

*Annual Assessment and Evaluation Report*

**Revised February 15, 2005**

**by**

**Dr. Cynthia Gillispie-Johnson**

**For Dr. Nancy Glenz, Retiree**

*Department of Graphic Communication Systems  
and Technological Studies*

**School of Technology  
North Carolina A&T State University  
2002 – 2003**

***Department of Graphic Communication Systems  
and  
Technological Studies***

**ANNUAL ASSESSMENT AND PROGRAM EVALUATION REPORT  
2002-2003**

**Brief Overview of Department and Programs:**

The Department of Graphic Communication Systems and Technological Studies has two undergraduate degrees and two graduate degrees. The Department offers Bachelor of Science degrees in *Graphic Communication Systems* with specializations in printing and publishing and drafting and design (0157); and *Technology Education* with concentrations in: Technology Education, Teaching (0273); Trade and Industrial Education, Teaching (0274); and Training and Development for Industry (0275). At the graduate level the Department offers a Masters of Science in Industrial Technology with a concentration in Graphic Communication Systems (0253). The Department also offers a Master of Science degree in Technology Education, which has received approval for delivery via the Internet. The Master of Science in Technology Education offers concentrations in: Technology Education, Teaching (0276); Trade and Industrial Education, Teaching (0277); Training and Development for Industry (0279); and Workforce Development Director (0278). The Department has gained approval for two certificate programs effective fall 2003: The Web Design Certificate and The Print Production Certificate. Additionally, the Department provides core courses for the School of Technology. The Department was instrumental in the success of the interdisciplinary SOT Gillette project. Students created a product, documented their process, and ultimately made a successful presentation to Gillette. Additionally, the Department was successful in gaining its accreditation from NCATE and DPI and is currently preparing for the NAIT accreditation visit in the spring of 2004.

**Strategic Plan:**

**Vision:** The Department of Graphic Communication Systems and Technological Studies strives to lead the nation in developing and delivering educational programs that will prepare graduates to excel in providing research and applied technological and managerial solutions to the challenges of the 21<sup>st</sup> Century workforce.

It is the mission of the Department of Graphic Communication Systems and Technological Studies to provide students with the teaching/learning environment and experiences to prepare them for careers in Graphic Communication Systems: Drafting and Design or Printing and Publishing or Technology Education with its areas of concentrations.

**Goals/Objectives:**

1. To provide quality competency-based instruction so that the students will be prepared to enter the fields of graphic communication systems or technology education, with its areas of concentrations.

1. Outcomes Achieved: On a likert scale from 1 to 5 with 5 being the highest score,

quality of instruction in the program score was 4.6. Appropriateness of the content/objectives score was 4.8. Qualification of the program professors' score was 4.8, and advisement by program professors' score was 4.8. The average GPA for students with satisfactory progress was 3.8. The average GPA for students with unsatisfactory progress was 1.8.

Customer relations was identified as lacking in the curriculum by the advisory board.

Based on the masters of science survey, the areas that scored 3.0 were development of teaching attitudes and dispositions, field experience, and program facilities. The students also identified on the survey instrument that discipline and diversity were missing in quality of instruction.

Workshops for PRAXIS I and II were given twice a year. These workshops were advertised on the web by the undergraduate coordinator in the department.

Assessment Measurements: PRAXIS I, PRAXIS II, Advisory Board recommendations, and Alumni Surveys are instruments used for departmental assessment measures. PRAXIS I is taken at the completion of the sophomore courses. Technology Education majors take PRAXIS I, the test of general knowledge; and at the completion of their degree, they take PRAXIS II, the test on professional knowledge. Non-education majors complete all required course work required per requirements of a professional accreditation body. Advisory committees for each degree areas and faculty for each degree areas review the curriculum and make recommendations for changes. At the current time, assessment occurs within each course and at the authority of the instructor.

Assessment Procedures: Data were collected by the School of Education and reported to each department with degrees in education. The associate dean of undergraduate studies, School of Technology conducted student and employer surveys in the spring 2003 and the data were currently being analyzed. The alumni survey was mailed every other year and analyzed by the graduate coordinator in the department.

Administration of Assessment Procedures: The faculty, led by the chairperson, assures that the curriculum for all teacher education programs reflects state and national requirements and that averages of 85% of the students, over a three-year period, pass required examinations. In order to do this, at the sophomore year, PRAXIS I is administered and in the senior year, PRAXIS II is administered. Faculty, led by the chairperson, maintained professional accreditation reflective of business, industry or government job requirements and/or employ an advisory committee to assure preparation of graduates for employment in a given degree field. The department chairperson is responsible for obtaining program accreditation and and/or active advisory committee helping to determine and validate curricula.

Use of Assessment Findings: Students with unsatisfactory progress have been directed to develop a plan of improvement in cooperation with the department's graduate coordinator. Two of the weaknesses identified in the curriculum were related to discipline and diversity in the required lesson plan format; this was addressed by adding a section on discipline to the methods course. Diversity in the public schools was addressed by adding a section to the methods course TECH 566 and by adding a section on diversity to the required lesson plan format. The results of the work and advice of the advisory committees were used to validate curriculum as it relates to producing student proficiencies. The curriculum reviews per requirement resulted in curriculum changes to meet requirements. PRAXIS II Test results were analyzed to determine what changes needed to be made to increase the pass rate on required teacher examinations. The results of the

assessment were also used to maintain accreditation per accreditation standards and advisory committees were used to evaluate and make recommendations for change. Per advisory committee recommendation, TECH 637-Industrial and Customer Relations in Graphic Communication was added to the course offerings.

2. To assist majors in developing those critical competencies in the sciences, communications, mathematics, and technical specialties essential to securing positions in related industrial, business and government careers.

## 2. Outcomes Achieved:

A survey was administered to graduates upon graduating from the university. The survey is also administered to alumni at diverse intervals:

Years surveyed	% Graduates surveyed	% Graduates employed	% Graduates in graduate school
2001 – 2002	31.8	50	12
2002 – 2003	12.5	14.2	10

Continuing education and employment: The survey was administered in the spring 2003. The data are being analyzed.

Results of employer surveys: The survey was administered in the spring 2003. The data are being analyzed. A recommendation from the advisory board was to add and revise course offerings in e-learning to attract more non-traditional students.

Assessment Measurements: The data were obtained from exit interviews with graduating seniors.

Assessment Procedures: The associate dean of undergraduate studies, School of Technology conducted an exit interview with each graduating senior, the goal of which was to determine positions secured or further study to be pursued. Additionally, employer surveys were administered; however, this data were not available at this time.

Data were collected by the School of Education and reported to each department with degrees in education. The associate dean for undergraduate studies, School of Technology conducts student and employer surveys in the spring 2003, and the data are currently being analyzed. The alumni survey is mailed every other year and analyzed by the graduate coordinator in the department.

Administration of Assessment Procedure: The faculty and departmental chair maintain accreditation standards and oversee advisory committees that determine if students are obtaining the necessary competencies. The Associate Dean for undergraduate studies conducted exit interviews with those seniors cleared for graduation to determine their perceptions of their preparation for employment. Specifically each degree program has an advisory committee. One of the expectations of each advisory committee is that they are part of the curriculum review process. Modification are discussed and approved. Representatives on the advisory committee include industrial and business professionals, and in-service teacher and administrators.

Use of Assessment Findings: The findings were used to modify curriculum, purchase equipment, computer hardware and software, and engage in faculty development.

The department developed two certificate programs--Web Development and Print Production. The description of one course was changed: GCS 585 (Graphic Communication Production Management). The titles and course description were changed in two courses: GCS 636 (Electronic Imaging and Distance Learning), and GCS 670 (Electronic Imaging in Graphic Communications); also GCS 636 (Web Design for Distance Education), and GCS 670 (Web Design for E-Commerce) titles were changed.

3. To develop adequate oral and written communication skills and provide project-oriented laboratory instruction requiring students to present laboratory results in both written and oral form.

3. Outcomes Achieved: Students are required to take 12 hours of communication courses and 18 or more hours of laboratory work. All students are required to take GCS 292- Technical Writing with a passing grade of C or better, English 100, 101 and Speech 250. The students' major course work is 90% laboratory based. The students are also required to take an internship course. These courses have made our graduates more marketable and employable. This is evidenced by the 100% passing rate of graduates on the Praxis. The students are also required to produce an electronic portfolio of their work and compete on the national level with laboratory and communication skills attained in the classroom. The students have always placed at the national conference.

Assessment Measurements: Mid-term, final examination, quizzes, and evaluations of the students' program were given at intervals. Each student should have a minimum of "C" grades in all laboratory based courses, and will be required to present oral and written technical reports of projects and internships completed. Each student is required to complete general education courses (i.e., English 100, 101, and Speech 250). To insure oral and written communication skills for graduates, all education majors must take Praxis I and II.

Assessment Procedures: The instructor of record evaluated student's test and examinations. The students were also given the opportunity to evaluate the instructor.

Administration of Assessment Procedures: Academic faculty, student advisors and the Department Chairperson carefully examined and monitored student evaluations and matriculation standards were carefully examined and monitored. Each student advisor, along with the Department Chairperson, monitored student's academic progress and matriculation standards to ensure successful completion of general education and communication courses designed to enhance effective communication skills. The School of Education and the University System monitored the Department's Praxis scores.

Use of Assessment Findings: The results were utilized to modify course requirements in order to assure congruence with industry standards. GCS 292 Technical Communication is intended to help students become proficient in written and verbal skills necessary to communicate effectively in both business and private sectors. Students were encouraged to build on the foundations already appropriated from other courses that stress communication skills.

4. To prepare students to function adequately in selected specialty areas demonstrating computer competence and knowledge of procedures, materials and equipment currently employed in technical, industrial and educational fields.

4. Outcomes Achieved: Ninety-eight percent (98%) of the students operate at the 70% or better competency level in computer skills, procedures, materials and equipment uses. Ninety-eight percent (98%) operated at 70% or better in computer aided design, desktop publishing, computer aided drafting, and electronic prepress.

Assessment Measurements: Students took test administered by the instructor of record in each major course with a passing grade of 70% or better. All courses that require computer competence and knowledge of procedures, materials and equipment were incorporated in major courses.

Assessment Procedures: The instructor of record gave mid-term, final examination, quizzes, and evaluations at interval stages throughout the course. Test may or may not be standardized. The students were also given the opportunity to evaluate the instructor.

Administration of Assessment Procedures: The instructor administered the mid-term, final examination, and quizzes. The Department chairperson, along with the faculty, carefully determined equipment needs, design and development of laboratories to reflect state of the art (computer and high technology) applications in graphic communication systems and technology education.

Use of Assessment Findings:

The assessment findings were used to review curriculum course content and laboratory developments to include computer based instruction in each specialty. Specifically each degree program has an advisory committee. One of the expectations of each advisory committee is that they are part of the curriculum review process. Modification were discussed and approved. Representatives on the advisory committees included industrial and business professionals, and in-service teachers and administrators recommending the following to be added to the curriculum: Certificate in Web Development and Print Production. The description of three courses were changed--GCS 585 (Graphic Communication Production Management); GCS 636 Electronic Imaging and Distance Learning), and GCS 670 (Electronic Imaging in Graphic Communications); also GCS 636 (Web Design for Distance Education and GCS 670 (Web Design for E-Commerce) titles were changed.

5. To prepare students for careers in education, industry, business and government upon graduation.

5. Outcomes Achieved: Technology Education graduates were very successful in achieving challenging employment opportunities from various education, industry, business and government agencies. Ninety-six percent (96%) percent of all education majors placed for the past four years. In the last two years, 50% and 14% of the graphic communication systems major surveyed, respectively were employed upon graduation. An additional 10 to 12 percent continued in graduate school.

Assessment Measurements: A survey instrument was used to review, develop and change academic programs and curricula with faculty, the accrediting agency, and industrial advisory

committee to enhance marketability and career opportunities of graphics communication systems and technology education majors.

Assessment Procedures: The graduate coordinator in the Department conducted and analyzed the survey data and data from the assessment office on NC A&T campus.

Administration of Assessment Procedures: The departmental office, office of the associate dean for undergraduate studies, School of Technology and the University Career Development and Placement Office monitored the job placement and career opportunities of graduates.

Use of Assessment Findings: The Department is forming partnerships with companies to place the graduates. The Department compiled a data base of the companies in the area to form internship partnerships in the hope of permanent employment of graduates.

### **Relationship to University's Strategic Plan:**

The following is a brief description of how the Department's strategic plan is related to the college's/school'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 graphic communication systems or technology education, with its fields of concentrations.
- To assist majors in developing those critical competencies in the sciences, communications, mathematics and technical specialties essential to securing positions in related industrial, business, and government careers.

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 21<sup>st</sup> century work force challenges".

These objectives are also congruent with the agricultural and technical 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, transportations 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 faculty, staff and students, and Department's advisory committees review the departmental objectives periodically. 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's and Department's programs will be 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: adding the content area of screen printing to the printing and publishing specialization, encouraging entrepreneurship, holding student product exhibitions, formalizing portfolio review policies, and completing development of on-line MS technology education courses. These departmental goals are related to Futures by encouraging entrepreneurship, which can increase partnerships and diversify resources. Some key indicators of progress include implementing screen printing and on-line MS Technology Education courses and operating efficiently, as well as increased graduation rates, and partnership with business and industry.

#### **Student Profile Data:**

Admission requirements for students considering the Department of Graphic Communication Systems and Technological Studies are graduation from high school, or the equivalent, and the completion of 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:

Graphic Communication Systems (undergraduates)	263
Technology Education & Industrial Technology (undergrads)	7
Vocational Industrial Education (undergraduates)	8
Technology Education (graduates)	14
Vocational Industrial Education (graduates)	<u>13</u>
<b>Total Number of Majors</b>	<b>305</b>
Number of Students in the Honors Program:	15
Number of Transfers (average admission GPA = 2.76):	11

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

Enrollment in Degree Credit Distance Learning			
Extension		On-Line	
Headcount	Credits	Headcount	Credits
8	27	34	112

#### **General Education**



Freshmen performance data 2002 - 2003:

The GPAs for freshmen were in the following categories for Fall 2002:

0.0 0– 1.00	<b>01</b>
1.0 0– 1.99	<b>10</b>
2.0 0– 2.99	<b>21</b>
3.0 0– 3.99	<b>17</b>
3.99 – 4.00	<b><u>01</u></b>
<b>Total number</b>	<b>50</b>

Other measures or indicators:

<i>Graphic Communication Systems Student Registrations (S. R.) and Student Credits Hours (SCHs)</i>							
Fall 1999		Spring 2000		Fall 2000		Spring 2001	
S.R.	SCH	S.R.	SCH	S.R.	SCH	S.R.	SCH
664	1992	1059	1995	1539	2738	1252	2349

Other measures or indicators continued:

<i>Graphic Communication Systems Student Credit Hours (SCHs)</i>			
Fall 2001	Spring 2002	Fall 2002	Spring 2003
SCH	SCH	SCH	SCH
2698	2609	2743	2457

### **Academic Major/Program (Past three years)**

Results of any licensure examinations: 100% passing rate of Technology Education graduates on the Praxis I and II.

### **Accreditation Reviews:**

The Department of Graphic Communication Systems and Technological Studies is fully accredited by:

- Southern Association of Colleges and Schools
- National Council for the Accreditation of Teacher Education
- Department of Public Instruction
- National Association of Industrial Technology

### **Internal Program Reviews:**

The Department of Graphic Communication Systems and Technological Studies enjoyed a successful and productive academic year. The Department's success was exemplified by improving both retention and graduation rates as well as successfully completing NCATE and DPI accreditation reviews. The Department has two undergraduate degrees, two graduate degrees, and provides core courses for the School of Technology. There is an advisory board 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

Year	Retention								
	Freshman Cohort	1yrs	2yrs	3yrs	4yrs	5yrs	6yrs	7yrs	8yrs
1994	17	64.7	70.6	70.6	23.5	11.8	5.9		
1995	27	85.2	70.4	74.1	29.6	7.4	3.7	3.7	
1996	15	66.7	46.7	46.7	6.7				
1997	33	81.8	87.9	75.8	27.3	15.2			
1998	34	76.5	55.9	58.8	23.5				
1999	34	82.4	64.7	61.8					
2000	44	90.9	65.9						
2001	51	86.3							

#### Graduation Rates

Graduation								
	1yrs	2yrs	3yrs	4yrs	5yrs	6yrs	7yrs	8yrs
1994				41.2	47.1	52.9	58.8	58.8
1995				40.7	63.0	63.0	63.0	
1996				40.0	46.7	46.7		
1997				45.5	60.6			
1998				26.5				
1999								
2000								
2001								

### Graduate and Alumni Survey

The graduate and alumni survey is administered to students upon graduating from the University. The survey is also administered to alumni at diverse intervals:

Years surveyed	% Graduates surveyed	% Graduates employed	% Graduates in graduate school	Graduates appreciate information
2001 – 2002	31.8	50	12	N/A
2002 – 2003	12.5	14.2	10	N/A

Continuing education and employment: The survey was administered in the spring 2003. The data are in the process of being analyzed.

Results of employer surveys: The survey was administered in the spring 2003. The data are in the process of being analyzed.

Evaluation of student experiences:

Class	Sophomore		Senior	
Year	1998	2000	1998	2000
Technology services leadership	73.5	81.4	67.3	81.1
skill development opportunity	72.3	69.2	78.6	91.4

### **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 philosophy that merit pay is awarded based upon meritorious service, which means a person has performed in an excellent or superior fashion. Although what is meant by merit is often debatable, the fact remains that it can and does exist. 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. The Dean, based upon recommendations of the Department Heads and the Deans personal observations, will make all merit decisions.

### **Faculty Development Activities:**

Departmental faculty members have also been highly productive in terms of conference presentations, publications, and grants. Each faculty member made presentations to regional or national conferences. All of the faculty members were recipients of funded grants. The entire 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, E-College and Blackboard to deliver courses for teacher licensure via the Internet. The faculty attended and made presentations at NAIT and ITEA in 2002 - 2003.

Vincent Childress:

- NCDPI Workforce Development Conference, Fall 2001
- NC Career and Technical Teacher Educators Conference, Fall 2001
- NC CTE Conference, April 2002
- NC TEA Conference, February 2002
- ITEA Annual Conference, March 2002
- Workforce Development Conference, July 2002
- Teaching Freshmen Symposium, campus ATL, Spring 2002
- Faculty Development For NCATE visit, Fridays in October & November 2001

- NC Technology Education Association, January 2003
- Special Population Readiness Coordinators Conference, February 2003
- International Technology Education Association Conference, March 2003

Cynthia Gillispie:

- National Association for Industrial Technology, November 2001
- International Graphic Arts Research Association, February 2002
- Bureau of Printing and Engraving, April 2002
- Just-In-Time Teaching, NC A&T Workshop, April 18, 2002
- Workshop on “Training in Printing and Design – Theory and Application,” May 20, 2002 – June 27, 2002
- Presented lectures on “Personal Economics” for C. Jackson Middle School Junior Achievement, November 2002
- “Student Perception of Flexography,” NAIT Convention, April 2003
- Chair/Host for the 2003 International Graphic Arts Education Association (IGAEA) Annual Conference

Nancy Glenz:

- National Association For Industrial Technology, November 2001
- NC TEA Conference, February 2002
- Faculty Development for NCATE visit, every Friday in October & November 2001

Arjun Kapur:

- Effective Teaching Workshop “Learning Productivity,” February 2002
- National Association For Industrial Technology, November 2001
- Workshop On “Training In Printing and Design – Theory and Application,” May 20, 2002 – June 27, 2002
- Helped in arranging and facilitating hands-on assistance in the first-time use of WEB for Faculty (Student Grading). Mr. Bill Wood, Information Systems liaison and Ms. Earla Thornhill from Office of Registrar conducted the seminar in room 3009 Smith Hall.

Devang Mehta:

- E-College workshop, August 2001
- National Association For Industrial Technology, November 2001
- Workshop On “Training In Printing and Design – Theory and Application,” May 20, 2002 – June 27, 2002
- ATL Effective Teaching workshop, February 2002
- WEB for Faculty Workshop, December 2001
- ATL Summer Academy for Faculty Teaching Freshmen, May 2002 – June 27, 2002
- Presented lectures on Personal Economics for C. Jackson Middle School Junior Achievement.

**Learning:**

The faculty members of the Department have continued their involvement with distance learning through the delivery of on-line courses that assist with teacher licensure and Master of Science degree in technology education with its concentrations. One faculty member is on the advisory board to ATL and has been instrumental in assisting faculty teaching and learning.

Dr. Vincent Childress

- Awarded tenure and promotion to associate professor in the summer of 2001
- 2003 Leadership Award, Technology Education for Children
- 2003 Vice President for Communication, Technology Education for Children Council
- Co-Chair for ITEA Program Excellence Award
- 2002 – 2003 Vice President at Large, NCTEA
- Editorial Review Board, Journal of Technology Education
- 2003 IGAEA Conference Committee member
- Interdisciplinary Ph.D. Leadership Taskforce member

Dr. Cynthia Gillispie-Johnson

- Awarded tenure and promotion to associate professor in the summer of 2002
- Elected to the Board of Directors of Youth Focus, Inc., recognized in the 2002 international Who's Who of Professional and Business Women and Who's Who among American Teachers (7<sup>th</sup> Edition)
- Nominated in the Peacemaker newspaper as one of 460 persons considered influential movers, shakers and makers among the African American Villages.
- Who's Who Among America's Teachers (October 3, 2002). Educational Communication, Inc. Austin Texas
- President's Award – Dedicated services. (July 31, 2002). International Graphic Arts Education Association
- Served as judge for NBCU Health Promotion alliance and TELOCO (Student Nurses Association) – Organ Donor awareness contest (2003). Funded by the North Carolina Department of Health and Human Resources
- Served as Secretary on the Board of Directors for International Graphic Arts Education Association, (2001 – 2003).
- 2003 Conference Chair/Host of the International Graphic Arts Education Association

Dr. Arjun Kapur

- Recognized by McGraw Hill through their request for his review of two of their texts, mechanical Desktop for Engineers R4, Mechanical Desktop for Engineers R5
- Received the Dean's Office 2003 Faculty Service Award
- ATL Steering Committee member
- 2003 IGAEA Conference Committee member

Dr. Devang Mehta

- 2003 IGAEA Conference Committee member
- Participated in GASC?GATF Teacher's Conference at the Graph/Converting Expo in Chicago, October 2002
- Participated in Graphic Arts Show, Charlotte, March 2003
- Participated in Gutenberg Festival, San Francisco, April 2003

Dr. Nancy Glenz

- ITT Taskforce Committee member
- 2003 IGAEA Conference Steering Committee Chair

Dr. Craig Rhodes

- 2002 – 2003 President Elect, NCTEA

- 2003 IGAEA Conference Committee member

**Discovery:**

The Department is committed to enlarging the body of knowledge as it relates graphic communication systems and technology education. To that end, all faculty have been actively involved in the effort to secure funded research.

Vincent Childress (PI) and Arjun Kapur and Patricia Shelton (CoPI's) Student Involvement in the Improvement of the Learning and Assessment Process. NSF. Fall 2001. \$106,000. Not funded.

Vincent Childress (PI) Technology Teaching Methods Project Technical Foundation of America. Spring 2002. \$22,546. Submitted.

Vincent Childress (PI) Technology Teaching Methods Project. Technical Foundation of America. \$22,546. Pending.

Nancy Glenz (PI) and D. Lafore (CoPI). E-Learning Licensure Program and Degree for Technology Education. President's E-Learning Initiative March 2002. \$80,820. Funded.

Nancy Glenz (PI). E-Learning Grant for Degree and Course Development for Technology Education. \$93,673. Funded.

Cynthia Gillispie-Johnson (PI) and D. Mehta, A. Kapur, and V. Childress (CoPI's): Training in Printing and Design-Theory and Application. Graphic Arts Education and Research Foundation. 1/4/02 – 12/31/01. \$37,970. Funded.

Cynthia Gillispie-Johnson (PI) and D. Dunn, and D. Brown, and G.R. Ray (CoPI's). McIntosh Computer Mediated Communication Laboratory. Futures Venture Seed Grant. February 2002/ \$12,000. Not Funded.

Cynthia Gillispie-Johnson (CoPI) and E. Barnette (PI) and S. Rowe (CoPI). Gender Neutral Activity Modules: Reducing Technological Barriers to Increase Female Participation in Engineering and Technology Programs. NSF March 2002. \$795,835. Submitted.

Cynthia Gillispie-Johnson (CoPI) and G. Ray (PI) and R. Purcell (CoPI). Strategies to Increase The Pool of Teachers through Online Course Offerings, 1890 Institution Teaching and Research Capacity Building Grants Programs. January 2002. \$199,999. Submitted.

Cynthia Gillispie-Johnson (PI) National List of Graphic arts Instructors. International Graphic Arts Education Association. 2003. \$5,000. Funded.

Cynthia Gillispie-Johnson (CoPI) and D. Dunn (PI) and D. Brown (CoPI) and A. Avery (CoPI). "Moving Up the Technical Ranks in Industry. A Multicultural Perspective." Visiting Industrial Scholar Program. Oak Ridge Associated Universities. 2002. \$600. Funded.

Cynthia Gillispie-Johnson (PI) and J. Stokes (CoPI). "Get Down Town – Action Greensboro." Futures Ventures. February, 2003. \$15,000. Not Funded.

Cynthia Gillispie-Johnson (PI) and C. Ray (CoPI) and G. Anderson (CoPI) and S. Lillie (CoPI) and S. Santmyers (CoPI) and D. Dunn (CoPI) and M. Hohamadi (CoPI). Introducing High School Students to the Design World in a University Setting. Futures Venture. February, 2003. \$15,000. Not Funded.

Cynthia Gillispie-Johnson (PI). The 2003 78<sup>th</sup> International Graphic Arts Education Association. 2003. \$2,500. Not Funded.

Cynthia Gillispie-Johnson (PI) and Devang Mehta (CoPI) and Arjun Kapur (CoPI) and Vincent Childress (CoPI). "Advanced Training in Design and Printing." GAERF. 2002. \$66,416. Not Funded

Cynthia Gillispie-Johnson (PI). Flexography for Classroom Instruction. Harper Corporation of America Submitted through Foundation Office. 2003. \$4272. Funded.

Elazer Barnette (PI) and Cynthia Gillispie (CoPI) and S. Rowe (CoPI). Female African-American Students' "Attitudes and Perceptions Toward Agriculture, Science, Engineering, Technology, and Computer Science (ASTEC) Education and Careers." NSF. 2003. \$499,000. Not Funded

Arjun Kapur (PI). NAIT Faculty Development Grant. \$2,850. Funded.

Arjun Kapur (PI). IGAEA Faculty Development Grant. \$1,500. Funded.

Arjun Kapur (PI). Establishing and Interdisciplinary CAD and Graphic Animation Center. Venture Grant. \$14,940. Not Funded.

Devang Mehta (PI) and V. Childress, C. Gillispie-Johnson, and A. Kapur (CoPI's). Web Design Training Workshop for Summer 2003. Graphic Arts Education and Research Foundation. May 2002 \$58,496. Not Funded.

Devang Mehta (PI). Establishing a Screen Printing Laboratory. Futures Ventures Grant. Spring 2002. \$15,000. Not Funded.

Devang Mehta (PI) Gutenberg Festival Faculty Development Grant. \$1900. Funded

Devang Mehta (PI). Franklin Estimating Software Licenses. Franklin Estimating Systems. 2002. \$3,000.

Devang Mehta (PI). Ink Spinks Inks. \$264.27

### **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.

## **Professional Presentations**

Vincent Childress: Workforce Development Conference. “Fundamentals of Technology Curriculum.” July 2002.

Vincent Childress: NC TEA. “Fundamentals of Technology Curriculum.” January 2003.

Vincent Childress: Conference Recruiting Non-traditional Students in Technology. “Special Population Readiness Coordinators Conference.” February 2003.

Vincent Childress: ITEA Conference. “Black Inventors Project.” March 2003.

Cynthia Gillispie-Johnson and Nancy Glenz: NAIT 2001 Conference “Establishing Internships with Industry: A Working Guide for University’s Department.” November 2001.

Cynthia Gillispie-Johnson and D. Brown, D. Dunn. The 44<sup>th</sup> Annual Southeast District Conference for the National Association of Negro Business and Professional Women’s Clubs, Inc. “The Technology Divided: Closing the Gap.” March 2002.

Cynthia Gillispie-Johnson. The English Department, Public Relations. “Business Etiquette.” April 2003.

Cynthia Gillispie-Johnson. Junior Achievement. “Your Community.” November 2002

Cynthia Gillispie-Johnson. Junior Achievement. “Production Management.” November 2002.

Cynthia Gillispie-Johnson. NAIT Convention. Computer Mediated and Wireless Communication as Related to Graphics. November 2002.

Cynthia Gillispie-Johnson. American Business Women Association. “Dividing the GAP in Technology.” Downtown Marriott, Greensboro, NC. 2002.

Cynthia Gillispie-Johnson. Koury Convention Center. “Life Long Learning for Distance Education.” October 2002.

Arjun Kapur: NAIT 2001 Conference. “Geographical Information Systems and Design/Drafting Curriculum.” November 2001.

Arjun Kapur: NAIT Convention. CADD in the Furniture and Cabinetry Design Production Processes. November 2002.

Devang Mehta: NAIT 2001 Conference “Safety and Health Issues in the Graphic Communications Industry.” November 2001.

Devang Mehta: NAIT 2002 Conference “An Investigation of the Perceived Financial Performance of Commercial Printing Firms for Conducting B2C Activities.” November 2002.

Craig Rhodes. ITEA Conference. “The Ethos of Middle School Modular Technology Education Classroom.” March 2003



## **Publications**

- Arjun Kapur (2001). Geographic Information Systems and Design Drafting Curriculum. Selected Papers, NAIT. November 2001.
- Arjun Kapur (2003). CADD Software in the Architectural and Building Industries. NAIT Convention.
- Cynthia Gillispie-Johnson, D. Dunn, D. Brown, V. Childress. (2002). "Establishing a Computer Mediated Communication Laboratory." *Visual Communication Journal*.
- Cynthia Gillispie-Johnson, Arjun Kapur, Dave Dillon (2002). "Perception of Flexography." *Journal of Visual Communication*. (not accepted).
- Cynthia Gillispie-Johnson and Nancy Glenz (2003). "Establishing Internships with the Industry: A Working Guide for University's Departments." *Journal of Visual Communication* (accepted).
- Vincent Childress, R. Gray, A. Lucas (2002). The Importance of Studying Black Inventors: Knowledge Skills and Dispositions. *Technology And Children*, 6(4).
- Vincent Childress (2002). Resources in Technology: Electokinetic Remediation. *The Technology Teacher*, 614(4), 15-19.
- Vincent Childress (2002). Black Inventors and their Inventions. NC A&T State University (online) <http://www.ncat.edu/~childress/blackinventors.html>
- Vincent Childress (2002). School of Technology: The Company. NC A&T State University (online). <http://ncat.edu/sotweb/gcsts/99999.htm> (Gillette Project web site)
- Vincent Childress (2002). Resources in Technology: Auqaponics. *The Technology Teacher*. 62(4), 17 – 21.
- Vincent Childress (2002). Teaching Reading, Writing and Systems through the Context of Safety. *Technology and Children*, 7(2), 6 – 7.
- Vincent Childress and Gray (2002). Tech techniques: Safety Tips For the Teacher. *Technology and Children*, 7(2), 5.
- Vincent Childress, et.al. (2002). Fundamentals of Technology, NC Department of Public Instruction.
- Vincent Childress (2002). Safety Systems Instructional Materials for Download. (<http://www.ncat.edu/~childres/teccresrs.html>)
- Vincent Childress, et.al. (2003). Activity: Black Inventors and Innovation. *The Technology Teacher*, 62(8), 7 – 10.
- Devang Mehta (2001). "Cost Estimating: The Powerful Tool." Carolina Draftsmen's Club Bulletin. February 2002.

Devang Mehta (2003). An Investigation to Determine the Cost of Differences Between Waterless Litho and Traditional Litho. *Visual Communications Journal*, 98 – 105.

Devang Mehta: (2003). An Investigation of the Perceived Financial Performance of Commercial Printing Firms for Conduction B2C Activities Using Web Technology. *Journal of Industrial Technology*, 19(2), 1-4.

### Faculty Profile:

Name	Highest Degree	Rank and Tenure	Sex	Race
Childress, V.	Ph.D.	Assoc/Tenured	M	Euro.-Amer.
Gillispie-Johnson, C.	Ph.D.	Assoc/Tenured	F	African-Amer.
Glenz, N.	Ph.D.	Prof/Tenured	F	Euro. -Amer.
Kapur, A.	Ph.D.	Assoc/Tenured	M	East Indian
Mehta, D.	D.I.T.	Assist	M	East Indian
Cobb, R.	Ph.D.	Assist	M	African-Amer.
Rhodes, C.	Ph.D.	Assist	M	African-Amer.

<i>Age Range</i>	<i>Number of Faculty</i>
20 – 30	1
30 – 40	2
40 – 50	2
50 – 60	1
60 – 70	1

### ***Graphic Communication Systems and Technological Studies Student Accomplishments***

#### Student Government Association Representatives

- 2002 - 2003 Miss A&T: Brooke Myatt
- 2002 – 2003 Mr. A&T: Derrell Young

#### Student Organization Activities

- Pyramid of Design and Drafting Society (PDDS): Hosted field trips and sponsored guest speakers
- Technical Association of the Graphic Arts (TAGA): Hosted field trips, sponsored guest speakers, and conducted student led workshops
- Technology Education Collegiate Association (TECA): Participated in regional and national competitions, placing fourth in the ITEA Live Communication Contest

**Form A**

**North Carolina A&T State University**

Department/ School Name: Graphic Communication Systems and Technological Studies

Program Name: B.S. Graphic Communication Systems

**I. 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 mastery of basic graphic communication systems and processes.
2. Demonstrate competencies in the sciences, communications, mathematics, and technical specialties essential to securing positions in related industrial, business and government careers.
3. Demonstrate ability to conduct laboratory and research projects and transfer the results in both written and oral form.
4. Demonstrate computer competencies and knowledge of procedures, materials and equipment currently employed in technical, industrial and educational fields.
5. Demonstrate readiness for careers in education, industry, business and government upon graduation.

**Form B**

**North Carolina A&T State University**

Department/ School Name: Department of Graphic Communication Systems and Technological Studies

Program Name: B. S. Graphic Communication Systems

**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.

<i>Commercially Available Tests/Surveys</i>	
1. No commercially prepared tests	

**Form C**

**North Carolina A&T State University**

Department/ School Name: Department of Graphic Communication Systems and Technological Studies

Program Name: B. S. Graphic Communication Systems

**II. Evaluation Methods**

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

<i>Locally Developed Methods</i>	
<i>Advisory Board-reviewed the curriculum and made recommendations. One hundred percent (100%) of the advisory board recommendations were implemented.</i>	
<i>Outcomes 2, 5</i>	
<i>Survey-Percentage of students employed and/or in graduate school 14% and 50% respectively. Results obtained from office of Institutional Planning and Assessment.</i>	
<i>Outcomes 2, 5</i>	
<i>Laboratory instruction – Required major courses in the curriculum. Skills are evaluated by the instructor of record with a 70% or better passing rate</i>	
<i>Outcome 3</i>	
<i>Evaluation – Passing rate of 70% or better for major courses administered by the instructor of record</i>	
<i>Outcome 1,4.</i>	

**Form D****North Carolina A&T State University**

Department/School Name: Graphic Communication Systems and Technological Studies

Program Name: B. S. Graphic Communication Systems

**III. 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 program outcome goals. Link the findings to the method used.

1. Findings from Office of Assessment, NC A&T State University indicated in the last two years of those surveyed, 50% and 14% respectively have employment upon graduation. Additional 10 to 12 percent continued in graduate school. This resulted in our redoubled effort to assist students in finding quality employment upon graduation. Some of the measures we plan to utilize in the endeavor are: support school career activities, increase opportunities for internships, help students develop skills that will facilitate finding employment, and conduct more thorough graduate and employer surveys. In addition, the Department formed partnerships with companies to place the graduates. The Department compiled a database of the companies in the area to form internship partnerships in the hope of permanent employment of graduates.
2. Findings from the Advisory Board resulted in review of curriculum courses content. Modifications were reviewed and changes were incorporated in the curriculum. Certificate in Web Development and Print Production were added to the curriculum. The description of three courses were changed – GCS 585 (Graphic Communication Production Management); GCS 636 Electronic Imaging and Distance Learning), and GCS 670 (Electronic Imaging in Graphic Communications); also GCS 636 (Web Design for Distance Education), and GCS 670 (Web Design for E-Commerce) titles were changed.

**Form A**

**North Carolina A&T State University**

Department/ School Name: Graphic Communication Systems and Technological Studies

Program Name: B.S. Technology Education

**I. 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 mastery of basic technology education, trade and industry education, and training and development for industry.
2. Demonstrate competencies in the sciences, communications, mathematics, and technical specialties essential to securing positions in related industrial, teacher education, business and government careers.
3. Demonstrate ability to conduct laboratory and research projects, and transfer the results in both written and oral form.
4. Demonstrate computer competencies and knowledge of procedures, materials and equipment currently employed in technical, industrial and educational fields.
5. Demonstrate readiness for careers in education, industry, business and government upon graduation.

**Form B**

**North Carolina A&T State University**

Department/ School Name: Department of Graphic Communication Systems and Technological Studies

Program Name: B.S. Technology Education

**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.

<i>Commercially Available Tests/Surveys</i>	
<p>1. <i>Praxis I</i> test is given at the completion of the sophomore courses. It is a test of the student's general knowledge. One hundred (100%) of students will score 85% or better on the competencies.</p> <p>Outcomes 2, 4</p>	
<p>2. <i>Praxis II</i> is taken at the completion of the students' degree. This is a test of the student professional knowledge. The students are expected to score 85% or better. Outcomes 1, 3, 5</p>	



**Form C**

**North Carolina A&T State University**

Department/ School Name: Department of Graphic Communication Systems and Technological Studies

Program Name: B. S. Technology Education

**II. Evaluation Methods**

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

<i>Locally Developed Methods</i>	
<p><i>Advisory Board – Active advisory board helped to determine and validate the curriculum. Implementation of the recommendation from the advisory board was 100%.</i></p> <p>Outcomes 1, 2</p>	<p><i>Evaluation – Passing rate of 70% or better for major courses administered by the instructor of record</i></p> <p><i>Outcomes 1, 2</i></p>
<p><i>Alumni Survey- Every other year the students are mailed a 43 – item questionnaire. Some variables/areas include: quality of instruction, appropriateness of the content/objectives, qualification of the program professor, and advisement by program professors, GPA, diversity, and discipline. Ninety-five percent (95%) of alumni surveyed responded 3.5 or better in the above areas.</i></p> <p>Outcomes 1, 3</p>	
<p><i>Exit interviews – All seniors are interviewed. The department had a 96% employment placement rate.</i></p> <p>Outcome 5</p>	
<p><i>Laboratory instruction – Required major courses in the curriculum. The instructor of record evaluated skills. Department had a 70% or better passing rate.</i></p> <p><i>Outcomes 3, 4</i></p>	

**Form D**

**North Carolina A&T State University**

Department/School Name: Graphic Communication Systems and Technological Studies

Program Name: B.S Technology Education

### **III. 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 program outcome goals. Link the findings to the method used.

1.	Findings in the alumni survey identified discipline and diversity were missing in the curriculum. This was addressed by adding a section on discipline to the methods course. Diversity in the public schools was addressed by adding a section to the methods course TECH 566, and by adding a section on diversity to the required lesson plan format.
2.	Findings from the Advisory Board resulted in a review of curriculum content. Modifications were reviewed and changed per advisory committee recommendations. TECH 637 – Industrial and Customer Relations in Graphic Communication was added to the course offerings.

**Form A****North Carolina A&T State University**

Department/ School Name: Graphic Communication Systems and Technological Studies

Program Name: M.S. Technology Education

**I. 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 mastery of basic technology education, trade and industry education, and training and development for industry, and workforce development.
2. Demonstrate competencies in organizing, directing and evaluating Technical Education programs, courses, and teaching-learning activities.
3. Demonstrate proficiencies in problem solving and research techniques in industrial, and technical education programs.
4. Demonstrate competencies in organizing, directing, and evaluating technical education programs, courses, and teaching-learning activities.
5. Demonstrate readiness for careers in education, industry, business and government upon graduation.

**Form B****North Carolina A&T State University**

Department/ School Name: Department of Graphic Communication Systems and Technological Studies

Program Name: M.S. Technology Education

**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.

<i>Commercially Available Tests/Surveys</i>	
1. No commercially prepared tests	

**Form C**

**North Carolina A&T State University**

Department/ School Name: Department of Graphic Communication Systems and Technological Studies

Program Name: M.S. Technology Education

**II. Evaluation Methods**

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

<i>Locally Developed Methods</i>	
<i>Advisory Board – Active advisory board helped to determine and validate the curriculum. Implementation of the recommendation from the advisory board was 100%.. Outcomes 1, 2</i>	
<i>Alumni Survey- Every other year the students are mailed a 43 – item questionnaire. Some variables include: development of teaching attitudes and disposition, field experiences, and program facilities. These areas had an overall rating of 3.0. Outcomes 1, 3</i>	
<i>Alumni Survey was used to review, develop and change academic programs and curricula with faculty and the accrediting agency. The department had a 96% employment placement rate Outcome 5</i>	
<i>Evaluation (Comprehensive Examination). A passing rate of 70% or better for major courses administered by the associate dean of graduate studies, School of Technology. The department had a 100% passing rate. Outcome 4</i>	

**Form D****North Carolina A&T State University**

Department/School Name: Graphic Communication Systems and Technological Studies

Program Name: M.S. Technology Education

**III. 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 program outcome goals. Link the findings to the method used.

- |   |
|---|
| 1. Findings from the Advisory Board were used to modify curriculum, purchase equipment, computer hardware, software, and engage in faculty development.   |
| 2. Findings from the Advisory Board resulted in a review of curriculum content. Modifications were reviewed and changed per advisory committee recommendations. TECH 637 – Industrial and Customer Relations in Graphic Communications was added to the course offerings. |

## Progress toward University's Mission

### Access

#### Department of Graphic Communication Systems and Technological Studies

##### Enrollment by Gender and Race 2002-2003\*

Major	Class	White		Black		Asian		Hispanic		Other		Total		Total
		F	M	F	M	F	M	F	M	F	M	F	M	
0057	MS	1	6	5								6	6	12
0075	Nfm				1								1	1
	Soph			1	1							1	1	2
	Jr		2	1	1							1	3	4
	Sn	1										1		1
0147	Ofm			1									1	1
0157	Nfm			26	25							26	25	51
	Ofm			10	24							10	24	34
0166	MS	3	8	3	1							6	9	15
<hr/>														
Total	Nfm			27	27							27	27	54
	Ofm			10	25							10	25	35
	Soph		3	31	37	2		1			1	34	41	75
	Jr		6	22	31					1		23	37	60
	Sn	2	2	22	28							24	30	54
	MS	4	14	8	1							12	15	27
	<b>Total</b>	<b>6</b>	<b>25</b>	<b>120</b>	<b>149</b>	<b>2</b>		<b>1</b>		<b>1</b>	<b>1</b>	<b>130</b>	<b>175</b>	<b>305</b>

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

Enrollment of undergraduate transfers: There were eleven transfer students 2002-2003.

## Enrollment in degree credit distance learning:

## Enrollment in Distance Learning Courses by Semester

Courses	2000 – 2001			2001 – 2002			2002 – 2003	
	Fall	Spring	Summer	Fall	Spring	Summer	Fall	Spring
Tech 566	1	11	4	4		15	12	
Tech 618		5						
Tech 619								24
Tech 626		8						
Tech 660	5					11	7	
Tech 661				5		5		
Tech 662		34	6			12		14
Tech 663	1	9	9	8	10			8
Tech 669	12	13	14	4	18	19		13
Tech 670								15
Tech 762	4							
GCS 636		18			25			18
GCS 670	26			21			14	
<b>Totals</b>	<b>49</b>	<b>98</b>	<b>33</b>	<b>42</b>	<b>53</b>	<b>62</b>	<b>33</b>	<b>92</b>

General Administration approved the online delivery of the Master of Science degree and course for licensure. The Department developed the courses and will deliver them online by the completion of spring 2004.

## Awarding of Degrees

## Number of Degrees Awarded Over Past Three Years

Years	Dec. 2000	May 2001	Dec. 2001	May 2002	Dec. 2002	May 2003
<i>Under Grad</i>						
GCS	20	29	10	27	23	30
TECH	2	2		1		3
VIE		1		1		
<i>Graduate</i>						
MSIT (Graphics)					1	1
TECH	7	1	1	1	1	5
VIE	5	2	4	4	1	5
<b>Totals</b>	<b>34</b>	<b>35</b>	<b>15</b>	<b>34</b>	<b>26</b>	<b>44</b>



## Faculty Development

### Discovery

Year	Proposals Submitted	Awards funded	Total Amount Funded
2000-2001	8	1	\$23,400
2001-2002	11	2	118,790
2002-2003	16	9 (one as copri)	143,493 (plus \$199,000 as copri)
Total amount funded			\$166,893/plus \$199,000

### Engagement (Public and Community Service)

The faculty designed, planned and implemented specific outreach activities. For example, faculty members responsible for Computer-Assisted Design and Drafting started a user group in CAD that has attracted a number of interested persons and agencies. The Department hopes to expand these types of ventures with different groups throughout the state.

The faculty also served as consultants, advisors, reviewers, etc., for a number of organizations such as the North Carolina Department of Public Instruction, school districts, National Association of Industrial Technology, North Carolina University General Administration, National Council for the Accreditation of Teacher Education, International Technology Education Association, Council of Technology Teachers, etc.

#### Community Service and Outreach Activities

Academic Year	Number of Activities
2000 – 2001	12
2001 – 2002	20
2002 – 2003	30

### Other Scholarly Activities

Scholarly Activity	2000 – 2001	2001 – 2002	2002 – 2003
Faculty Development	39	24	64
Presentations	8	4	12
Publications	11	8	12
Total	58	36	88

### **Interdisciplinary Activities**

Faculty and students in the GCSTS Department successfully led the interdisciplinary “Gillette” project in 2001-2002. Students formed “The Company” where they created a product, documented their process, and ultimately made a successful presentation to Gillette. The web site for the project is <http://www.ncat.edu/sotweb/gcsts/99999.htm>

Winston-Salem Forsythe County Schools and NC A&T SU entered into a dual enrollment agreement for the delivery of the course GCS 263 Evolution and Implications of Technology.

## **Overall Strengths of Program**

The Department has a number of strengths including the program, the faculty and the students. The Department is fully accredited in all program areas. These programs offer state of the art technologies such as computer aided drafting and design (CADD), software applications for printing and publishing (PageMaker, Illustrator, Bryce, QuarkXpress, Photoshop) computer numerically controlled devices, computer construction and networking, off-set and flexography printing, videography and multimedia. These tools help prepare students to conquer the challenges of the 21<sup>st</sup> Century workplace.

The students are an integral part of any educational program. Students accepted in Graphic Communication Systems and Technology Education 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.

The Department of Graphic Communication Systems and Technological Studies 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 both Ms. A&T Brooke Myatt and Mr. A&T Derrell Young representing the University as members from the GCSTS Department. The Department also received national recognition by being selected to host the International Graphic Arts Education Association annual conference in July 2003.

### **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**

CODE: \_\_\_\_\_

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

**SELF-STUDY QUESTIONNAIRE**

**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 department were you enrolled?**

(a). Electronics and Computer Technology	(c). Manufacturing Systems
(b). Construction Management and Safety	(d). Graphic Communications Systems & Tech. Studies
  
2. **Please indicate your degree concentration:**

(a). Electronics	(d). Graphic Communications
(b). Manufacturing Systems	(e). Not Applicable (See #3)
(c). Construction Management	
  
3. **Please indicate your degree concentration if choices in #2 were not applicable:**

(a). Occupational Safety and Health	(c). Technology Ed./Industrial Arts
(b). Vocational Industrial Ed.	(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  
 (b). Changed career direction (d). Difficulty finding employment  
 (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*

<b>16. Challenge</b>	.	.	.	.	.	.	.	.	1 2 3 4 5
<b>17. Location</b>	.	.	.	.	.	.	.	.	1 2 3 4 5
<b>18. Salary &amp; Benefits</b>	.	.	.	.	.	.	.	.	1 2 3 4 5
<b>19. Advancement Potential</b>	.	.	.	.	.	.	.	.	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. | <b>Overall technical competence, knowledge, and professionalism of Technology faculty:</b>     | . . . 1 2 3 4 5 |
| 22. | <b>Advisement and counseling provided by Technology faculty:</b>                               | . . . 1 2 3 4 5 |
| 23. | <b>Department's instructional facilities and equipment used to prepare you for employment:</b> | . . . 1 2 3 4 5 |
| 24. | <b>Quality of your education in terms of its preparation for your career:</b>                  | . . . 1 2 3 4 5 |
| 25. | <b>Adequacy of appropriate computer preparation:</b>   | . . . 1 2 3 4 5 |
| 26. | <b>Undergraduate preparation as compared to your co-workers with B.S. degrees:</b>             | . . . 1 2 3 4 5 |
| 27. | <b>Overall perception of your major department:</b>  | . . . 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. | <b>I am/was satisfied with my first job/position related to my major.</b>   | . . . 1 2 3 4 5 |
| 29. | <b>I am/was satisfied with my academic preparation for my first job/position related to my major.</b>                           | . . . 1 2 3 4 5 |
| 30. | <b>I am satisfied with my academic preparation for my current job/position.</b>   | . . . 1 2 3 4 5 |
| 31. | <b>The curriculum that I followed in college prepared me for initial employment.</b>  | . . . 1 2 3 4 5 |
| 32. | <b>The curriculum that I followed prepared me for promotion/advancement.</b>  | . . . 1 2 3 4 5 |
| 33. | <b>I would describe the quality of the Technology faculty interaction with students as extremely positive and constructive.</b> | . . . 1 2 3 4 5 |
| 34. | <b>My technical background (concentration) is essential for success in my present position.</b>                                 | . . . 1 2 3 4 5 |
| 35. | <b>Advancement and promotion for me have been satisfactory.</b>   | . . . 1 2 3 4 5 |
| 36. | <b>If I could start college all over, I would choose to graduate with the same major.</b>                                       | . . . 1 2 3 4 5 |

**37. 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? \_\_\_\_\_

**38. What is your present employment?**

Job Title: \_\_\_\_\_ Company name: \_\_\_\_\_

Job Duties: \_\_\_\_\_

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

\_\_\_\_\_

**40. Which courses were the least useful?**

\_\_\_\_\_

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

\_\_\_\_\_

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

\_\_\_\_\_

**43. 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 .....1 2 3 4 5 NA  
to co-workers with B.S. degrees
- 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 .....1 2 3 4 5 NA  
other employees with similar job related  
responsibilities
- 6. Potential for professional advancement with .....1 2 3 4 5 NA  
the company

**(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

	<b>PREPARATION</b>		<b>IMPORTANCE</b>	
	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.

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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.

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### Summary Report for the Technology Education Program Survey for 2001 - 2002

The alumni responding to this survey, sent out in the spring semester of the 2001 – 2002 academic year, know this program as the Technology Education and Vocational-Industrial Education program. It consisted of two BS and MS degrees respectively. However, since these respondents began matriculating through the program, the name of the program was changed and the degrees combined into one BS degree and one MS degree, each named Technology Education, and each with the following concentrations:

- Technology Education, Teaching
- Trade and Industrial Education, Teaching
- Training and Development for Industry (non-licensure)
- Workforce Development Director (MS only)

**Respondents:** 6 graduated undergraduate students.  
3 graduated graduate students.

It should be noted that students responding to this survey could have been enrolled here as far back as 1996

Item 4: When asked if he or she attempted to take the PPST or Praxis I test:

Yes: 4 bachelor's

No: 2 bachelor's

Yes: 2 master's

No: 1 master's

Item 5: When asked if he or she passed the PPST or Praxis I:

Yes: 3 bachelor's

No: 1 bachelor's

Yes: 2 master's

No: 0 master's

Item 6: When asked if he or she was admitted to Teacher Education:

Yes: 4 bachelor's degree

No: 0 bachelor's degree

Yes: 1 master's degree

No: 0 master's degree

Item 7: Of the bachelor's degree respondents, when asked which early field experiences the student participated in:

3 participated in TECH 211/218 20 hour earliest field experience.

2 participated in CUIN 301 the course which replaced TECH 211/218 for the 20 hour earliest field experience.

4 participated in CUIN 400 the course in which the middle 40 hour field experience is offered.

5 participated in TECH 566 the methods course 60 hour internship.

Item 8: When asked if he or she student taught in the public schools:

Yes: 3 bachelor's degree

No: 1 bachelor's degree

Yes: 0 master's degree

No: 1 master's degree

Item 9: When asked if he or she became a teacher or continued teaching after graduating:

Yes: 6 bachelor's degree

No: 0 bachelor's degree

Yes: 3 master's degree

No: 0 master's degree

Item 10: When asked if he or she is still teaching:

Yes: 6 bachelor's degree

No: 0 bachelor's degree

Yes: 3 master's degree

No: 0 master's degree

Item 11: When asked if he or she passed the Praxis II (not required of VIE majors):

Yes: 6 bachelor's degree

No: 0 bachelor's degree

Yes: 2 master's degree

No: 1 master's degree

Reported Scores

580 bachelor's Passed

580 bachelor's Passed

670 bachelor's Passed

620 master's Passed

Item 12: When asked if he or she felt prepared to teach after graduating:

Yes: 4 bachelor's degree

No: 1 bachelor's degree

Yes: 3 master's degree

No: 0 master's degree

Item 13 is not applicable to these respondents.

Item 14: For those not admitted to Teacher Education, when asked why he or she failed to attempt or did not pass PPST or Praxis I:

Summarized comments

1 bachelor's – I passed, but it took longer to pass Praxis II than it did to pass Praxis I.

1 bachelor's – It is a double standard; other majors do not have to take it.

Item 15: When asked what the program could do to better prepare him or her for public school teaching:

Summarized comments

1 bachelor's - More internships.

2 bachelor's - More discipline management instruction

1 bachelor's – Add a Praxis I preparation course (CUIN 102 was added for exactly this purpose.)

1 bachelor's - More lesson plans developed and collected.

1 bachelor's and 1 master's – More curriculum development.

1 master's – Prepare better for the Praxis II in Workforce Development Director. (We added that concentration in order to focus the course work on the directorship and passing Praxis II test 410/administration.)

1 master's – No changes.

Item 16: When asked what experiences or courses prepared him or her well:

Summarized comments

1 bachelor's – All courses helped me.

2 bachelor's– Technology Education Teaching Methods

1 bachelor's and 1 master's – Curriculum development class

1 bachelor's – Classroom organization

Item 16: When asked what experiences or courses prepared him or her poorly:

Summarized comments

1 bachelor's– None

1 bachelor's – Test & Measurement and Educational Psychology (These are not taught by our department.)

Items 18 through 21: No responses were provided; only non-teaching graduates were to respond to these items. (It is not unusual for one of these graduates to go into private industry instead of teaching.)

Items 22 through 43: Respondents were asked to rate the program of the listed characteristics. The Likert type rating scale was 1 means poor and 5 means superior. Means for bachelor's degree student respondents and for master's degree student respondents are indicated beside each item.

Please note that items 36, 37, and 41 are directly related to the Conceptual Framework of the Teacher Education unit: DART – Diversity, Assessment, Reflection, and Technology.

Please note further that:

Item 27 rates teaching methods

Item 31 rates professor feedback

Item 40 rates content-pedagogy

Item 43 is the overall rating of the program

**1 means poor and 5 means superior.**

	<b>Rate the:</b>	<b>Mean Bachelor's</b>	<b>Mean Master's</b>
22.	Quality of instruction in the program.	4.6	3.6
23.	Appropriateness of the content/objectives.	4.8	3.6
24.	Qualification of the program professors.	4.8	4
25.	Advisement by program professors.	4.8	4.6
26.	Program facilities.	4.6	3
<b>27.</b>	<b>Teaching of technology teaching methods.</b>	<b>4.8</b>	<b>3.3</b>
28.	Teaching of the facilities management.	4.8	3.3
29.	Teaching of safety management.	4.8	4
30.	Teaching of discipline and classroom management.	3	3.3
<b>31.</b>	<b>Professor's evaluation of your performance.</b>	<b>4.8</b>	<b>4</b>
32.	Experiences for providing ideas for learning activities.	4.8	3.3
33.	Teaching of instructional planning.	4.5	3
34.	Field experiences.	4.1	2.3
35.	Student-teaching.	4.25	n/a
<b>36.</b>	<b>Student's preparation to use computer and instructional technology for teaching purposes.</b>	<b>4.6</b>	<b>3</b>
<b>37.</b>	<b>Faculty's encouragement of you to evaluate and reflect on your own learning and teaching.</b>	<b>4.6</b>	<b>3.6</b>
38.	Encouragement of your participation in professional activities like TECA, TSA or VICA.	4.8	4
39.	Teaching of professionalism, professional history, and educational philosophy.	4.6	4
<b>40.</b>	<b>Preparation in the systems of technology or technology content. (Technology Education majors only)</b>	<b>4.8</b>	<b>4</b>
<b>41.</b>	<b>Extent to which you were taught about diversity.</b>	<b>3.5</b>	<b>2.6</b>
42.	Program on the development of your teaching attitudes and dispositions.	4.3	3.3
<b>43.</b>	<b>Technology Education of VIE program overall.</b>	<b>4.5</b>	<b>3.6</b>

The undergraduate program appears to need no improvements based on the Likert type rating scale above. However, the master's degree program could improve in the areas in which it scored more closely to 3.0 (average). These areas are:

- Discipline and classroom management. (This was addressed by adding a section on discipline to the methods course TECH 566)
- Diversity in the Public Schools. (This was addressed by adding a section to the methods course TECH 566 and by adding a section on diversity to the required lesson plan format.)

Finally, when asked to write any additional comments:

1 bachelor's – Technology Education in the public schools is considered a dumping ground by the principal.

1 master's – More hands-on activity ideas. (In the newly proposed MAT all students will have to take activity based courses like the systems courses. At the master's level, only technology education majors have to take them, but Trade and Industrial Education teachers do not.