Annual Assessment and Evaluation Report

Dr. Dave Dillon
Department of Construction Management
and Occupational Safety and Health
School of Technology
North Carolina A&T State University
2003 – 2004

Department of Construction Management
and
Occupational Safety and Health

ANNUAL ASSESSMENT AND PROGRAM EVALUATION REPORT
2003-2004

Brief Overview of Department and Programs:

The Department of Construction Management and Occupational Safety and Health have two undergraduate degrees and two graduate degree options within the Masters of Science in Industrial Technology (MSIT) program. The Department offers Bachelor of Science degrees in *Construction Management* (0156) and *Occupational Safety and Health* (0094). The Department also offers an on-line option for the Bachelor of Science in Occupational Safety and Health degree, which is delivered via the Internet. At the graduate level the Department offers a Master of Science in Industrial Technology with a concentration in Construction Management (0252) and a concentration in Occupational Safety and Health (0254). The Department also offers a certificate program in Occupational Safety and Health. Additionally, the Department was successful in its accreditation from the American Council for Construction Education in the spring of 2004 received re-accreditation from NAIT.

Strategic Plan:

Vision: The Department of Construction Management and Occupational Safety and Health strives to provide quality programs in the fields of Construction Management and Occupational Safety and Health, and to lead the nation in the preparation of graduates who will provide solutions to the challenges facing the 21st Century workforce.

Mission: It is the mission of the Department of Construction Management and Occupational Safety and Health to provide students with a high quality teaching/learning environment and to prepare them for careers in the fields of Construction Management and Occupational Safety and Health.

Goals/Objectives:

Construction Management

Goal 1

The Construction Management Unit provides an environment, which nurtures individual development and creativity through scholarly pursuits in the program areas of construction management.

Outcome/Results:

Approximately 90% of our graduates have received employment in a construction related field upon graduation.

Approximately 50% of graduates have completed the General Contractor's Exam.

Goal 2

The Construction Management Unit provides a basic knowledge of management skills and problem-solving techniques associated with Construction Management and Occupational Safety and Health.

Outcome/Results:

Approximately 80% of graduates find employment as construction managers or assistant managers.

Approximately 25% of all graduates go on to pursue graduate degrees or professional licensures.

Goal 3

The Construction Management Unit will develop scientific and technological proficiency through organized instruction and research in the program areas of CMS.

Outcomes/Results:

All students will be proficient in the use of construction related computer software packages to address problems commonly found in the construction environment.

Goal 4

The Construction Management Unit prepares individuals to secure positions in technical-management in business, industry and government.

Outcome/Result:

The management and completion of construction projects by students demonstrates their competence in the application of technical management tools and capabilities in the construction areas. All Construction Management graduates will gain employment in the construction field upon graduation.

Goal 5

The Construction Management Unit provides advanced technological competencies and leadership in the utilization of computers in industry, business and technical settings.

Outcome/Result:

Students can successfully plan, set-up and use computer systems to regulate and monitor financial resources of a project. Upon graduation, all graduates will be able to use financial, planning, scheduling and graphical software to solve construction related tasks.

Students who complete the BS degree in Construction Management shall have achieved the objectives outlined by the Department. In addition to the stated assessment procedures, the Department will conduct follow-up studies to determine the value of the Department's programs to graduates and employers of graduates. Each graduating student completes an exit interview with the Associate Dean of the School of Technology. The Associate Dean's office maintains a statistical database that is helpful in determining the effectiveness of the programs.

Occupational Safety and Health

Goal 1

The Occupational Safety and Health unit provides a quality environment which nurtures individual development and creativity through scholarly pursuit of academics in the field of Occupational Safety and Health.

Outcome/Result:

Approximately 95% of graduates receive employment in the Occupational Safety and Health field upon graduation. Upon graduation all OSH graduates can take the ASP and answer a minimum of 75% of the questions correctly.

Goal 2

The OSH unit assists students in the development of scientific and technical competencies through laboratory exercises and instructional activities.

Outcome/Result:

All graduates will be able to successfully setup and monitor the workplace environment using currently available industrial hygiene equipment.

Goal 3

The OSH unit assists students in the development of adequate oral and written communication skills, and to put those skills into practice in laboratory and classroom activities.

Outcome/Result:

The students use the most current computer software packages to produce reports and evaluations. All OSH courses require oral and written presentations. This is an integral part of each course of study. All major courses require a grade of c or better.

Goal 4

The OSH unit assists students in the development of technical management capabilities in workplace safety, industrial hygiene and OSHA related rules and regulations.

Outcome/Result:

The management and completion of safety related projects by our graduates demonstrates their competence in the applications of technical management tools and capabilities.

Goal 5

The OSH unit assists students in preparation for careers in education, industry, business and government upon graduation in the field of Occupational Safety and Health.

Outcome/Result:

Information gathered by students, their employers and the OSH Advisory Committee indicate that our graduates are well prepared for a career in a Safety field. All OSH graduates will gain employment in a safety or health field upon graduation.

Relationship to University's strategic plan:

The following is a brief description of how the Department's strategic plan is related to the School of Technology's mission goals and strategic plan. The objectives of the Department are:

- To provide quality competency-based instruction so that men and women will be prepared to enter the fields of construction management and occupational safety and health upon graduation.

- To assist majors in developing those critical competencies in the sciences, communications, mathematics and technical specialties essential to securing positions in construction management and occupational safety and health.

These learning objectives are congruent with the School of Technology's mission which is "to prepare students at the undergraduate and graduate levels to become competitive technology-management professionals for industry, education and government, who are able to research and apply technological and managerial solutions for 21st century work force challenges".

These objectives are also congruent with the mission of North Carolina Agricultural and Technical State University and are stated in the University of North Carolina Long Range Plan 2000-2005, page 2, as follows:

"North Carolina Agricultural and Technical State University is a public, comprehensive, land-grant institution committed to fulfilling its fundamental purposes through exemplary undergraduate and graduate instruction, scholarly and creative research, and effective public service. The University offers degree programs at the baccalaureate, master's, and doctoral levels with emphasis on engineering, science, technology, literature, and other selected areas. As one of North Carolina's three engineering colleges, the University offers Ph.D. programs in engineering and technology management. Basic applied research is conducted by faculty in university centers of excellence, in inter-institutional relationships, and through significant involvement with several public and private agencies. The University also conducts major research through engineering, transportation and its extension programs in agriculture.

The mission of the University places a high emphasis upon technology. The School and University missions and Department objectives are made available to faculty, staff, students, and any other interested person. The Departmental objectives are reviewed periodically by the faculty, staff and students, and Department's advisory committees. Typically this process occurs during a self-study or program review or when internal and external environmental factors are impacting upon the Department. For example, during the spring of 2004, the School and Departmental programs were reviewed for the purpose of maintaining accreditation by the National Association for Industrial Technology (NAIT) and the school's mission statement and Department objectives must reflect the direction of the programs and relate to the university's overall mission.

Departmental goals designed to facilitate accomplishing student learning goals include the establishment of internship programs for Construction Management students, the purchase of additional laboratory equipment to enhance practical experience, and the continued development of distance delivery courses.

Student Profile Data:
Admission requirements for students considering the Department of Construction Management and Occupational Safety and Health have graduated from high school, or the equivalent, and completed the SAT, or the equivalent. The minimum acceptable GPA is 2.0. The minimum acceptable SAT score is a combined total of 820.

The Total Enrollment in each Departmental Program 2002-2003:

Construction Management	99
Occupational Safety and Health	80
Total Number of Majors	**179**
Number of Students in the Honors Program:	61
Number of Transfers (average admission GPA = 2.27):	29

Progression Requirement: Prerequisites to some courses are listed in the University Course Catalogue.

General Education

Freshmen performance data 2002 - 2003:

The GPAs for Freshmen were in the following categories:

0.0 0– 1.00	**02**	
1.0 0– 1.99	**04**	
2.0 0– 2.99	**07**	
3.0 0– 3.99	**06**	
3.99 – 4.00	**01**	
Total number	**20***	***from Fact Book totals 2003**

Other measures or indicators:

Construction Management & Safety Student Registrations and SCHs							
Fall 1999		Spring 2000		Fall 2000		Spring 2001	
S.R.	SCH	S.R.	SCH	S.R.	SCH	S.R.	SCH
395	1225	543	1249	578	1493	541	1234

Other measures or indicators continued:

Construction Management & Safety Student Registrations and SCHs			
Fall 2001	Spring 2002	Fall 2002	Spring 2003
SCH	SCH	SCH	SCH
1328	1466	1100	1249

Accreditation Reviews:
The Department of Construction Management and Occupational Safety and Health is fully accredited by:

- Southern Association of Colleges and Schools (SACS)
- American Council for Construction Education (ACCE) *~ Construction program only
- National Association of Industrial Technology (NAIT) *~ both programs

Internal Program Reviews:

The Department of Construction Management and Occupational Safety and Health continue to enjoy a successful and productive academic year. The Department's success was exemplified by improving both retention and graduation rates as well as successfully completing the ACCE one year program review. The Department has two undergraduate degrees, and provides the entire Occupational Safety and Health degree program on-line. There is an advisory committee for each of the program areas to help steer the Department toward continued success in achieving the Departmental vision, mission, and goals, which are closely aligned with the focus of the School of Technology as well as North Carolina A&T State University.

Retention & Graduation Rates:

Retention of Full-time First-time Entering Freshmen
Construction Management & Safety

Year	Retention								
	Freshman Cohort	1yrs	2yrs	3yrs	4yrs	5yrs	6yrs	7yrs	8yrs
1995	07	100.00	57.1	57.1	57.1				
1996	05	80.00	60.00	60.00	20.00				
1997	08	100.00	75.00	62.5	25.00	12.5			
1998	13	84.6	53.8	38.5	23.1				
1999	07	100.00	100.00	85.7	28.6				
2000	11	90.9	72.7	72.7					
2001	07	57.1	57.1						

Graduation Rates

Graduation								
	1yrs	2yrs	3yrs	4yrs	5yrs	6yrs	7yrs	8yrs
1995					42.9	42.9	42.9	42.9
1996				40.00	60.00	60.00	60.00	
1997				25.00	37.5	50.00		
1998				15.40	23.10			
1999				57.1				
2000								
2001								

Graduate and Alumni Survey

An exit survey is administered to students upon graduating from the university. The survey is also administered to alumni at diverse intervals:

Construction Management

Years surveyed	% grads surveyed	% grads employed	% grads in grad school	Grads appreciate info
2001 – 2002	98	95	30	
2002 – 2003	99	90	10	

Occupational Safety and Health

Years surveyed	% grads surveyed	% grads employed	% grads in grad school	Grads appreciate info
2001 – 2002	97	97	11	
2002 – 2003	98	80	20	

Continuing education and employment: There is no data available at this time. The survey was administered in the spring 2003. The data are in the process of being analyzed.

Results of employer surveys:

Each CM instructor is responsible for a specific number of graduates, equally distributing the responsibility of work to be accomplished. Below is a synopsis of the returned findings for each instructor.

Lewis Waller:

All employers that were surveyed had high opinions of our graduates. In each instance, the employers spoke of how our graduates have been an asset to the company.

The areas noted as Strengths are as follows:
1) Attitude
2) Initiative
3) Scheduling
4) Computer Literacy.

The areas of Weakness are as follows:
1) Plan reading
2) Formwork design
3) Steel design
4) Surveying
5) Mechanical systems skills
6) Working independently.

Dr. Shofoluwe:

On speaking with employers responding to surveys he has sent, Dr. Shofoluwe mentions that they had no major concerns. However, they did mention areas of weakness. Sited in general were weaknesses in Blueprint reading, and a lack of communications skills.

Dr. Robert Pyle:

Dr. Pyle did get feedback from students he surveyed. They gave the following as areas to be aware of in our program:
1) More hands-on instruction needs to take place
2) Computer facilities are more than adequate
3) Student advisement needs to be improved, it is rated as average only
4) More time spent on Blue print reading
5) Personnel Management needs to be included
6) Less structured requirements with more interactive activities
7) Develop a course on Resource Management and Purchasing

Faculty Development and Quality

Faculty personnel policies regarding appointment, promotion, tenure may be located in the current faculty handbook for the University.

Merit Pay: It is the school's policy that merit pay be awarded based upon meritorious service---which means a person has performed in an excellent or superior fashion. Faculty members are expected to perform in teaching, research, and service as a part of their obligation to the University. Those who bring added worth to the Department and School; involve themselves in specific leadership roles; and those who care more about the overall benefits of the whole than their personal gain, are usually those who deserve merit when available. As a result, Department Heads and the Dean should be able to determine which of their faculty performed meritoriously and thus, will reward merit to those individuals. All merit decisions will be made by the Dean based upon recommendations of the Department Heads and the Deans personal observations.

Faculty Development

Discovery

Year	Proposals Submitted	Awards funded	*Total Amount Funded*
2003-2004	4	2	*$97,000.00*
2002-2003	3	1	*$548,000.00*
2001-2002	6	2	*$40,000.00*
Total amount funded			*$685,000.00*

Engagement (Public and Community Service)

Community Service and Outreach Activities

Academic Year	Number of Activities
2003 – 2004	4
2002 – 2003	2
2001 – 2002	2

Other Scholarly Activities

Scholarly Activity	2001 – 2002	2002 – 2003	2003 – 2004
Faculty Development	4	2	4
Presentations	2	5	7
Publications	1	2	4
Total	7	9	15

Interdisciplinary Activities

Solar Heating Project ~ Dr. Singh in conjunction with Dr. Pyle
Waste Management Certification Program
Tractel ~ Safety at Heights workshops

Departmental faculty members have also been highly productive in terms of conference presentations, publications, and grants. Each faculty member made presentations at regional or national conferences. Three faculty members were recipients of funded grants. All faculty published articles in professional journals. Additionally, in the effort to stay current with national trends, all faculty members participated in faculty development activities by attending conferences or workshops. Departmental faculty members collaborated with the Center for Distance Learning and Blackboard to deliver courses via the Internet. The faculty attended and made presentations at NAIT and ASSE conferences in 2002 - 2003.

Dr. Robert Pyle

Dr. Pyle has participated in several professional workshops, authored publications, made presentations at seminars and developed grants.

SELECTED PROFESSIONAL PUBLICATIONS AND PRESENTATIONS :

"Telecommunication Facility Development", September, 1998
US Department of Housing and Urban Development

Safety & Toxic Substances in Your Work Place,
Weaver Education Center, January, 1986.

"Vocational Administrator Liability"
Part of a Safety Seminar – Region V, Vocational Directors Meeting
April 18, 1984

Turrentine Middle School
"Occupations in Construction Technology"
April 13, 1984

"The Dynamics of Creative Leadership", Chapter 6,
Identifying, Recruiting and Selecting Potential Creative
Leaders, August, 1983
(ACIATE Yearbook).

"Competency Test Items Bank and Furniture Curriculum Guide"
SDPI for North Carolina. Printed and Adopted August, 1983.

International Conference of the American Industrial Arts Association
Topic: Energy Conservation – Modularizing Instruction Project
Funded by U.S. Department of Energy Faculty Development
Program, 1982

Energy Conservation: A Workshop for Selected Eastern U.S. Industrial
Education Educators", December, 1981, 662 page document.
USOE Publication.

"Final Report – Do-It-Yourself Weatherization Techniques for
Low Income and Disadvantaged City Dwellers," June, 1980.

"Construction Technology Opportunities at North Carolina A&T State
University" Presentation – Piedmont Construction Estimators,
Spring, 1980.

PROFESSIONAL CERTIFICATIONS/LICENSES:

American Institute of Construction ~ Certified Professional Constructor

National Grant Writers Association ~ Certified Grants Writer
2001 Irmo, South Carolina

Dr. Musibau Shofoluwe

Dr. Shofoluwe has participated in several professional workshops, authored publications, made presentations at seminars and developed grants.

Selected Professional Development Activities (Workshops/Seminars, etc.)

- Pass the North Carolina General Contractor Licensure Board Exam (2001)
- Completed a workshop on teaching Honors Students, Summer 2000
- Have attended various workshops and seminars on Housing and Urban Development
- Attended the Timberline Precision Estimating training workshop in Oregon and Florida, 1997 & 1998.
- Spent one week at DOE site in Cincinnati, Ohio on environmental safety training, 1997, 1998, & 1999.
- Presentation at the City of Winston Salem's minority contractor's workshop, 1996, 1997.
- Participated in grants man ship opportunity seminar organized by HUD, Atlanta, 1997.
- Attended a workshop on grants writing organized by the NC A&T Office of Development, 1995
- Passed North Carolina Home Inspection Licensure Board Exam, 1995.
- Attended seminar on HUD 203(k) construction write-up. Became HUD 203(k) consultant.
- Completed a formal training in Home Inspection through Professional Career Development Institute, Atlanta, Georgia, 1996.
- Presentation at the City of Greensboro's minority contractors institute workshops, 1993, 1994.
- Attended OSHA 500 Train the Trainer Workshop, 1994. Became Authorized OSHA 10/30 Hour Trainer.
- Attended and made presentations at various professional organizations: NAIT, ASC, SEEDCO, etc.

Selected Research, Papers and Publications

Shofoluwe, M.A. & Egger, S. (2000). Integrating OSHA 30-Hour course contents into a construction safety class NAIT 33rd Annual Proceedings, Pittsburgh, Pennsylvania (Refereed)

Obi, S.C.; Shofoluwe, M.A. & Bajere, P.A. (1999). Emerging Trends for the 21st Century: The new world order. NAIT 32nd Annual Proceedings, Panama City, Florida (Refereed)

Bajere, P.A. & Shofoluwe, M.A. (1999). The Role of Construction Project Managers in the new Millennium+. NAIT 32nd Annual Proceedings, Panama City, Florida (Refereed)
Shofoluwe, M.A. & Wingate, J. (1998). D & D Quantity takeoff estimates for environmental restoration projects. Environmental Remediation Science & Technology Conference, Greensboro, North Carolina (Refereed).

Shofoluwe, M.A., Pyle, R., & Tillman, L. (1998). NCA&T State University community economic and skills development facility: An avenue for community empowerment. Eighth annual SEEDCO HBCU conference. Baltimore, Maryland (Refereed)

Bajere, P.A. & Shofoluwe, M.A. (1998). Academic-Industry Alliance: A Pragmatic approach to expand recognition of industrial technology. NAIT 31st Annual Proceedings, Indianapolis, Indiana (Refereed).

Shofoluwe, M.A. (1997). Contractors need effective management skills for success. Builder Update. April 1997.

Bajere, P. A., & Shofoluwe, M.A. (1996). A knowledge-based system for diagnosing non-structural cracks in Concrete construction. Proceedings of the American Society of Engineering Management , Dallas, (Refereed)

Shofoluwe, M.A., Kashef, A.E., Egger, S., & Varzavand, S. (1995). Perceptions of Department chairs toward the tenure and promotion process. Journal of Industrial Technology, 11(3), 8-12 (Refereed).

Shofoluwe, M.A., & Carter, Sr., H. (1995). Analysis of OSHA hazard communication standard. 1995 NAIT Proceedings, Savannah, Georgia. (Refereed)

Shofoluwe, M.A., & Desai, R. (1994). Technology education at international level. 1994 ITEA Proceedings, Kansas City, Kansas (Refereed).

Shofoluwe, M.A. (1993). An empirical study of construction job characteristics and work outcomes. Proceedings of the 26th NAIT Convention, Durham, North Carolina (Refereed).

Shofoluwe, M.A. (1993). Motivational aspects of construction work. Proceedings of the 1993 ASC Regional Conference, Atlanta, Georgia (Refereed)

Shofoluwe, M. A., & Johnson, H. (1993). The future role of industrial technologists in industrial organizations. Journal of Industrial Technology, 9 (2), 38-41. (Refereed)

Shofoluwe, M.A. (1993). Relationships between construction job characteristics and work outcomes. ASC Proceedings of the 1993 Annual Conference, Estee Park, Colorado. (Refereed)

Shofoluwe, M.A., Varzavand, S., & Egger, H. (1993). The need for total quality management in construction. Journal of the American Institute of Constructors (AIC), 17(3), 21-24. (Refereed)
Egger, H. S., Varzavand, S., & Shofoluwe, M. A. (1992). Survey of the physical facilities for an accredited ACCE Construction education program. ASC Proceedings of the 28th Annual Conference. (Refereed)

Shofoluwe, M. A. (1992). Organizational safety commitment in construction: A case study. 28th Annual Regional Proceedings of the Associated Schools of Construction, Florida. (Refereed)

Shofoluwe, M. A. (1992). Job characteristics of construction craftsmen and their relationships to affective work outcomes. Unpublished doctoral dissertation, University of Northern Iowa

Shofoluwe, M. A. (1991). Analysis of safety programs in selected construction firms. Journal of Industrial Technology, 7(2), 12-16. (Refereed)

Shofoluwe, M. A. (1991). The needs for resource planning for building construction projects. Journal of Industrial Technology, 7(3), 6-8. (Refereed)
.
Shofoluwe, M. A. (1990). Construction engineering technology education: The employers' view (1990). Journal of Industrial Technology, 6(3), 11-13; 25-27. (Refereed)

Shofoluwe, M. A. (1989). Employers' perceptions of construction engineering technology education (Technical Report). Grambling State University, Dept. of Industrial & Engineering Technology.

Mr. Lewis Waller

Mr. Waller is currently doing research towards his doctorate.

- Currently enrolled in doctoral program at Capella University.

Dr. Horlin Carter

Dr. Carter has participated in several professional workshops, authored publications, made presentations at seminars and developed grants.

Scholarly Activities (grants, workshops, national committee, etc.):
Funded Project/Grants:
November, 2001. Conducted "Safety and Professional Liability Workshop" for Vocational Teachers of Winston-Salem/Forsyth County Schools.
1997, Training Safety Professional-OSHA 10 Hour and 30 Hour Construction Standards Course, Port-Prince, Trinidad, $5,000.00
1994. OSHA Authorized Instructor for General Industry Standards (10 & 30 Hour) Course.
1994. OSHA Authorized Instructor for Construction Standards (10 & 30 Hour) Course.
National Committee:
1993-1998, Vice-President, Minorities in Occupational Safety, Health and Environment, (MIOSHE) Washington, DC
October, 1997. Presided at the National Conference, MIOSHE, Chicago, IL.

Publications:

Carter, Horlin. "Construction Safety Standards in the NAIT Curriculum". National Association of Industrial Technology, November, 2003.
Carter, Horlin, Dillon, Dave, and Arjun Kapur. "Teaching Spatial Concepts In the Architectural Design Process". Techdirections, September, 2003.
Carter, Horlin. "Preparing For A Career in the Occupational Safety and Health Field", National Association of Industrial Technology, November, 2002.
Carter, Horlin. "An Assessment of OSHA's Proposed Recording and Reporting Requirements", Professional Safety, December, 1996.
Carter, Horlin. "Analysis of OSHA Hazard Communication Standard". National Association of Industrial Technology, November, 1995.

Dr. Dilip Shah

Dr. Shah has participated in several professional workshops, authored publications, made presentations at seminars and developed grants.

PROFESSIONAL DEVELOPMENT:

1. Comprehensive Review for Industrial Hygiene, University of Utah, 1982
2. Occupational Noise Evaluation and Control, University of Southern California, 1982
3. Radiation Safety, Northwestern University, 1983
4. Industrial Hygiene Engineering, University of Minnesota, 1983
5. Basic Principles of Epidemiology, University of Minnesota, 1983
6. AIHA Respiratory Protection, American Industrial Hygiene Association, Denver, 1983
7. Total Review for Certified Safety Professional, Milwaukee School of Engineering, 1985
8. Current Issues in OSH, University of Alabama, 1996
9. International Symposium of Hazardous Chemicals, American Industrial Hygiene Association, 1996
10. Indoor Air Quality, University of North Carolina at Chapel Hill, 1997
11. Non Ionizing Radiation Safety, University of North at Chapel Hill, 1998
12. Legal Issue in OSH Field, University of North Carolina at Chapel Hill, 1999
13. Fundamentals of Industrial Hygiene, UNC-CH, Winter Institute, Tampa, FL 2003

PRESENTATIONS AND PUBLICATIONS:

Following presentations were made at local, state, national and international Conferences and Organizations:

1. Introduction to OSH, Association of Engineers, Venezuela, 1979
   (40 Hour introductory course for Association members)
2. Introduction to Noise Control, Union of Engineers, Venezuela, 1979
3. Introduction to Industrial Hygiene, University of Carabobo, 1980

(Several other presentations varying in length from 12 hours to 40 hours under the sponsorship of UNESCO. All these presentations were prepared, and delivered by me including reading material in SPANISH .

4. "Engineering Control for Industrial Hygiene" Summer Institute, UNC-CH, Williamsburg, VA August 1999

PROFESSIONAL ASSOCIATIONS:

American Society of Safety Engineers (ASSE)
American Conference of Governmental Industrial Hygienists(ACGIH)
National Association of Industrial Technology (NAIT)
American Industrial Hygiene Association… Carolinas Section

SERVICE:

University Committees:
School of Technology Dean Search committee, 1998-present
School of Technology Career Expo, 1997-present
Waste Management Advisory Board, 1992-present
Safety Committee, 1991-1995
Environmental Technology/Waste Minimization Committee, 1990-present
Various departmental committees (Chaired 3 faculty search committees)
OSH Advisory Committee
Various school committees
Faculty Advisor, OSH Club

Community, Professional Organizations:
North Carolina Department of Labor, OSHA Advisory Council, 1992-1997
ST. Augustine College, Industrial Hygiene Program Advisory Council, 1994-1997
Triad Chapter, American Society of Safety Engineers, Board of Directors, 1989-present
Volunteer work with Greensboro Muscular Sclerosis Society….1999-present

HONORS:

Outstanding Teacher, University of Zulia, Graduating Class, 1979
Outstanding Teacher, University of Zulia, Graduating Class 1980
(Both these were from the School of Industrial Engineering)
Exemplary Service, NC Department of Labor, 1997 (OSHA Advisory (Council)
Outstanding teacher, Graduating OSH Class of 2002

Dr. Syrulwa Somah

Dr. Somah has participated in several professional workshops, authored publications, made presentations at seminars and developed grants.

BOOKS PUBLISHED

Somah, S. (In-press). Issues in the Field of Environmental Health and Occupational Safety. Burlington, MA: Elsevier Science

Somah, S. (1999). Occupational Safety and Health: An Introduction to the Field and Job Hunting Guide. Mansfield Center, CT: Principia Press

Somah, S. (1994). Historical Resettlement of Liberia and It Environmental Impact: Baltimore, MD: University Press of America. (Republished in paperback and hardback).

REFERED JOURNALS

Somah, S. (2002). Working Conditions of Pharmacists: A Greensboro Case Study. NAIT Journal

Somah, S. (1999). Successful Internship Programs: How to Establish and Nature a Classroom to Workroom Program. 13th WWOSAPCON Journal, 24, (1), 34-39

Somah, S. (1998). Municipality Safety. 12th WWOSAPCON Journal, 23(2), 7-15

RESEARCH REPORTS

Somah, S. (2001). The Ideal Classroom Desk survey was conducted in Greensboro, NC to investigate if there was a growing need for well-designed height

NON-REFEREED JOURNALS/ PAPERS PRESENTED AT CONFERENCES

Somah, S. (2002). The Effect of Height of Classroom Desk: Related to Stress on College Professors' Skeletal Muscles System: ASSE Academics Practice Specialty Quarterly Newspaper

Somah, S. (1998).
You Received the Degree – What Next? 32nd National Association of Industrial Technology

Somah, S. (2002). Internships: Why Your Program Needs One and How to Get It: ASSE Academics Practice Specialty Quarterly Newspaper

Somah, S. (2003) Your Tenure and Promotion Begins the First Day of Employment: ASSE Academics Practice Specialty Quarterly Newspaper

OTHER PUBLICATIONS

Somah, S. (In-press). Christianity, Colonization and State of African Spirituality

Somah, S. (2000). Contributor: African Politics and Spirituality: The African Diaspora: An Introduction to African Studies: Kendall/Hunt

Somah, S. (2002) Nyanyan Gohn-Manan: History, Government, and Migration of the Bassa. Bloomington, IN. 1stbook Library

Dr. Dave Dillon

Dr. Dillon has participated in several professional workshops, authored publications, made presentations at seminars and developed grants.

PUBLICATIONS

With Arjun Kapur, 'CADD Software in the Architectural and Building Industries' National Association of Industrial Technology 36th Annual convention – Selected Papers, November 19- 22, 2003, pp.116-119.

With Arjun Kapur and Horlin Carter, "Teaching Spatial Concepts in the Architectural Design Process", Tech Directions, September 2003, pp. 18-19.

With Arjun Kapur, 'CADD in the Furniture and Cabinetry Design/Production Process' National Association of Industrial Technology 35th Annual convention – Selected Papers, November 6 –9, 2002, pp. 141 – 144.

With Arjun Kapur, 'Geographical Information Systems and Design Drafting Curriculum' National Association of Industrial Technology 34th Annual convention – Selected Papers, October 31 – November 3, 2001, pp. 108 – 110.

With Arjun Kapur and Veeramuthu Rajaravivarma "Setup and Management of a University Computer Lab" Proceedings of the 10th Year Symposium of the Faculty of Architecture and Engineering. European University of Lefke, Turkish Republic of Northern Cyprus. November 16 – 18, 2000, pp. 116 – 118.

With Arjun Kapur, "CADD Software and Civil/Survey Applications" National Association of Industrial Technology 33 rd Annual Convention – Selected Papers, November 1- 4, 2000, pp 96 – 98.

With Arjun Kapur, "Use of CADD Software in Textile and Pattern Design"" National Association of Industrial Technology 32nd Annual Convention – Selected Papers, November 17 – 20, 1999, pp 67 – 69.

With Arjun Kapur, "Use of Computer Graphics Software in Carton and Packaging Design", National Association of Industrial Technology 31 St. Annual Convention – Selected Papers, October 21 – 24, 1998, pp 101 – 104.

With Arjun Kapur and Vincent Childress, "Preparing for a Career in Technical Graphics: An Open Letter to Advisors and Students", Tech Directions, January 1999, pp. 27-27.

With Arjun Kapur, "Use of CADD Software As A Tool Rather Than A Subject In Graphic Instruction", National Association of Industrial Technology 30 Th. Annual Convention - Selected Papers, October 1997, pp 41 - 43.

With Arjun Kapur and Jim Brock, “CADD Softwares in Engineering and Technology Education”, The Institute of Electrical and Electronics Engineers Southcon 96 - Conference Record, June 1996, pp 212 - 216.

"Application of Horizontal Siding to Historic Buildings", Old House Journal, September/October 1994, Vol. 22, Number 6 pp 38 - 39.

"Using the User Database Nirvana Utilization Tracking System", produced for Sandia National Laboratory Organization 2862, Albuquerque, New Mexico, August 1993.

"Recommended Readings for Technology Educators", Published by the State Department of Public Instruction, Raleigh, North Carolina, May 1990.

"Recommended Readings for Technology Educators", The Technology Bank, International Technology Education Association, 89-150, February 1990.

With Bill Bartholomew, Developed "Fulbright Residence Manual for Ghana" United States Information Service, Accra, Ghana, May 1990.

With Chris Droessler, "Information Gathering by Telemetry", TIES Journal, November - December 1989.

Developed questions for Educational Testing Service. Technology Education section of the National Teacher Exam. January 11, 1989.

With Chris Musselwhite, "Paideia: Boom or Bane for Vocational Education", Journal of Epsilon Pi Tau, 14:1, Winter/Spring 1988.

"Middle School Students Build Pneumatic Structures", School Shop, 46:5, December 1986.

"Factors Affecting a Person’s Decision to Major in Industrial Arts", a doctoral dissertation published by North Carolina State University; Raleigh, North Carolina, December 1985.

"Industrial Arts Students Can Gain Insight by Completing Projects From the Past", School Shop, 45:5, December 1985.

With Linda Dillon, "What Does Otto Lilienthal Have to do With Education in the Industrial Arts?", The Kappan, 67:1, September 1985.

"Computer Program Helps Students With Darkroom Practices", School Shop, 45:2, September 1985.

With Linda Dillon, "Industrial Arts in Japan", Journal of Epsilon Pi Tau, 9:1, spring 1983.

With Linda Dillon, "Puzzles Provide Learning Activities for Elementary/Special Needs Students", School Shop, 42:7, February 1983.

With Linda Dillon, "School Flower Boxes", Teaching Exceptional Children, 16:1, Fall 1983.

With Linda Dillon, "The Wiring Board", Teaching Exceptional Children, 14:4, February 1982.

With Linda Dillon, "Signal Devices Aid Hearing Impaired Students", School Shop, 42:2, September 1982.

With Linda Dillon, "Nuts and Bolts for TMRs", School Shop, 40:9, May 1981.

With others, "How to Make and Use a Pinhole Camera", Kodak Booklet AA-5, August 1976.

PRESENTATIONS

"CADD Software in the Architectural and Building Industries" National Association of Industrial Technology 36th Annual Convention November 19- 22, 2003, Nashville, TN.

"CADD in the Furniture and Cabinetry Design/Production Process", National Association of Industrial Technology 35th Annual Convention , November 6 –9, 2002, Panama City, Florida.

"Geographical Information Systems and Design Drafting Curriculum" National Association of Industrial Technology 34th Annual Convention October 31 – November 3, 2001, Detroit, MI.

"CADD Software and Civil/Survey Applications" National Association of Industrial Technology 33 rd Annual Convention November 1-4, 2000 Pittsburgh, PA.

"Use of CADD Software in Textile and Pattern Design" National Association of Industrial Technology 32nd Annual Convention November 17 – 20, 1999,

"Use of Computer Graphics Software in Carton and Packaging Design", National Association of Industrial Technology 31 St. Annual Convention, Indianapolis, Indiana, October 21 – 24, 1998.

"Use of CADD Software As A Tool Rather Than A Subject In Graphic Instruction", National Association of Industrial Technology 30 Th. Annual Convention, Atlanta, Georgia, October 8 - 11, 1997.

"CADD Software in Engineering and Technology Education", SOUTHCON 96 Technical Conference/ IEEE, Orlando, Florida, June 25-27, 1996. This paper was also published in the conference proceedings, ISBN 0-7803-3268-7.

“U.S. Fulbright Alumni: The Fulbright Experience Abroad”, Fulbright Conference, University of North Carolina Wilmington, May 2-3, 1996.

Conducted Computer Graphics workshop for University of San Simon and Bolivian Society of Engineers, Cochabamba, Bolivia, May 15 - 19, 1995.

Conducted Computer Graphics workshop for Catholic University of Cochabamba, Bolivia, May 8 - 12, 1995.
Conducted Computer Aided Drafting (VersaCad and Intergraph Microstation) for local business and industry. One workshop per month 1988 - present.

"Innovative Structures", Summer Conference Tech Fest, Greensboro, North Carolina, August 6, 1986.

"Pneumatic Housing" International Technology Education Association Conference, Kansas City, Missouri. March 1986.

"Airplane Model Construction on 1/4 and 1/2 Scale", American Industrial Arts Association Conference (AIAA), San Diego, California. March 1985.

"Industrial Arts in Japan", AIAA Conference, Milwaukee, Wisconsin. April 1983.

"Industrial Arts for the Gifted and Talented Students", North Carolina Industrial Arts Association, Greenville, North Carolina. November 1982.

"Prevocational Adaptive Equipment for Mentally Retarded Students", Graduate Leadership Development Conference, Stone Mountain, Georgia. April 1981.

Co-presenter, "A beginning Industrial Arts Sequence for TMRs", AIAA conference, Pittsburg, Pennsylvania. March 1981.

Learning:

The faculty members of the Department have continued their involvement with distance learning through the delivery of on-line courses in the fields of Construction Management and Occupational Safety and Health.

Dr. Robert Pyle:

- CM 592 – Project Management
- OSH 614 – Industrial Relations

Dr. Musibau Shofoluwe:

- CM 692 – Project Management (grad level)
- CM 710 – Advanced Construction Management and Organization
- CM 720 – Construction Contract Administration

Mr. Lewis Waller:

- CM 320 – Construction Safety
- CM 592 - Project Management
- CM 596 – Construction Financial Management and Organization

Dr. Horlin Carter:

- OSH 210 – Introduction to Occupational Safety & Health
- OSH 414- Principles of Fire Prevention & Protection
- OSH 393- Safety Management
- OSH 516- Safety Management
- OSH 678 – Experiential Education I
- OSH 679- Experiential Education II

Dr. Dilip Shah:

- OSH 201 – Introduction to OSH
- OSH 411 – Hazardous Materials
- OSH 413 – Industrial Hygiene I
- OSH 416 - Industrial Hygiene II

Dr. Syrulwa Somah

- OSH 210- Industrial Accident Prevention
- OSH 312- Accident Investigation Analyses & Records
- OSH 415- Standards and Regulations in Occupational Safety & Health
- OSH 513– Ergonomics/ Human Factor
- OSH 555– Health Physics OSH
- 632- Design of Engineering Hazard Control
- OSH 672- System Safety and Other Analytical Methods
- OSH 517 Safety Management
- OSH 230 Hazardous Materials Handling

Discovery:

The Department is committed to enlarging the body of knowledge as it relates Construction Management and Occupational Safety and Health. To that end all faculty have been actively involved in the effort to secure funded research.

Dr. Robert Pyle

RESEARCH PROJECTS:

• Fall Protection Training	2000	$680,000
• Telecommunication Facility Development	1998	$366,000
• Collaborative Efforts With The Center for Accessible Housing	1994-96	$ 52,388
• Coastal Conservation Initiative Waste Disposal	1995	$110,000
• New Handbook for Trade and Industrial Instructors	1992-93	$ 6,000
• Title III Project-Technology Education	1987-89	$230,000
• AT&T Technologies, Inc.	1986	$ 120,000
• Associate Degree Program For Region 5	1984-86	$ 77,000
• Energy Conservation North Carolina University Department of Energy	1981-82	$ 16,000
• Project Solar Applications	1980	$ 2,000
• Scarce Skills Project	1979	$ 7,800
• Weatherization Techniques for Low Income Title I-A	1979	$ 13,927

Dr. Musibau Shofoluwe

Funding Received (Over $1.8 million in funded grants)

Community Economic Empowerment through Intra-State Partnership Alliance, 2000. Funded by Dept. of Housing and Urban Development, $475,000
Community Economic & skills Empowerment Initiatives, 1999 (HUD) $466,665
Development of Telecommunications network for Public Housing, 1999 (C0-PI, $366,000) HUD
D&D Quantity Takeoff – Pilot Plant, 1999. Funded by Fluor Daniel Fernald ($49,983)
D&D Quantity Takeoff Estimates – Plant 8, (1998) – Fluor Daniel Fernald ($49,837)

Development of D&D Quantity Takeoff Estimates for Environmental Restoration Projects, 1998. Funded by Fluor Daniel Fernald (68,000).
NC A&T Community Economic & Skills Development Project, 1997. Funded by HUD ($300,000)
CM Internship program, 1997. Funded by the city of Greensboro ($3,380)
Research Proposal Planning grant, $8,000. Funded by DOE-MICON, 1996
Development of D&D Cost Model for Environmental Restoration Project, 1996. Funded by Fluor Daniel Fernald. ($52,000).

Dr. Horlin Carter

1997, "Training Safety Professionals-OSHA 10 and 30 Hour Construction Standards Course, Port-a-Prince, Trinidad, $5,000.00

2003-04. National Institute for Occupational Safety and Health (NIOSH) Training Project Grant. $104,000.00 -1st Year, $520,000.00 over 5-year period. Grant Proposed, not yet funded. Dr. Horlin Carter, Project Director, Dr. Syrulwa Somah, Co-Project Director.

Dr. Dilip Shah

GRANTS:

HBCU/MI Waste Minimization/Environmental Technology Consortium (With Drs. Chang, Psalmonds and Uzochukwu) 1990-96 ($1,500,000)

National Institute for occupational Safety and Health (NIOSH) 1994-2000 ($198,000)

Various grants from private corporations (Marathon Oil, Exxon USA, Moil Oil, Hoechst Celanese, Ryder Systems, Abbott Laboratories, Champion International, and others) 1990-present ($60,000 +)

Dr. Syrulwa Somah

CAREER HIGHLIGHTS

- Received ($3, 586) equipment grant from Chubb Insurance

GRANT FUNDS GENERATED

Project Principal Investigator: Dr. Syrulwa Somah. The Housing and Urban Development (HUD) grant, NCA&T State University received ($ 79,000), OSH

Department assumes work practices evaluation contract during the course of the grant ($2 million) awarded to City of Greensboro and other collaborating partners: Guilford County Health Department, Greensboro Housing Coalition, Greensboro Housing Authority, Faith Action, Self- Help Credit Union, Project Homestead and Minority & Women's Business. **07/02 - 07/05**

Engagement/Service Activities:

The University's role as a valued member of the community locally, regionally, and nationally is supported through faculty efforts of engagement and service. The faculty members of the Department have contributed significantly to the positive image of North Carolina A&T State University.

Dr. Robert Pyle

PROFESSIONAL CERTIFICATIONS/LICENSES:

American Institute of Construction	Certified Professional Constructor
National Grant Writers Association 2001 Irmo, South Carolina	Certified Grants Writer

Dr. Musibau Shofoluwe

Service at University Level (Past & Present)

SOT Teacher of the Year Committee
School of Technology (SOT) Promotion, Tenure and Reappointment committee
SOT Grade Appeal Committee
SOT Admissions & Curriculum Committee
SOT Career Expo Committee
University Senate
Chancellor's committee on Energy Conservation
Chancellor's "Futures" Planning Committee
Committee on Research for Fluor Daniel Fernald Subcontract
Department Curriculum Committee
Committee on Evaluation of School Administrators
On-Line B.S. in Surveying Committee
Post-Tenure Review Committee
Administrative Term Appointment Committee
Graduate Studies and Admission Committee (MSIT & PhD programs)

Service at National Level

Chair, Construction Focus Group, National Association of Industrial Technology (NAIT)
Research committee, Associated schools of construction (past)
NAIT Editorial Review Board
Chair, Research Committee, NAIT Research Division
Building Code Committee – Greensboro Builders Association (past)

Community Service

Member of Board of Directors, Triad Minority Development Corporation (past)
Member, Advisory Board for GTCC Architectural Technology program
Volunteer, Habitat for humanities
Workshop volunteer presenter – City of Greensboro MWBE program
Workshop volunteer presenter – City of Winston Salem Section 3 Contractor's business enterprise program
Volunteer service – Alamance elementary school (past)
Proctor for South East Middle school
Volunteer service for local community development organizations

Professional & Civic Affiliations

National Association of Industrial Technology (NAIT)
American Association of Cost Engineers
Epsilon Pi Tau
Faculty Advisor, Associated General Contractors of America (AGC), Student Chapter
NC Licensed Home Inspectors Association
Association of Construction Inspectors
NCA&T Alumni Association
Past President, Nigerian Association in the Triad
Various offices held in other civic organizations
Greensboro Builders Association – Building code committee member (past)

Honors and Awards

Recipient of the Prestigious *UNC Board of Governors' Excellence in Teaching Award (2001)*
NCA&T State University Teacher of the Year
Associated Western University Faculty Research Fellowship Award (Summer 1997, 1998 & 1999)
School of Technology Excellence in Teaching Award
Excellence in Partnership Award, given by the City of Winston Salem

Dr. Horlin Carter

PROFESSIONAL MEMBERSHIPS

American Society of Safety Engineers
National Safety Council
Epsilon Pi Tau Professional Fraternity
Phi Delta Kappa
National Association of Industrial Technology
Safety Council of North Carolina
Rho Sigma Kappa Safety Honor Society
Air Force Association
National Guard Association of the United States (NGAUS)

Service Activities
Co-Chairman, Trustee Board, Genesis Baptist Church, Greensboro, NC

HONORS:
"Outstanding Faculty Award:, Department of Construction Management & Occupational Safety and Health, 2002-2003.

Dr. Dilip Shah

Volunteer with Multiple Sclerosis Society
Judge Science Fairs for local schools

Dr. Syrulwa Somah

PROFESSIONAL MEMBERSHIP

Member, American Society of Safety Engineers, 1995 to Present
Member, American Society of Safety Engineers, 1995 to Present
Advisor, Committee of Children Safety, World Safety Organization, 1993 to present
Member, Human Factors Society, 2001- present
Member**,** NCA&T, Institute of Human –Machine Studies, 2002-present
Member, Board of Certified Safety Professionals, 1992 to present
Assistant Editor, The Specialties: A Newspaper for ASSE Safety Educators
Member, National Registry of Environmental Professionals, 1998 to 2000
Member**,** American Public Works Association, 1997 to 1998
Member, Toastmasters International, 1996 to 1998
Vice President for Education, Greensboro Toastmaster, 1997 to 1998
Member, American Conference of Governmental Industrial Hygienists, 1991 to 1997
Member, ASSE Advisory Board to NIOSH, 2003 to present

Dr. Dave Dillon

PROFESSIONAL MEMBERSHIPS

Alpha Phi Omega fraternity – faculty advisor (2001 – present)
American Council for Construction Education
Epsilon Pi Tau professional fraternity (State President 1983)
Fulbright Alumni Association
North Carolina Technology Education Association (State Treasurer 1968 - 1989)
National Association of Industrial Technology
Partners of the Americas - Bolivia (Board of Directors 1995 - 1998)
Piedmont Triad Council of International Visitors (Board of Directors 1995 - 1998)

HONORS

"Outstanding Faculty Award" Department of Graphic Communication Systems 1999-2000.

"Teacher of the Year" award NC A&T State University School of Technology March 20, 1996.

Epsilon Pi Tau "William Warner Research Award" April 1987.

Young Educator of the Year, North Carolina Industrial Arts Association, 1986.

Innovative Technology Award (1986) presented by the State Department of Public Instruction, Raleigh, North Carolina.

Teacher of the Year, Ligon Middle School, 1984 - 1985.

Finalist, Wake County Teacher of the Year, 1984 - 1985.

AIAA Curriculum Award: Innovative Technology Project 1985 ($100.00)

Epsilon Pi Tau Leadership Award, 1983.

Faculty Profile:

Name	Highest Degree	Rank and Tenure	Sex	Race
Pyle, R.B.	Ph.D.	Professor	M	Caucasian
Shofoluwe, M.	D.I.T.	Professor	M	African
Waller, L.			M	African/American
Carter, H.	Ph.D.	Assoc/Tenured	M	African/American
Shah, D.	Ph.D.	Associate Prof.	M	Asian
Somah, S.	Ph.D.	Associate Prof.	M	African
Dillon, D.	Ed.D.	Associate Prof.	M	Caucasian

Age Range	*Number of Faculty*
20 – 30	
30 – 40	
40 – 50	*3*
50 – 60	*3*
60 – 70	

Construction Management and Occupational Safety and Health Student Accomplishments

Student Government Association Representatives

- 2002 - 2003: Lawrence Penn
- 2002 – 2003 Andrew Kong

Student Organization Activities

- Associated General Contractors of America, Student chapter (AGC)
- Sigma Lambda Chi (SLC)
- Rho Sigma Kappa (RSK)
- American Society of Safety Engineers (ASSE)

Progress toward University's Mission

Access

Department of Construction Management and Occupational Safety and Health

Enrollment by Gender and Race Fall 2003*

Major	Class	White		Black		Asian		Hispanic		Other		Total		Total
		F	M	F	M	F	M	F	M	F	M	F	M	
0156	Nfm			1	10							1	10	11
	Ufm				3								3	3
	Soph		3										3	3
	Jr	2	2	3	21	1	1				1	6	25	31
	Sn		1	3	10						1	3	12	15
0094	Nfm				1					1		1	1	2
	Ufm	2	1	2	2						1	4	3	7
	Soph	2		3	3							5	3	8
	Jr	2	2	8	6							10	8	18
	Sn	1	1	14	7							15	8	23
Total	Nfm			1	11					1		2	11	13
	Ufm	2	1	2	5						1	4	6	10
	Soph	2	3	3	3							5	6	11
	Jr	4	4	11	27	1	1				1	16	33	49
	Sn	1	2	17	17						1	18	20	38
	Total	**9**	**10**	**34**	**63**	**1**	**2**			**1**	**3**	**45**	**76**	**121**

*Similar data are not available for the years 2000-2001 and 2001-2002.

Enrollment of undergraduate transfers: There were 30 transfer students 2003-2004.

Nfm - New freshmen
Ufm - Upper freshmen
Soph - Sophomore
Jr - Junior
Sn - Senior

Enrollment in degree credit distance learning:

Enrollment in Distance Learning Courses by Semester

Courses	2001– 2002			2002 – 2003			2003– 2004	
	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring
CM 320								
CM 592	16	25		20	29	43	21	57
CM 720				5				9
CM 780						4		
OSH 201		31				19	39	52
OSH 210	13							25
OSH 312	6			9				
OSH 393	22	24				19		29
OSH 411					15			
OSH 413							28	
OSH 414		8						
OSH 415							6	
OSH 416								24
OSH 513					14			25
OSH 555								
OSH 672					7			29
OSH 678		16			11			12
OSH 679							12	
Totals	**57**	**104**		**34**	**76**	**85**	**106**	**262**

Awarding of Degrees

Number of Degrees Awarded Over Past Three Years

Years	Dec. 2001	May 2002	Dec. 2002	May 2003	Dec. 2003	May 2004
Under Grad						
CM	6	5	11	8	8	x
OSH	3	5	5	7	5	x
Totals	**9**	**10**	**16**	**15**	**13**	**xx**

Faculty Development

Form A

North Carolina A&T State University

Department/ School Name: **Construction Management and Occupational Safety and Health**

Program Names: **Construction Management (Bachelor of Science)**

Program-Level Student Learning Goals

Please use this form to list the student learning goals for all programs in your department/school or attach a list. Use a separate sheet for each program and note that you may have fewer or more goals that space is allotted for here. If needed make copies of this form.

1. Demonstrate the ability to plan, organize and manage the complete construction process. This process involves planning, implementing and final acceptance by the client.
2. Demonstrate mastery of critical competencies in science, mathematics and technical specialties associated with Construction Management. These competencies include: computation, estimation, logic, and scientific reason as is applies to construction management.
3. Demonstrate adequate oral and written communication skills, and provide project oriented laboratory instruction which requires the presentation of laboratory results in both written and oral forms.
4. Demonstrate competence and knowledge of the utilization of computers in industry and business.
5. Demonstrate the necessary technical knowledge and problem solving skills required for a career in the construction industry.

Form B

North Carolina A&T State University

Department/ School Name: **Construction Management and Occupational Safety and Health**

Program Name: **Construction Management**

II. Evaluation Methods

In each row, please list methods (measurements used); then identify those methods (measurements) that will be used within the next year or so.

Commercially Available Tests/Surveys	
1. NA	
2. NA	

Form C

North Carolina A&T State University

Department/ School Name: **Construction Management and Occupational Safety and Health**

Program Name: **Construction Management**

II. Evaluation Methods

List methods (qualitative and/or quantitative) and whether these will be used again

Locally Developed Methods	
1. Each instructor constructs and administers examinations for each individual course. There is also a pre-test (in CM 100) and a post-test (in CM 650). All major courses must be completed with a grade of C or better (Goal 4 & 5).	*Feed back with regard to these tests is discussed with the advisory board.* (continued use)
2. Requiring students to demonstrate mastery of subject matter with projects and portfolios. Eighty-five percent of Alumni will indicate that they are well prepared in science, math and technical specialties (Goal 1 & 3).	*Feed back from local industries Employers of our graduates are surveyed through the SOT survey. (http://www.ncat.edu/~sot/surveys.htm)* (continued use)
3. Recommend students participate in internship activities. Oral and written presentations are required in all CM courses. Advisory Committee, survey respondents and ACCE will judge the quality of the results. (Goal 1).	*Feed back from students, graduates and alumni. Information from the survey is provided by the SOT Associate Dean's office.* (continued use)
4. Computer use is required in most CM courses, with computer use playing a major part in CM 150, 318, 594, 596 and 60l. All graduates have a mastery of 75% or more when using Microsoft Office, Primevera and Timberline software packages (Goal 5).	*Feed back from employers (via survey) indicates the graduates are proficient in construction related computer use.*
5. Most CM courses have a lecture and lab portion. Technical and problem solving skills are developed via lecture and practical lab exercises (Goals 1 & 2).	*Feed back from employers (via survey) indicates the graduates are proficient in construction related computer use. The survey results will indicate that the graduates are well prepared in this category.*

Form D

North Carolina A&T State University

Department/ School Name: Construction Management and Occupational Safety and Health

Program Names: Construction Management

Major Findings and Changes Made to Program as a Result of Assessing Goals

Please list the major findings and program improvements made as a result of assessing student learning and programs outcome goals. Link the findings to the method used.

1. Findings from students, graduates and alumni resulted in our redoubled effort to assist students in finding quality employment upon graduation. Some of the measures we utilized in this endeavor were: supporting School career activities, increasing opportunities for internships, helping students develop skills that facilitated finding employment. Contacted students and encouraged them to participate in the SOT survey.
2. Feed back from accrediting agencies resulted in our continually upgrading knowledge, skills and abilities of faculty and staff, and a redoubled effort to prepare teaching environments conducive to learning. Some of the measures for accomplishing these goals were providing staff training in computer software usage and application, and upgrading laboratory and classroom facilities.
3. Feed back from local and national accrediting agencies resulted in our continued efforts to enhance scholarly activities of faculty. The department especially encourages increased efforts in securing research and grants in order to fund improvements to the department.

Form A

North Carolina A&T State University

Department/ School Name: Construction Management and Occupational Safety and Health

Program Name: Occupational Safety and Health (Bachelor of Science)

Program-Level Student Learning Goals

Please use this form to list the student learning goals for all programs in your department/school or attach a list. Use a separate sheet for each program and note that you may have fewer or more goals that space is allotted for here. If needed make copies of this form.

1. Demonstrate individual development and creativity through scholarly pursuit (writing and presentation) of academics in the field of Occupational Safety and Health.
2. Demonstrate mastery of scientific and technical competencies, through laboratory exercises and individual instruction.
3. Demonstrate adequate oral and written communication skills, and put those skills into practice in laboratory and classroom activities.
4. Demonstrate a high level of computer competence and knowledge of the procedures, materials and equipment currently employed in technical, industrial and educational fields.
5. Demonstrate ability to read, interpret and apply OSHA rules and regulations; the ability to write in concise and logical terms laboratory reports; and the ability to perform all necessary computations related to the career field.

Form B

North Carolina A&T State University

Department/ School Name: **Construction Management and Occupational Safety and Health**

Program Name: **Occupational Safety and Health**

II. Evaluation Methods

In each row, please list methods (measurements used); then identify those methods (measurements) that will be used within the next year or so.

Commercially Available Tests/Surveys	
1. NA	
2. NA	

Form C

North Carolina A&T State University

Department/ School Name: Construction Management and Occupational Safety and Health

Program Name: Occupational Safety and Health

II. Evaluation Methods

List methods (qualitative and/or quantitative) and whether these will be used again

Locally Developed Methods	
1. Exit interviews with graduates will indicate that 85% of those graduating capable of delivering professional grade oral and written presentations. (Goals 1, 2 & 3).	*Feed back as to competency in oral and written communications is reflected in SOT survey results and by employers (continued use).*
2. Employer survey results of 90% will indicate that graduates are prepared scientifically and technically. (Goals 2 & 4)	*Feedback is taken from employers (continued use).*
3. Pre-test/Post-test results will indicate, via a 50% increase in scoring, that these skills have been mastered. (Goals 3 & 5)	*Feedback is taken from instructor observations and from examinations (continued use).*
4. Employer survey results will indicate 80% mastery of necessary job related computer skills. (Goals 2 & 4)	*Feedback is taken from examinations and from employers (continued use).*
5. Pre-test/Post-test will indicate 80% mastery of this competency. (Goals 4 & 5)	*Feedback is from instructors, employers and the SOT survey.*

Form D

North Carolina A&T State University

Department/ School Name: Construction Management and Occupational Safety and Health

Program Names: Occupational Safety and Health

Major Findings and Changes Made to Program as a Result of Assessing Goals

Please list the major findings and program improvements made as a result of assessing student learning and programs outcome goals. Link the findings to the method used.

1. Findings from SOT survey will result in students performing tasks better after gaining employment. A key indicator will be the results from the SOT employer survey. Also a pre-test/post-test will be given.
2. Findings from local and national accrediting agencies resulted in a formalized policy regarding student portfolio review, and student product exhibitions.
3. Feedback from local accrediting agencies resulted in encouragement to engage in entrepreneurial ventures. Key indicators of success will be increased partnerships and diversification of resources.

Analysis and Summary of Data

From 2001 until 2003 the Department of Construction Management and Occupational Safety and Health administered departmentally developed surveys to graduates and their employers. Information from these surveys can be found on page 10-11 of this paper. While preparing the NAIT self-study accreditation documentation during the 2003-2004 academic year, the School of Technology requested that all program areas use the School of Technology Alumni and Employer survey. Copies of both surveys can be found in the appendix of this document. It was requested that any information from departmental surveys that was not currently on the School of Technology surveys, be submitted to the Associate Dean for undergraduate studies for inclusion. Dr. Shofoluwe chaired an ad hoc committee that was charged with the responsibility of determining and submitting this information to the Associate Dean's office. The information was submitted and both alumni and employers have begun responding to the surveys.

However, since the revised survey is relatively new to the School of Technology, only a small number of alumni and employers have responded. As of January 2005, 27 alumni and 4 employers have responded.

	CM	OSH
Alumni	**16**	**11**
Employers	**3**	**1**

The result and comments generally reflect those found by the departmental surveys, displayed on page _____.

Overall Strengths of Program

The Department has a number of strengths including the program, the faculty and the students. Both programs are fully accredited by the National Association of Industrial Technology (NAIT), and the American Council for Construction Education (ACCE) also accredits the Construction Management Program. Further, the most current computer software used for estimating, report generation, scheduling and planning and safety incident management is employed in many of the class offerings.

The students are an integral part of any educational program. Students accepted into both program areas are prepared to handle the demands of a technologically advanced society by first mastering a demanding course load. Students embark upon successful careers in either the public or private sector after being equipped with the technical abilities, problem-solving strategies, and communication skills by dedicated faculty members.

The faculty demonstrates genuine concern and individual attention that students need to flourish. The faculty utilizes a variety of technological tools to enhance instructional delivery in order to facilitate the teaching/learning environment. Faculty development activities provide important opportunities, which allow faculty members to remain current on new technological innovations and how these tools can be used for

instructional purposes. Examples of faculty developments are the Tractel safety heights faculty workshops, OSHA 500 & 501 workshops, and the LEPC workshops. All are available to the faculty.

The Department of Construction Management and Occupational Safety, through the efforts of the dedicated faculty and staff, provide the teaching and learning environment that continues to produce graduates who make a difference. Student leadership continues to grow as evidenced by the numerous internships and co-ops that our students participate in. This can be evidenced by the 100% job placement for CM students and near 100% job placement for OSH students over the past four years.

Weaknesses:

1. Increased enrollment without an increase in faculty.
2. A sufficient budget to provide adequate faculty development activities.
3. Program has not fully developed and documented how it incorporates findings from assessment for program improvements. (Steps have been taken to improve this, and the OSH instructors are working on incorporating this element into their annual work.)

Threats and Challenges to the Program

Several areas of concern to the success of the program relate to resources. The increased number of students demands an increase in faculty as well as equipment and support. Likewise since the degrees are highly technical it is imperative that faculty, staff and resources remain current with the trends in business, industry and education. The programs must continue to meet the standards that are set by accrediting agencies and advisory committees.

Strategies to Address Challenges

Continued efforts to partnership with business and industry must be pursued as a means to remain effective and to secure resources. Likewise interdisciplinary efforts within the School of Technology and with the University should be encouraged to more effectively utilize current resources.

Appendix

Self-study Questionnaire and Employer Questionnaire Administrated by the School of Technology

***CODE:* _____**

North Carolina Agricultural & Technical State University
School of Technology
Greensboro, NC 27411

SELF-STUDY QUESTIONNAIRE
(Alumni)

A. DIRECTIONS

Please read each statement carefully and circle the response which best describes your opinion or situation. If you completed both the bachelor and master's degree programs, please respond to the questionnaire based upon your bachelor's degree program experience only. Your responses will be kept confidential and used only in summary reports. The university's Office of Planning, Assessment and Research will analyze responses. Thank you for your cooperation.

Part I
Background Information

1. Which academic departments were you enrolled?
(a). Electronics and Computer Technology
(b). Construction Management and Safety
(c). Manufacturing Systems
(d). Graphic Communications Systems & Tech. Studies

2. Please indicate your degree concentration:
(a). Electronics
(b). Manufacturing Systems
(c). Construction Management
(d). Graphic Communications
(e). Not Applicable (See #3)

3. Please indicate your degree concentration if choices in #2 were not applicable:
(a). Occupational Safety and Health
(b). Vocational Industrial Ed.
(c). Technology Ed./Industrial Arts
(d). Automotive

4. What was your enrollment status when you were admitted to the School of Technology?
(a). New Freshman
(b). Transferred from another institution (4-year college or community college)
(c). Enrolled at A&T, but transferred from another degree program

5. What is your sex?
(a). Male (b). Female

6. What is your racial background?
(a). Black (c). Indian (Native American) (e). Other
(b). White (d). Asian

7. Your age upon graduation was:
(a). 20-22 (c). 26-28 (e). 31 or older
(b). 23-25 (d). 29-30

8. Which academic year did you receive your baccalaureate degree?
(a). 1997-98 (c). 1999-00 (e). 2001-02
(b). 1998-99 (d). 2000-01 (f). Other (please specify academic year: _____)

9. Indicate the highest degree you now hold:
(a). Bachelor's Degree (c). Doctoral Degree

(b). Master's Degree (d). Other _____
(specify)

10. What is your employment status?
(a). Employed full-time (c). Self-Employed
(b). Employed part-time (d). Not Employed

11. Are you employed in a field that relates to your undergraduate major?
(a). Yes (b). No

12. How long did it take you to obtain your full-time job related to your degree after graduation?
(a). Obtained job prior to graduation (c). 2-6 months (e). Over 1 year
(b). Less than 2 months (d). 6-12 months

13. If you are unemployed, or employed in a job/position unrelated to your major, the primary reason is:
(a). Position is not available in the desired geographic location (c). Continuing formal education
(d). Difficulty finding employment
(b). Changed career direction (e). Other:_____
(Specify)

14. What is your approximate annual salary?
(a). Less than $40,000 (d). $60,000-$69,999
(b). $40,000-$49,999 (e). $70,000 or above
(c). $50,000-$59,999

15. What is the primary activity/responsibility in your current job/position?
(a). Technical (d). Marketing Sales
(b). Managerial (e). Other_____
(c). Training/Education (Specify)

For items 15-18, indicate your satisfaction with the following aspects of your present job.
1 = very dissatisfied, 2 = dissatisfied, 3 = neutral, 4 = satisfied, 5 = very satisfied

16. Challenge 1 2 3 4 5

17. Location 1 2 3 4 5

18. Salary & Benefits 1 2 3 4 5

19. Advancement Potential 1 2 3 4 5

Part II
Program Evaluation (Academic Program/Employment)

20. In your opinion, did the knowledge and skills you acquired while enrolled in the School of Technology at NC A&T enhance your chances of being more fully employed in the field for which you were being educated?
(a). Yes
(b). No (If no, why? _____)

Using a 1 to 5 scale, please rate the following items:
(1 = poor, 2 = fair, 3 = average, 4 = good, 5 = excellent)

21. **Overall technical competence, knowledge, and professionalism of Technology faculty: . . . 1 2 3 4 5**

22. **Advisement and counseling provided by Technology faculty: 1 2 3 4 5**

23. **Department's instructional facilities and equipment used to prepare you for employment: . . . 1 2 3 4 5**

24. **Quality of your education in terms of its preparation for your career: 1 2 3 4 5**

25 **Adequacy of appropriate computer preparation: . . 1 2 3 4 5**

26. **Undergraduate preparation as compared to your co-workers with B.S. degrees: 1 2 3 4 5**

27. **Overall perception of your major department: . . 1 2 3 4 5**

Please use the following scale to indicate your agreement or disagreement with the statements below:
(1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree)

28. **I am/was satisfied with my first job/position related to my major. 1 2 3 4 5**

29. **I am/was satisfied with my academic preparation for my first job/position related to my major. . . 1 2 3 4 5**

30. **I am satisfied with my academic preparation for my current job/position. 1 2 3 4 5**

31. **The curriculum that I followed in college prepared me for initial employment. . . . 1 2 3 4 5**

32. **The curriculum that I followed prepared me for promotion/advancement. 1 2 3 4 5**

33. **I would describe the quality of the Technology faculty interaction with students as extremely positive and constructive. 1 2 3 4 5**

34. **My technical background (concentration) is essential for success in my present position. . . . 1 2 3 4 5**

35. **Advancement and promotion for me have been satisfactory. 1 2 3 4 5**

36. **If I could start college all over, I would choose to graduate with the same major. 1 2 3 4 5**

What was your first job/position after graduation related to your major?

Job Title:_____ Company name:_____

Job Duties:_____

Starting Annual Salary:_____ Part-time?_____ Full-time?_____

37. What is your present employment?

Job Title:_____ Company name: _____

Job Duties:_____

38. Which courses in your major have been most useful to you?

_____

39. Which courses were the least useful?

_____

40. Which courses outside your major have been most useful to you?

_____

41. List any strengths and/or weaknesses of the Technology curriculum:

_____

42. Do you have any recommendations for improving the program from which you graduated?

_____

_____

_____

THANK YOU!

CODE_____

North Carolina A&T State University
School of Technology
Greensboro, NC 27411

B. EMPLOYER QUESTIONNAIRE

Employee Name: _____

Supervisor's Name: _____ Title: _____

Company Name: _____ Phone: (_____)_____

Address: _____

City State Zip

On a scale of 1 to 5, please rate the performance of the above employee on the standards which follow:
1=poor, 2=fair, 3=average, 4=good, 5=excellent, NA=not applicable

1.	Preparation for initial employment	1 2 3 4 5 NA
2.	Undergraduate preparation as compared to co-workers with B.S. degrees	1 2 3 4 5 NA
3.	Skills for current position	1 2 3 4 5 NA
4.	Progress on the job	1 2 3 4 5 NA
5.	Overall performance as compared to other employees with similar job related responsibilities	1 2 3 4 5 NA
6.	Potential for professional advancement with the company	1 2 3 4 5 NA

(ADDITIONAL QUESTIONS ON REVERSE SIDE)

Use the 1 to 5 scale below to respond to a listing of skills and abilities that we hope our graduate exhibits:

I. PREPARATION

1=poor
2=fair
3=average
4=good
5=excellent
NA=not applicable

IMPORTANCE

1=not important
2=of little importance
3=of moderate importance
4=of much importance
5=highly important
NA=not applicable

	PREPARATION		**IMPORTANCE**	
	Rate how well the graduate was prepared to use each skill or ability.	Skill	Indicate how important the skill or ability is.	
7.	1 2 3 4 5 NA	Oral Communication	1 2 3 4 5 NA	27.
8.	1 2 3 4 5 NA	Written Communication	1 2 3 4 5 NA	28.
9.	1 2 3 4 5 NA	Listen Effectively	1 2 3 4 5 NA	29.
10.	1 2 3 4 5 NA	Apply Mathematics	1 2 3 4 5 NA	30.
11.	1 2 3 4 5 NA	Solve Problems	1 2 3 4 5 NA	31.
12	1 2 3 4 5 NA	Generate Creative Alternatives	1 2 3 4 5 NA	32.
13.	1 2 3 4 5 NA	Work as Team Member	1 2 3 4 5 NA	33.
14.	1 2 3 4 5 NA	Set and Work Toward Goals	1 2 3 4 5 NA	34.
15.	1 2 3 4 5 NA	Use of Computer Applications	1 2 3 4 5 NA	35.
16.	1 2 3 4 5 NA	Apply Technical Knowledge	1 2 3 4 5 NA	36.
17.	1 2 3 4 5 NA	Function in Leadership Roles	1 2 3 4 5 NA	37.
18.	1 2 3 4 5 NA	Use of Management Skills	1 2 3 4 5 NA	38.
19.	1 2 3 4 5 NA	Use of Hands-on Skills	1 2 3 4 5 NA	39.
20.	1 2 3 4 5 NA	Use of Human Relation Skills	1 2 3 4 5 NA	40.
21.	1 2 3 4 5 NA	Ethical Work Behavior	1 2 3 4 5 NA	41.
22.	1 2 3 4 5 NA	Demonstration of Professionalism	1 2 3 4 5 NA	42.
23.	1 2 3 4 5 NA	Quick Adaptation to Changes	1 2 3 4 5 NA	43.
24.	1 2 3 4 5 NA	Follow Through of Assignments	1 2 3 4 5 NA	44.
25.	1 2 3 4 5 NA	Basic Technical Knowledge	1 2 3 4 5 NA	45.
26.	1 2 3 4 5 NA	Organizational/Planning Skills	1 2 3 4 5 NA	46.

27. In addition to the above, list all other characteristics that you will look for in future employees.

_____

_____

28. Please cite major strengths and/or weaknesses, which you have observed relative to on-the-job performance of the employee.

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29. Would you hire another NC A&T State University School of Technology graduate?

Yes □ No □

30. Please provide other comments and suggestions that may be considered in our curriculum revision process.

THANK YOU!

January 31, 2005 version