yardstick would be used for evaluation of teaching?

A discussion about new teaching innovations resulted in comments about the place for exit interviews with students, comments from alumni, and classroom visits by peers (normally associated with tenure). No suggestions resulted.

John T. Mason III was elected secretary so the officers for 1991-92 are:

Chairman	William K. Rey
Vice Chairman	Donald L. Cole
Secretary	John T. Mason III

The meeting adjourned at 1:20 p.m.

John T. Mason III, Secretary

MINUTES

ADMINISTRATIVE ROUNDTABLE II FOR THE
SOUTHEASTERN SECTION
AMERICAN SOCIETY FOR ENGINEERING EDUCATION

APRIL 15, 1991

The Administrative Unit Technical Session of the Southeastern Section of the American Society for Engineering Education was held at 10:45 a.m. on April 15, 1991 in the Decatur Room 209 of the Charleston Sheraton, near the Citadel.

The attendees are shown in Enclosure 1. George Swisher, chairman, moderated the discussion centering on problems common to most engineering education administrators.

There were two main topics discussed during the session:

1. Outcomes assessment

   George Swisher distributed a copy of a paper on Outcomes Assessment prepared two years ago by the Associate Dean of Engineering at TTU, M. B. Ventrice. (See enclosure 2)

   *COPA is pushing ABET to evaluate using outcomes assessment
   *NSPE pushes students to pass the FE (EIT) so that Europeans will consider our degrees equivalent to theirs.
   *Tennessee uses EIT 2 out of 5 years for CE, EE and ME as a measure of outcomes assessment.
   *Cost of the EIT is: $30 - ALA, ARK, TENN; $40 - KY; $80 - ILL; $90 - VA
   *Some will exempt students from taking the EIT if they have documented evidence that they aren't going into engineering - LSAT, GRE, etc.

2. Recruiting

   *NSPE has an excellent 8 minute video on "Bicycling"
   *ASME, SAE, etc have similar material
   *Some felt it is appropriate to concentrate on the lower grades - 5th & 6th grades
   *There are 500-1000 intervention programs in the USA
   Contact: Dr. Michael Hacker
   State Department of Education
   Albany, NY
   for modules on Science & Technology and the principles of engineering
   *SCME runs summer institutes for 80-100 teachers. This was started in 1977 and is rotated among participating universities. Bill Rey of University of Alabama is familiar with this.

Because of time constraints the session concluded at 12:10 p.m.

John T. Mason III, Secretary

ADMINISTRATIVE UNIT
ROUNDTABLE II

Al-Qattan, Ibrahim	Tennessee Technological University	Box 5002, Cookeville, TN 38505
Anderson, Mel	University of South Florida	ENG 118, Tampa, FL 33620
Ardis, Colby V.	Southern Illinois University	Edwardsville, IL 62026-1804
Brown, Russell H.	Clemson University	CE Dept., Clemson, SC 29634
Chen, Wayne	University of Florida	300 Weill Hall, College of Engineering, Gainesville, FL 32611
Cole, Donald L.	University of Louisville	Academic Services, Speed Scientific School, Louisville, KY ~~227411~~ 40292
Gambrell, Sam	University of Alabama	Box 870278, Tuscaloosa, AL
Gunley, William Q.	University of Tennessee at Chattanooga	Chattanooga, TN 37343
Guy, Louis L.		5200 Rolling Rd, Burke, VA 22015
Jenkins, Leo	University of Louisville	Louisville, KY 40292
Jennett, Charles	Clemson University	Clemson, SC 29631
Johnson, L. Ray	Mississippi State University	Starkville, MS
LeFevre, E. Walter	University of Arkansas	Fayetteville, AR 72764
Mason, John T. III	Tennessee Technological University	Box 5005, Cookeville, TN 38505
Morris, Don	Virginia Tech	ESM Department, Blacksburg, VA 24061
Ntuen, Celestine A.	North Carolina A & T State University	IE Dept., 405 NcNair Hall, Greensboro, NC 27411
Rey, William K.		P. O. Box 664, Tuscaloosa, AL 35486
Sallah, Neil M.	Tennessee Technological University	BE Dept., Box 5002, Cookeville, TN 38505
Snyder, Robert D.	UNC	Charlotte, NC 28223
Stotz, Kerwin C.	VMI	EE Dept., Lexington, VA 24450
Strong, Donald		Educational Consultant, Alexandria, VA
Swisher, George	Tennessee Technological University	Box 5005, Cookeville, TN
Wilson, Stephen G.	University of Virginia	EE Dept., Charlottesville, VA 22901

History And Current Status Of Programs For The Assessment of "Value Added" By Public Universities In The State Of Tennessee

M. B. Ventrice
Tennessee Technological University
Cookeville, Tennessee

ABSTRACT

This paper gives a brief history of the State of Tennessee's Performance Funding Program and an explanation of the State's Comprehensive Education Reform Act, including a discussion of a few of the many special programs for higher education which have resulted from the act. Several of the instruments for assessment of "value added" currently used by the Performance Funding Program are discussed (including their limitations) and a few of the results and corrective measures instituted are explained. Both Performance Funding and the Reform Act deal with all academic disciplines in state-supported colleges and universities. The discussions and explanations of the paper focus on engineering and general education competencies.

HISTORICAL REVIEW

In Tennessee, two state-wide programs, the Performance Funding Program and the Comprehensive Educational Reform Act of 1984, were initiated and have resulted in extensive assessment of, and reward to, state-supported universities for the "value added" to students as a result of their having completed curricula at these universities. These two programs were preceded by The Performance Funding Project, an extensive study of the feasibility of assessing and rewarding value added.

Performance Funding Project

In the mid seventies, prior to the initiation of the two state-wide programs, the Tennessee Higher Education Commission (THEC), the coordinating body for state-supported higher education in Tennessee, initiated a Performance Funding Project. The Project's purpose was to explore the feasibility of allocating some portion of state funds on a performance criterion (how effective), as compared to the then current allocation scheme which was based on activity criterion (how much). Eleven institutions were selected to participate. Each was to attempt to identify its institution-wide instructional goals; each was to identify and test appropriate performance indicators for the goals they identified. In concert with this, the THEC was to develop ways in which performance, as measured by the performance indicators, might be incorporated into the funding of universities, in addition to the enrollment based funding then being used. The Project was of interest to many and was funded by grants from the Ford Foundation, The W.K. Kellogg Foundation and FIPSE (Fund for the Improvement of Post-Secondary Education).

The Two Assessment/Reward Programs

In the latter part of the seventies, using the results of the Performance Funding Project, the state initiated the first of its assessment and reward programs -- the Performance Funding Program. In the mid-eighties, in response to concerns about the quality of all public education in Tennessee, the Tennessee legislature passed the outlines for the second program -- the Comprehensive Education Reform Act of 1984. The Reform Act primarily dealt with public education from kindergarten through grade twelve and teacher education programs but also included a section which mandated improvement of the quality of the educational experience at state-supported universities and community colleges in Tennessee. Performance Funding and the Reform Act overlap and are complementary of one another. Both programs have been beneficial to the students and institutions involved.

PERFORMANCE FUNDING PROGRAM

The Performance Funding Project was successful and resulted in Tennessee's Performance Funding Program, mentioned above, a program which provides funding to state-supported colleges and universities in Tennessee based on the quality, and improvement of the quality, of their academic performance. It was the first such statewide program in the nation.

The Performance Funding Program was initially based on undergraduate-level institution-wide instructional goals and assessment techniques, as was the case for the Performance Funding Project. It was recognized that the missions of universities also include research and service; but, to initiate the program, a more limited focus was selected. As the program matured, the discipline-specific instructional goals of the various colleges and schools within each university were identified and instruments for assessment established. Recently, masters-level programs have been added to the list of programs assessed. This broadening of perspective was

partially motivated by the Reform Act.

The latest performance funding guidelines consist of six standards. Universities earn "points" based on how well they score on the six standards. Each university receives additional funding, above its basic appropriation, for each point earned. During 1987-88, Tennessee Tech, for example, received about $1.2 million in performance funding, in addition to its regular state appropriation of approximately $30 million.

Current Performance Funding Standards

The current performance funding guidelines for universities consists of the following six standards:

I. Accreditation (20 points): The score is based on percentage of accreditable programs that are accredited.

II. Major Fields (30 points):

a. Licensed and certified fields (10 points). Each such field is assessed twice in five years through the results of undergraduate licensure/certification examinations taken by all graduating students in that field with points awarded for both the percentage of students scoring above the external mean and the amount of improvement over the previous assessment. As part of this standard, the performance of engineering students on the EIT examination is assessed.

b. Other undergraduate fields (10 points). Fields with few graduates and fields aligned with external programs are exempt, but other fields must be assessed at least once in five years through the performance of all graduating students on nationally standardized tests, locally developed tests, or tests developed from a cooperative question bank among institutions. A field is deemed successful if its students score above the mean (not applicable for local tests) or show improvement over previous performance.

c. Master's programs (10 points). Each program is assessed once in five years by external reviewers. Points are awarded according to how many of the ten formal standards established by the Tennessee Conference of Graduate Schools are adjudged as met, and according to qualitative standards (such as the quality of the teaching/learning environment and the scholarship of the faculty), as evaluated by the reviewers. (Examples of the Tennessee Conference standards include requirements for a core curriculum, for a thesis or other written culminating experience, and for a comprehensive examination.)

III. General Education (20 points):

a. Level of general education (10 points). All graduating seniors take the ACT-COMP test. The score is based on the average performance of the seniors compared to an appropriate reference group.

b. Gain in general education (10 points). From the entering ACT scores of the graduating seniors, a mean entering COMP performance is imputed. This figure is subtracted from the mean COMP performance of the graduating seniors, to establish the gain or "value-added."

IV. Alumni satisfaction (15 points): Every two years the graduating class of two years before is surveyed with a common instrument covering overall satisfaction, satisfaction with major instruction, impact of general education, and current societal participation. An institution is considered successful if its alumni respond more favorably than does the average respondent from all four-year institutions in Tennessee.

V. Corrective Measures (15 points): Institutions report corrective measures taken to address weakness identified in the other standards and in other review processes.

VI. Developing and Piloting Assessment Instruments (variable): Up to a total of 10 points may be earned over five years for carrying out this activity. The assessment instruments can be new comprehensive examinations for general education gains or new tests in major fields such as biology, sociology, history, and so forth.

Origins of Standards

Since the beginning, performance funding standards have been developed cooperatively by the THEC and the institutions concerned, and this cooperative development has continued. It has been recognized that the programs should not be static; change has been occurring as experience has been gained. This is expected to continue.

COMPREHENSIVE EDUCATION REFORM ACT OF 1984

In the early eighties concern about the quality of education in the United States intensified. In 1983 the U.S. Department of Education issued a report entitled A Nation at Risk: The Imperative for Education Reform in which concern was expressed

about "a rising tide of mediocrity" in the nations elementary and secondary schools. Later, other organizations and agencies issued reports which expressed concern not only about kindergarten through high school but also about higher education. It was in this climate that the legislature of the State of Tennessee passed the Comprehensive Education Reform Act of 1984.

The Reform Act primarily addressed improvement of elementary and secondary school education and the quality of teacher education programs at the various state-supported universities. But one relatively brief section, Section 97 (sometimes referred to as the Bragg Amendment after the state senator who proposed it), dealt with a wide range of improvements in state-supported higher education. The Act brought about significant increases in state spending on education and the Act required that evidence of improvement as a result of this increased spending be shown. The Act mandated improvement, but the Act also mandated or brought about various programs designed to facilitate that improvement.

The Bragg Amendment mandated improvements in many aspects of higher education, such as:

- the elimination of those courses offered for degree credit by state-supported universities which serve as remediation for high school deficiencies
- an increase in the percentage of students who enter four-year university degree programs and who subsequently earn baccalaureate degrees
- an increase in the scores of public university entry level students on the composite tests of ACT and SAT
- an improvement in standardized scores of graduating students at public universities
- an improvement in test scores of students entering graduate schools within public universities as measured by such national examinations as the GRE
- an improvement in the average National Teachers Examination scores of students enrolled in state-supported university teacher preparation programs
- an increase in the number of engineering students from state-supported universities who pass the EIT examination on the first attempt.

But with these mandates came a number of initiatives designed to aid the universities in attaining the mandated improvements, such as the funding of non-degree-credit remedial and developmental studies programs for students having deficiencies in their academic preparation for college-level study, and special appropriations for Chairs of Excellence and Centers of Excellence at each university. Chairs of Excellence are endowed chairs for which half the endowment comes from the state and half from university resources and/or private donations. Centers of Excellence are research centers whose basic operating budget comes from the state but which are expected to obtain significant funding from external sources, such as research grants, contracts and gifts. At Tennessee Tech Centers primarily enhance graduate education but are also expected to have a positive effect on the undergraduate instructional program.

Other state actions of significance that resulted from the prevailing spirit of improvement were an increase in the minimum requirements for high school graduation and an increase in admission standards of state-supported universities.

Because of the Bragg Amendment, state-supported universities were required to submit annual reports on their progress in the various areas itemized in the amendment, such as average EIT scores and pass rates. This was complementary to the institution-wide performance information being collected for Performance Funding purposes. In 1987 many of the disciplines specific performance indicators, such as performance on the EIT, were incorporated into the performance funding guidelines. At the same time the basis of comparison became national norms rather than internal improvements. Bragg Amendment reports are still submitted but some of the information also appears in the institutions' performance funding reports.

RESULTS/VALUE ADDED

Performance funding and the Bragg Amendment have resulted in systematic periodic collection of much statistical information on student abilities that can be used to help determine the value added to students as a result of their having completed curricula at state supported universities. Value added could be considered to be in two categories, knowledge or competence gained over that previously held by the student, and knowledge or competence gained in areas in which the student had little or no previous experience. The ACT-COMP test falls in the first category. The purpose of the ACT-COMP test is to measure value added in general educational objectives, such as ability to communicate effectively, solve problems, clarify values, function in social institutions, and understand, appreciate and use the principles of science and the arts. Tests which measure students' understanding of engineering tend to fall in the second category. As incoming freshmen most engineering students have little knowledge of engineering; hence, whatever engineering knowledge they have as graduating seniors is value added. The EIT is a measure of value added in engineering.

ACT-COMP

The ACT-COMP test was identified during the Performance Funding Project as an appropriate test to measure general education outcome and

has been used as a performance funding measurement tool by the Performance Funding Program since its inception. The test is designed by the College Outcome Measures Program (COMP) of the American College Testing Program. The test is designed to measure student competence in six areas-functioning in social institutions, using science, using the arts, communicating, solving problems, and clarifying values. From scores in each of the six areas, a total score can be derived. The total score can then be compared to the ACT score of the student as an entering freshman. To carry out the comparison, the initial ACT score is converted to the same scale used for the ACT-COMP total score.

Table 1 shows the value added in general education competencies for the 1987-88 Tennessee Tech graduating class and for the engineering students in that class. The engineering students have a higher entering ACT score than the graduating class as a whole but did not increase their general education competencies as much as the class as a whole.

Table I - Value Added in General Education Competencies, 1987-88 Graduating Seniors

	No. of Students	Entering ACT	Imputed Entering ACT	ACT-COMP	Value Added
TTU	1002	21.6	179.8	190.1	10.3
Engineering	290	24.7	189.1	193.8	4.7

Figures 1 and 2 show the ACT-COMP percentile scores in the various categories for the 1985-86, 1986-87 and 1987-88 graduating classes and the comparable scores for the engineering students in these classes. All scores are above the norm. Scores in "using science" tend to be high; scores in "functioning in social institutions" tend to be the lowest.

TTU

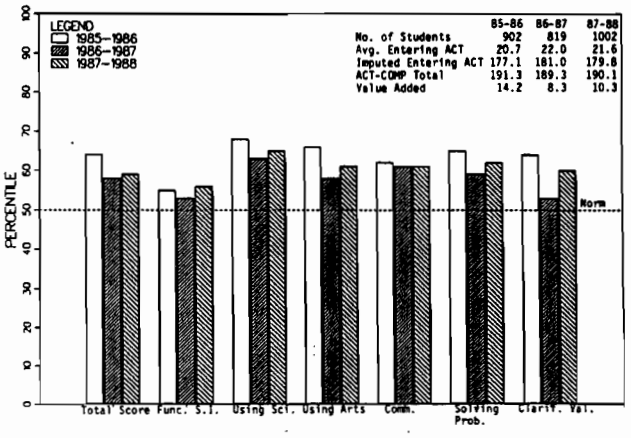

Figure 1 - ACT-COMP Results for Tennessee Tech Graduating Seniors - 1985-86, 1986-87, and 1987-88.

COLLEGE OF ENGINEERING

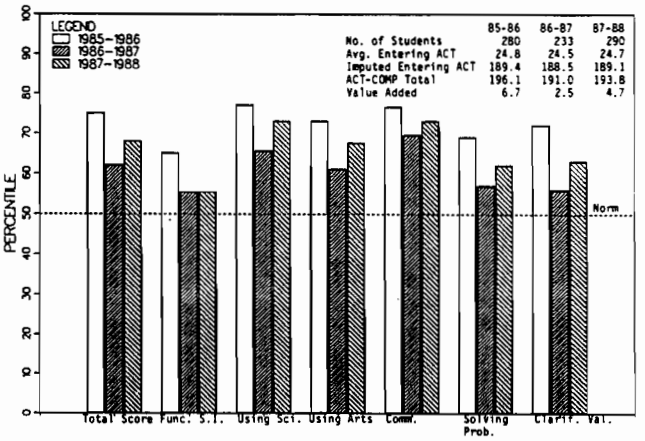

Figure 2 - ACT-COMP Results for Tennessee Tech Graduating Engineering Seniors - 1985-86, 1986-87, and 1987-88.

By looking at the ACT-COMP scores of Tennessee Tech graduating seniors it is possible to identify the weaker areas and devise institutionwide remedial actions. By looking at the ACT-COMP scores of the various departments, schools and colleges of the university, it is possible to identify areas of weakness for these various subgroups and perhaps to modify the curricula of such programs so as to address the weaknesses.

EIT and Other Discipline - Specific Examinations

Both Performance Funding and the Bragg Amendment require that graduating seniors take an appropriate discipline-specific examination to measure competencies in their majors. Disciplines which have undergraduate licensure/certification exams associated with them are to use these exams. Other disciplines are free to decide the examinations which will be used, with oversight from the THEC. For graduating engineering students, the EIT is required by both the Bragg Amendment and by the Performance Funding Program.

In recent years it has been possible to obtain information as to how students taking the EIT exam have performed collectively on the various parts of the exam. Table II lists the average performance of Tennessee Tech students on the April 1986 through April 1988 exams, and the corresponding averages for all who took those exams. Examination of the table indicates that TTU students tended to perform better than the total group of examinees in several areas and to do especially well on the A.M. computer programming questions. The TTU students' performance was not as good as the total group of examines in a number of areas, especially dynamics and engineering mechanics. It is interesting to note that on electrical circuits, engineering economy and mathematics questions, TTU students performed both better and worse than the national group. The results suggest areas of the TTU curriculum needing investigation

relative to improvement of student comprehension so as to increase the value added in these areas. The teaching of engineering mechanics/dynamics is especially in need of attention.

TABLE II - Weighted Average Results of April 1986 through April 1988 EIT Exam - National and TTU

SUBJECT	NO. OF EXAM QUESTIONS	% CORRECT TTU	% CORRECT ALL NATIONAL EXAMINEES	% DIFF.
A.M. Section				
Dynamics	16	46.6	50.1	-7.0
Mechanics of Materials	13	42.2	43.7	-3.4
Electrical Circuits	18	41.6	43.1	-3.5
Structure of Matter	5	47.0	48.0	-2.1
Statics	13	57.3	59.5	-3.7
Fluid Mechanics	14	51.1	52.0	-1.7
Computer Programming	8	55.7	51.3	+8.6
Materials Science	6	43.7	45.5	-4.0
Engineering Economics	6	64.6	64.8	-0.3
Chemistry	10	49.6	51.6	-3.9
Thermodynamics	14	46.8	45.6	-2.6
Mathematics	17	62.3	60.7	+2.6
P.M. Section:				
Required:				
Engineering Economics	10	54.7	52.2	-4.8
Electrical Circuits	10	46.3	44.7	+3.6
Mathematics	15	50.9	53.6	-5.1
Engineering Mechanics	15	40.7	46.4	-12.3
Additional (Choose Two):				
Computer Programming	10	55.0	55.1	-0.2
Electronics/Electrical Mach.	10	45.8	45.7	+0.2
Fluid Mechanics	10	49.8	52.9	-5.9
Mechanics of Materials	10	39.5	42.0	-6.0
Thermodynamics/Heat Transfer	10	50.7	52.5	-3.4

It should be remembered that most who take the EIT exams choose to do so and should, therefore, be motivated to do well. It is not known how requiring students to take the exam, with no penalty for not passing, affects performance. There is anecdotal information indicating that requiring the exam tends to lower the overall average of the group. Because of this, some caution is needed when making comparisons with national norms.

Alumni Survey

As was stated previously, an alumni survey is used as part of the Performance Funding Program. The survey indicates something about alumni perception of the value added to their intellectual and social development as a result of their university experience. The survey lists thirty-nine questions, but, counting all parts of each question, there is a total of ninety questions. The questions cover a wide variety of experiences while in school and during the two-year period since graduation. Only a limited subset of the questions, primarily those dealing with one's overall educational experiences and subsequent employment, are used to determine the institutions performance funding points. Having responses to the larger group of questions offers insight into the students' experiences and helps delineate areas in which attention to increasing value added might be appropriate.

The alumni survey results tend to be complementary of the results of the ACT-COMP exam. For example, the ACT-COMP results shown in Figure 2 indicate that, of all the various categories tested, TTU engineering students do less well in "functioning in social institutions." The alumni survey indicates that the TTU engineering graduates are less likely than other graduates to vote, write a letter to the editor, contribute time or money to political campaigns, or go to a public lecture. Survey results for TTU engineering graduates indicate they feel their education did not add as much to their appreciation of different cultures, understanding of interactions between people and the environment, getting along with people of different races and ethnic groups, understanding different philosophies and cultures, or ability to lead or guide others as did the education of graduates of other fields.

The ACT-COMP results in Figure 2 indicate engineering seniors at TTU tend to have high scores in "using science." The alumni survey indicates that TTU engineering graduates feel their education added more to their abilities to understand graphical information, to define and solve problems, to understand mathematical concepts, to understand and apply scientific principles and methods, to use mathematics in everyday life, to learn on their own, and to have developed practical skills necessary to obtain employment in their field than did the education of graduates of other fields.

Corrective Measures

For those interested in improving a university's academic program at the department, college or university level, the Performance Funding and Bragg Amendment data can be a catalyst for insight into understanding weaknesses and developing methods for improvement. Tennessee Tech has instituted numerous activities as a result of the data it has gathered.

To improve communications skills of all students, Tennessee Tech instituted a writing-across-the-curriculum program. The purpose of the program is to have faculty incorporate writing into as many classes as is feasible. This practice strengthens the writing skills developed in the year of English composition and year of literature courses which are required of all students at TTU. Writing-across-the-curriculum ensures the students' writing skills continue to be developed throughout their undergraduate education. Seminars and workshops have been available to faculty so they can learn the principles of writing-across-the-curriculum and how to implement the concept into the classroom constructively.

Tennessee Tech has a relatively high graduation rate, typically about 50%; but the Bragg Amendment requires that graduation rates be

improved. The university undertook a number of corrective measures in this area. It conducted a survey of non-returning students to determine the reasons for non-return. As a result of the survey the university is looking at the possibility of increasing the number of night classes offered. The university added University 101, Introduction to Campus Life, to the curriculum. University 101 is an elective freshman seminar course designed to address the special concerns of first year students. The course familiarizes students with university facilities and services, such as the library, computer center, and student services offices. It teaches effective study techniques and emphasizes development of appropriate balance of academic and other activities. The class size is normally twenty or less. It is a popular course and has reduced the nonreturn rate among those who have taken it.

Various colleges and departments have instituted special activities to deal with areas of concern identified by Performance Funding and Bragg Amendment data. In engineering, the weak areas of student performance on the EIT are being addressed.

SUMMARY AND CONCLUSIONS

Performance Funding data and Bragg Amendment statistics provide a wide spectrum of information about the characteristics of the graduates of state-supported colleges and universities in Tennessee and some measure of the value added to those graduates as a result of completing curricula at those institutions.

The Tennessee Tech data and statistics indicate some things that are expected -- in general educational competencies engineering students scored highest in "using science" -and some things that are surprising -- in general educational competencies engineering students scored higher in "using the arts" than in "problem solving."

Only highlights of Tennessee's efforts at measuring value added have been presented. Only a small sample of the data collected has been given. Only a few of the corrective actions taken have been described. But the few samples indicate that there is much to be gained by attempting to measure value added and that measuring value added in many areas with a variety of instruments and techniques is important.

The information gathered is primarily statistical in nature. Since it is statistical it is important to analyze many years of data so as to establish trends and to determine if corrective measures are having effects on those trends.

To get maximum value from the information, much time and effort is needed. The university-wide norms are interesting, but of more value and interest are the norms of the various colleges and academic departments within the university. There are significant differences among the students in the various disciplines.

Investigating value added is a fruitful area for continuing study and improvement.

1991 ASEE
Southeastern Section Meeting
April 14-16, 1991

Sheraton Charleston Hotel
Charleston, South Carolina

Sponsored by

The Citadel
The Citadel Development Foundation
Private and Corporate Engineering, Architectural, Construction, and Industrial Firms in South Carolina
American Society for Engineering Education

ASEE Conference Committee
Department of Civil Engineering
The Citadel
Charleston, South Carolina 29409

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ChallEngE '91

Challenges in Engineering Education

1991 ASEE
Southeastern Section Meeting

REGISTRATION

The registration fee for this program is $140 if received by April 3, 1991. Registrations received after this date will be $150. The fee covers the cost of the sessions, handout materials, refreshment breaks, two breakfasts and luncheons, a reception, and banquet. The spouse program includes a Sunday evening harbor tour and dinner cruise, and tours of the Charleston's historic district and Middleton Plantation (described later), and the awards banquet. Tickets for each event may be purchased separately.

Your registration fee should accompany the attached registration form. Checks should be made payable to *The Citadel*. MasterCard and VISA are accepted. Mail to:

ASEE Conference Committee
Department of Civil Engineering
The Citadel
Charleston, SC 29409

Enrollment is limited and registrations will be processed on a first-come, first-served basis.

ABOUT THE PROGRAM

ChallEngE '91

The theme **ChallEngE '91** (**Chall**enges in **Engi**neering **E**ducation) portrays the major focus of the conference: the challenges in engineering education associated with concerns such as a changing international environment, curricula, ethics, design, use of computers, recruiting, and many others.

MEETING FEATURES

- Plenary Session: A distinguished panel of national leaders in academic, military, and industrial sectors shaping a new era of Engineering Education will examine "The Challenges and Opportunities of Engineering Education in the Next Decade"
- Learning Styles/Teaching Techniques Workshop
- New Engineering Educators Session
- Special "Surviving Hurricane Hugo" Presentation
- Paper presentations for all disciplines
- Administrative Roundtable
- Charleston Harbor Dinner Cruise
- Spouse Program including tours of Historic Charleston and Middleton Place

CANCELLATIONS AND REFUNDS

If for any reason, you register and find you cannot attend, please contact the Department of Civil Engineering at The Citadel prior to March 29, 1991, and you will receive a full refund. If you are unable to give the full two-week notice, an administrative fee equal to 25% of the registration fee will be charged against your refund. Refunds cannot be made after the program has begun; however, a substitute participant may be designated in place of a registrant who cannot attend if this change is made during registration.

TRANSPORTATION

A commercial transportation service is available for transportation between the Charleston International Airport and the Charleston Sheraton. For information about that service, call Airport Ground Transportation at (803)767-7113.

LODGING

A limited number of rooms has been set aside at the Charleston Sheraton for attenders at the conference at a rate of $95.00 Single or $95.00 Double. Rooms may be reserved by calling (803)723-3000. Please identify yourself as an ASEE conference participant when making reservations. Because springtime in Charleston is the peak tourist season, it is recommended that reservations be made as early as possible.

LOCATION

The 1991 ASEE Southeastern Section Meeting will be held near The Citadel at the Charleston Sheraton Hotel on Lockwood Drive, at the upper edge of the city's historic district. Traveling into Charleston on Interstate 26, follow the signs onto Highway 17 South (to Savannah) and turn right at the sixth traffic light. Traveling into Charleston from the South along Highway 17, stay in the left lane coming across the Ashley River, turn left at the first traffic light, proceed one block and turn left onto Spring Street, then turn right at the first traffic light.

ADDITIONAL INFORMATION

For additional information, call (803)792-5083 and ask for someone on the ASEE Conference Committee.

LOCATION OF MEETING ROOMS

MONDAY, APRIL 15

7 - 9 AM **Registration**

7:30-9 AM **General Breakfast**

Cotillion A

9 - 10:15 AM **General Session**

Cotillion C

10:15 - 10:45 AM **Refreshment Break**

10:45 - NOON **Technical Sessions**

- **Instructional Unit Session I**
  Cotillion C
- **Civil Engineering Session I**
  Cotillion B
- **Engineering Technology Session I**
  Palmetto 213
- **Research Unit Session**
  Charleston 220
- **Administrative Unit Session**
  Decatur 209

NOON - 1:30 PM **Unit Luncheons**

- **Instructional Unit**
  Cotillion A
- **Research Unit**
  Citadel A
- **Administrative Unit**
  Citadel B

1:30 - 2:45 PM **Technical Sessions**

- **Civil Engineering Session II**
  Cotillion B
- **Mechanical Engineering Session I**
  Charleston 220
- **Industrial Engineering Session**
  Decatur 209
- **Engineering Technology Session II**
  Palmetto 213
- **Engineering Graphics Session I**
  Prosper 229
- **Instructional Unit Session II**
  Cotillion C

2:45 - 3:15 PM **Refreshment Break**

3:15 - 4:30 PM **Technical Sessions**

- **Electrical Engineering Session**
  Decatur 209
- **Civil Engineering Session III**
  Cotillion B
- **Mechanical Engineering Session II**
  Charleston 220
- **Engineering Technology Session III**
  Palmetto 213
- **Instructional Unit Session III**
  Cotillion C

6:00 - 7:00 PM **Reception**

Courtyard

7:00 - 9:00 PM **Awards Banquet**

Cotillion A

TUESDAY, APRIL 16

7:00 - 9:00 AM **Registration**

7:30 - 9:00 AM **Division Breakfast and Business Meetings**

Cotillion A

9:00 - 10:15 AM **Technical Sessions**

- **Instructional Unit Session IV**
  Cotillion C
- **Engineering Technology Session IV**
  Palmetto 213
- **Engineering Graphics Session II**
  Prosper 229
- **New Engineering Educators Session**
  Charleston 220

10:15 - 10:45 AM **Refreshment Break**

10:45 - 12:00 **Plenary Session**

Cotillion C

NOON - 1:30 PM **Luncheon and Section Business Meeting**

Cotillion A

1:30 PM **NSF/Faculty Rap Session**

Prosper 229

MINUTES

ADMINISTRATIVE UNIT OF THE SOUTHEASTERN SECTION
AMERICAN SOCIETY FOR ENGINEERING EDUCATION
APRIL 15, 1991

The annual business meeting of the Administrative Unit of the Southeastern Section of the American Society for Engineering Education was held at lunch on April 15, 1991 in the Citadel B room of the Charleston Sheraton, near the Citadel. In attendance were:

Ardis, Colby	Southern Illinois University
Braun, Ed	UNC - Charlotte
Chin, Robert A.	East Carolina University
Cole, Donald	University of Louisville
Cox, Virgil	Gaston College
Crossman, Gary R.	Old Dominion University
Evett, Jack B.	UNC Charlotte
Gunley, William Q.	University of Tennessee at Chattanooga
Jenkins, Leo	University of Louisville
LeFevre, E. W.	University of Arkansas
Mason, John T.	Tennessee Technological University
Morris, Don H.	Virginia Tech
Rey, William K.	University of Alabama
Reyes-Guerra, David	ABET
Sallah, Neil M.	Tennessee Technological University
Swisher, George	Tennessee Technological University
Tate, Boyce D.	Southern College of Technology

The meeting was called to order by the chairman, George M. Swisher at 12:50 p.m. The minutes of the 1990 meeting were read by the secretary, Donald L. Cole and approved.

Discussion was encouraged concerning the agenda for the meeting next year. It was suggested that several deans be requested to discuss their views about the relative importance of **Research and Teaching**. With regard to this, other comments were:

1. This could be done as a combined research and administrative session.

2. The session should start with an opening presentation.

3. The importance of service should also be worked into the discussion.

4. What yardstick would be used for evaluation of teaching?

A discussion about new teaching innovations resulted in comments about the place for exit interviews with students, comments from alumni, and classroom visits by peers (normally associated with tenure). No suggestions resulted.

John T. Mason III was elected secretary so the officers for 1991-92 are:

Chairman	William K. Rey
Vice Chairman	Donald L. Cole
Secretary	John T. Mason III

The meeting adjourned at 1:20 p.m.

John T. Mason III, Secretary

AGENDA

SUNDAY, APRIL 14

- 6 PM **Registration**

Tours of Citadel Campus (Complimentary)

2 - 4 PM **Learning Styles/Teaching Techniques Workshop**

4 - 6 PM **Executive Board Meeting**

7-10 PM **Charleston Harbor Dinner Cruise**

(bus from Sheraton available at 6:30 PM)

MONDAY, APRIL 15

7 - 9 AM **Registration**

7:30-9 AM **General Breakfast**

- o Campus Representatives Meeting
- o New Engineering Educators Meeting
- o Session Moderators Meeting

9 - 10:15 AM **General Session**

- o Section President's Welcome (Dr. Robert Mabrey, Tennessee Tech University)
- o Announcements
- o Keynote Address

10:15 - 10:45 AM **Refreshment Break**

10:45 - NOON **Technical Sessions**

■ Instructional Unit Session I

Moderator: J. P. Mohsen, University of Louisville

Integrating Ethics into Engineering Curricula Through Role Play and Dramatization
Kenneth P. Brannan, William L. Spearman, and Dennis J. Fallon, The Citadel

Playing Games in Engineering Classes
Joseph E. Hummer, University of North Carolina at Charlotte

Mechanical Engineering Student and Faculty Perceptions of Team Projects in Engineering Courses
B. K. Hodge, R. P. Taylor, and Ahmad Smaili, Mississippi State University

■ Civil Engineering Session I

Moderator: Fazil T. Najafi, University of Florida

A Reinforced Concrete Design Experience for Freshman Civil Engineering Students
J. P. Gomez, Virginia Military Institute

Construction, Destruction, and Instruction: A Laboratory Based Civil Engineering Curriculum
Russell H. Stout, Jr., The Citadel

Disposable Plastics in Concrete: A Design Project for the Building System Design Course
Mostafiz R. Chowdhury, East Carolina University

■ Engineering Technology Session I

Moderator: Wayne D. Andrews, East Tennessee State University

A Focus on Applied Engineering Applications
Neil Bungard, East Tennessee State University

Outcome Assessment of Technical Math at Community Colleges
Edwin R. Braun, University of North Carolina at Charlotte

Computer Aided Instruction for Math Principles
Marian M. Clark, East Tennessee State University

Expert Systems As A Supplement to Present Teaching Methods
Jimmy Dean Hahs, East Tennessee State University

■ Research Unit Session

Moderator: Samuel V. Bell, University of Louisville

A Technic to Analyze Floating Foundation Resting on Elastic Continuum Using the Galerkin Technic or FEM
G. Gabre, Alabama Agricultural and Mechanical University

Moire Interferometry for Strain Analysis of Composites
Abraham Salehi, Tennessee Technological University

Proposed High Speed Ground Transportation Systems in Florida
L. David Shen, Florida International University

■ **Administrative Unit Session**

Moderator: George Swisher, Tennessee Technological University

Administrative Roundtable II

- o Recruiting of Undergraduates in A Declining Demographic Situation
- o Indirect Cost Reallocations to Units
- o Outcomes Assessment of Graduates (EIT, GRE, ACT-COMP Tests)
- o Freshman-level Programs
- o The Quality of Advising Programs
- o Innovative Equipment/Computer Software Acquisition Schemes (Loans, Grants, Targeted Student Fees, etc.)
- o Faculty Salary Inequities/Inversion
- o Other topics that may be brought up from the floor

NOON - 1:30 PM **Unit Luncheons**

■ **Instructional Unit**
Presentation of the Tom. C. Evans Award Winning Paper and Business Meeting

■ **Research Unit**

■ **Administrative Unit**

1:30 - 2:45 PM **Technical Sessions**

■ **Civil Engineering Session II**

Moderator: Kenneth P. Brannan, The Citadel

To "C" or Not to "C": The Language of Choice in Engineering Education
James K. Nelson, Jr., Clemson University

Modeling in the Civil Engineering Curriculum or We Have Never Done A Problem Like This One
J. A. Murden, The Citadel

Engineering Education for A New Century: Prologue for the Future
H. C. Saxe, Norwich University

■ **Mechanical Engineering Session I**

Moderator: Clark Midkiff, University of Alabama

The Measurement Test Plan: The Role of Design in the Undergraduate Measurements Laboratory
R. S. Figliola and D. E. Beasley, Clemson University

Challenges in a National Competitive Student Design Program
Stuart R. Bell and Joey K. Parker, The University of Alabama

The Legacy of the Swiss Mechanical Foundation
William A. Beard, Western Kentucky University

■ **Industrial Engineering Session**

Moderator: Ibrahim Y. Al-Qattan, Tennessee Technological University

A Capstone Design Course: A Practical Approach
L. Ray Johnson and M. Wayne Parker, Mississippi State University

On Reasoning About Change in an Engineering Design Process
Celestine A. Ntuen, North Carolina A & T State University

A Proposed Knowledge-Based Quality Control and Inspection System
C. Clinton Strange, Jr., Jiangqiao Luo, and Amad K. Elshennaway, University of Central Florida

■ **Engineering Technology Session II**

Moderator: Mark Williams, Memphis State University

Research Opportunities for Engineering Technology Faculty
Shelton L. Houston and Gary H. Johnsey, The University of Southern Mississippi

The Research Technologist
Roger L. Blue, University of North Carolina at Charlotte

Admit it-- One Thing Engineering Technology Does Not Need is Funded Research"
Curtis J. Young, Douglas E. Tino, Inc.

■ **Engineering Graphics Session I**

Moderator: George R. Lux, Virginia Polytechnic Institute

A Graphics Curriculum Assessment
Robert A. Chin, East Carolina University

The Future of Engineering Graphics Education
Linda C. Cleveland, Clemson University

The Significance of Solid Modeling in Engineering Graphics Education
James A. Leach and Robert A. Matthews, University of Louisville

■ **Instructional Unit Session II**

Moderator: Donald Cole, University of Louisville

Communicating With Student Via LAN
Ronald B. Meade, Virginia Military Institute

Managing A Microcomputer Lab
Sunil Hazari, East Carolina University

Challenges in Outreach Engineering Education Programs
L. David Shen, Florida International University

2:45 - 3:15 PM **Refreshment Break**

3:15 - 4:30 PM **Technical Sessions**

■ **Electrical Engineering Session**

Moderator: Rhonda Hockelberg, Alabama A & M University

An Inexpensive Laboratory for Integrated Circuit Design
Peter B. Aronhime, Jacek M. Zurada, Samuel V. Bell, and James Stephens, University of Louisville

A New Network Approach to Channel Equalization
Ali Elahi, Alabama A & M University

Computer Graphics in Undergraduate Networks to Emphasize Transfer Function and Frequency Response
B. E. Stuckman, University of Louisville

Integrating PSPICE into the Electronics Portion of A University Undergraduate Curriculum
Samuel V. Bell, Jr. and Kevin M. Walsh, University of Louisville

■ **Civil Engineering Session III**

Moderator: Edwin Foster, University of Tennessee at Chattanooga

Comparison of Teaching Load and Resistance Factor with Allowable Stress Design
Dewey H. Deason, Tennessee Technological University

Are Your Students Learning LRFD in Steel or Are Your Customers Getting Less Than Their Money's Worth
Curtis J. Young, Douglas E. Tino, Inc.

The Role of Computers in Engineering Education
Fazil T. Najafi, University of Florida

■ **Mechanical Engineering Session II**

Moderator: William A. Beard, Western Kentucky University

Finite Element Methods Introduced in an Advanced Mechanics of Materials Course
William Q. Gurley, The University of Tennessee at Chattanooga

Graduate Supervision of Undergraduate Cogeneration Design Projects
K. Clark Midkiff, The University of Alabama

A Design-Centered Thermal Science Course
William S. Johnson, The University of Tennessee at Knoxville

■ **Engineering Technology Session III**

Moderator: Neil Bungard, East Tennessee State University

Graduate Programs in Technology: What Does the Future Hold?
Aaron K. Ball, Western Carolina University

Engineering Technology in A Changing World
G. Gabre, Alabama Agricultural and Mechanical University

Meeting the Challenge of Technological Advancements Through Strategic Planning
Neal F. Jackson, Memphis State University

■ **Instructional Unit Session III**

Moderator: L. David Shen, Florida International University

Teaching Engineering Design in the 1990's
Robert G. Batson, The University of Alabama

Instructional Methods for Teaching Open-End Engineering Design Concepts
Celestine A. Ntuen, North Carolina A & T State University

Student Evaluation by Dedication Assessment
Mario Paz and J. P. Mohsen, University of Louisville

6:00 - 7:00 PM **Reception**

7:00 - 9:00 PM **Awards Banquet**

TUESDAY, APRIL 16

7:00 - 9:00 AM **Registration**

7:30 - 9:00 AM **Division Breakfast and Business Meetings**

9:00 - 10:15 AM **Technical Sessions**

■ **Instructional Unit Session IV**

Moderator: Curtis J. Young, Douglas E. Tino, Inc.

Challenges in Engineering Education
Marjorie T. Davis, Mercer University

Freshman Seminar for Engineers
Gary H. McDonald, The University of Tennessee at Chattanooga

A Workshop Program to Assist Graduate Teaching Assistants with Instructional Responsibilities
Walter E. Castro, A. Wayne Bennett, and Imtiaz Hague, Clemson University

■ **Engineering Technology Session IV**

Moderator: Jimmy Dean Hahs, East Tennessee State University

The Role of AAS Engineering Technology Programs in Creating Technological Intellectual Capital
Virgil G. Cox, Gaston College

Joint Effort Between Engineering Technology Educators and Professional Societies in Recruiting Students
Gregory W. Mills, Western Kentucky University

Educating the Work Force
Thomas M. Murray, Jr. and Samuel V. Bell, University of Louisville

Quality Survival for the Small Manufacturer
Edwin R. Braun, University of North Carolina at Charlotte

■ **Engineering Graphics Session II**

Moderator: Robert A. Matthews, University of Louisville

Conversion From Manual to Computer Aided Graphics Provides Some Expensive Lessons but Also Generates Unexpected Benefits
Gary H. Johnsey and Shelton L. Houston, University of Southern Mississippi

Analysis of Citations Found in Articles Published in the Engineering Design Graphics Journal
Robert A. Chin, East Carolina University

■ **New Engineering Educators Session**

A panel discussion of issues facing new engineering educators.

Moderator: Dermot Collins, University of Louisville

Panelists:

- ▹ Dennis Fallon, The Citadel: *Managerial Leadership Styles for the Engineering Educator*
- ▹ Susan Simons, Memphis State University: *Dealing with Non-traditional Students*
- ▹ Chang Park, University of Florida: *Juggling Your Time Between Research and Teaching*
- ▹ Leo Hirth, Auburn University: *Effective Classroom Presentation*
- ▹ Dermot Collins, University of Louisville: *Mentoring of Freshman Students*
- ▹ Colby Artis, Southern Illinois University at Edwardsville: *Tips for New Engineering Educators*

10:15 - 10:45 AM **Refreshment Break**

10:45 - 12:00 **Plenary Session**

A panel examination of: "The Challenges and Opportunities of Engineering Education in the Next Decade."

Moderator: Charles Lindbergh, Head, Department of Civil Engineering, The Citadel

Panelists:

- ▹ David Reyes-Guerra, Executive Director, Accreditation Board for Engineering and Technology
- ▹ Walter LeFevre, President, National Society of Professional Engineers
- ▹ Wilbur L. Meier, Director, Division for Engineering Infrastructure, National Science Foundation

▹ MGEN Bud Ahearn, Air Force Engineering and Services

▹ Wayne Clough, Dean of Engineering, Virginia Polytechnic Institute and State University

▹ Louis L. Guy, Jr., Guy and Davis, Consulting Engineers

NOON - 1:30 PM **Luncheon and Section Business Meeting**

1:30 PM **NSF/Faculty Rap Session**

Wilbur L. Meier, Director, Division for Engineering Infrastructure, National Science Foundation will host an informal discussion with Southeastern Section faculty on faculty opportunities with NSF.

LEARNING STYLES/TEACHING TECHNIQUES WORKSHOP

Conducted by Susan Simons, Memphis State University

The two-hour workshop will be held at the Sheraton Charleston on Sunday, April 14, 1991, from 2-4 PM. Learning styles and teaching styles will be the primary emphasis of the workshop. The instrument utilized will be the Kolb Learning Style Inventory which will examine the individual learning styles of the participants. By examining and understanding the differences of the individual learning styles within the group, the participants will have a greater understanding of the learners in their classrooms. Faculty could then resort to various methods of teaching to enhance the education of all students.

REGISTRATION FORM
1991 ASEE Southeastern Sectional Meeting
April 14-16, 1991, Sheraton Charleston, Charleston, South Carolina

Name_____
Preferred Badge Name_____
Title_____
Company/Affiliation_____
Mailing Address_____
City_____State_____Zip_____

Mail form and fee to:
ASEE Conference Committee
Department of Civil Engineering
The Citadel
Charleston, SC 29409

Telephone: (803)792-5083

Please register me for the following activities:

Event	Cost	Self	Spouse
Conference Registration (Registration will be $150 after April 3, 1991; reg. fee includes Mon. and Tue. meals)	$140	____	
Sunday Evening Harbor Cruise/Dinner*	$15	____	____
Learning Styles/Teaching Techniques Workshop	$15	____	
Banquet	$23	Incl.	____
Monday Charleston Tour and More!*	$18		____
Tuesday Middleton Plantation Tour*	$25		____

*Limited spaces available; see information on back page.

I am enclosing a check for $_____ made payable to *The Citadel.*

Charge $_____ to my credit card.

MasterCard#_____VISA#_____

Expiration Date_____ Authorizing Signature_____

SPRINGTIME IN HISTORIC CHARLESTON

Springtime in Charleston is a favorite for resident and tourist alike. Private gardens take on the color of flower and foliage and parks and plantations become promenade places for thousands. Visiting Charleston is a uniquely American experience. Preservation is a way of life for the city's occupants, conveniently reminding the visitor of its long and rich historic past. From the founding site at Charles Towne Landing through the careful restorations of the historic district at the tip of the peninsular city, to the gardens, forts, beaches and parks that lie about her, Charleston can charm and delight the most discerning of travelers.

SPECIAL CONFERENCE ACTIVITIES

Sunday, April 14, 1991

1-6 PM CITADEL CAMPUS SHORT TOUR (COMPLIMENTS OF THE CITADEL) A touring van will be at the Sheraton Charleston hotel entrance from 1 to 6 PM for those wishing to visit the campus of the historic Military College of South Carolina.

7-10 PM SUNDAY EVENING DINNER CRUISE AND HARBOR TOUR ($15) - We've chartered the "Spirit of Charleston", a 104 foot tour boat for an evening tour of the Harbor, beginning at 7:00 PM on Sunday, April 14. Included will be a catered dinner and dancing. Transportation will be provided from the Sheraton Charleston at 6:30. **Dinner Cruise Update: We've priced the tickets for the dinner cruise at ½ the going rate. Tickets are going rapidly during early registration. The availability of remaining spaces is subject to the heavy springtime tourist demand in the Charleston area. Don't be disappointed. Sign up without delay. (If you have already registered, you may sign up for the dinner cruise by mailing in a check marked dinner cruise.)**

Monday, April 15, 1991

7 PM AWARDS BANQUET ENTERTAINMENT - A special presentation by Dr. John Murden of The Citadel entitled "Hurricane Hugo: The Experience" will give dinner guests a dramatic picture of how Charleston survived one of the most destructive storms of the century.

SPOUSE PROGRAM

Sunday, April 14, 1991

1-6 PM CITADEL CAMPUS SHORT TOUR (COMPLIMENTS OF THE CITADEL) - See description above.

7-10 PM SUNDAY EVENING DINNER CRUISE AND HARBOR TOUR ($15) - See description above.

Monday, April 15, 1991

9 AM - NOON THE CITY OF CHARLESTON TOUR ($18) A privately guided tour of the historic city. Favorite sights include: Rainbow Row, cobblestone streets, quaint gardens, hundreds of 18th and 19th century homes, buildings and churches, the Battery overlooking the Charleston Harbor and Fort Sumter, and a visit to the Heyward-Washington House, built in 1772.

NOON - 2 PM LUNCH (DUTCH TREAT)/SHOPPING IN CHARLESTON Browse through the Market Square area, well-known for its unique shops, boutiques, restaurants, and pubs.

7 PM AWARDS BANQUET Join the conference registrants for the Reception and annual Awards Banquet at the Sheraton Charleston. See description above.

Tuesday, April 16, 1991

8:30-11:45 AM THE MIDDLETON PLANTATION TOUR ($25) A privately guided tour of the gardens, house and stableyards. The gardens are the oldest in America, laid out in 1741, reflecting the elegance of 17th-century France and 18th-century England. The house interprets the evolutionary history of the Middleton family. The stableyards reconstruct aspects of colonial life and the day-to-day world of the rice and cotton eras, with animals, artifacts, craft exhibits, and demonstrations by period artisans.