NORTH CAROLINA A&T STATE UNIVERSITY

TEACHER EDUCATION PROGRAMS

"Professional Educator: Catalyst for Learning"

SPECIALTY AREA REPORT

Technology Education (BS; A License)
Trade and Industrial Education (BS; A License)
Technology Education (MS; M License)
Trade and Industrial Education (MS; M License)
Workforce Development Director (MS; M Add-On License)

NORTH CAROLINA DEPARTMENT OF PUBLIC INSTRUCTION
Program Area Review
March 10 - 14, 2007

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Trade and Industrial Education (BS; A License)
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Specialty Area Report

PROGRAM CAPACITY

Technology Education (BS)
Trade and Industrial Education (BS)
Technology Education (MS)
Trade and Industrial Education (MS)
Workforce Development Director (MS)
Specialty Area Report

Program Overview

Levels Offered

The Department of Graphic Communication Systems and Technological Studies (GCSTS) offers the Bachelor of Science Degree in Technology Education with the following concentrations related to licensure:

- Technology Education, Teaching (licensure area 820)
- Trade and Industrial Education, Teaching (licensure area 740XX)

These concentrations are licensure programs designed to meet the North Carolina licensure requirements for teaching all courses within, respectively, the Technology Education (820 license) program area and the Trade and Industrial Education (740XX license) (T&I) program area. Trade and Industrial Education licensure is granted in a specific trade area, and the license is specific to teaching courses within that trade area. These licensure programs lead to the A license.

The Department also offers the Master of Science Degree in Technology Education with the following concentrations related to licensure:

- Technology Education, Teaching (licensure area 820)
- Trade and Industrial Education, Teaching (licensure area 740XX)
- Workforce Development Director (add-on licensure area 711)

It is important to note that no Form V's have been completed for Workforce Development Director, and while there are students in the pipeline, none has yet to graduate. We have had students complete coursework needed to clear Provisional 35 licenses for this area, but this does not require Form V.

These degrees meet the advanced competencies as mandated by the North Carolina Excellent Schools Act for master-level teacher education programs. These licensure programs lead to the M license.

Special Characteristics

All concentrations in the M.S. Technology Education degree are official UNC online programs. Therefore, lateral entry, provisional 35, and licensure-only students pursue their licenses online also. Several undergraduate courses have sections that are offered online. This was done as an agreement with the North Carolina Department of Public Instruction's (DPI's) Rebecca Payne in order to serve the State's Technology Education and T&I teachers who are not able to drive to

campus. The data support our high quality programs.

Programs of Study

The B.S. programs in Technology Education require completion of 127-129 credit hours, comprising 25 credit hours within the University Studies curriculum; 19 credit hours in English, mathematics, natural science elective, and physics; 24 credit hours within the College of Education, including student teaching; 36 credit hours within the program area, which include methods, content-pedagogy, lab management and safety, and curriculum development; 18 credit hours within the state-mandated Second Academic Concentration, which includes industrial technology courses for extra content mastery; and 6 credit hours free electives. The program of study for Technology Education is detailed in Figure 1. The program of study for Trade and Industrial Education is detailed in Figure 2.

Since the last NC DPI team visit, there have been a number of changes made to the program. The Second Academic Concentration (SAC) was reduced from 24 semester hours to 18 semester hours as allowed by UNC-General Administration. The program also designed a new SAC that has great overlap with the program curriculum, and now most majors take the new SAC called Integrated Technologies. The University recently implemented its new integrated University Studies program, which replaces the previous general education core. Because of these new courses which had to be added to all undergraduate programs of study, the program coordinators had to redesign the program curricula. However, they still kept in place high levels of mathematics and science. In addition, because of feedback from alumni surveys, all concentrations now require the four “systems” classes in order to gain classroom activity ideas which were not being taught in industrial technology service courses outside of the programs to the extent desired. These classes are preparing T&I students well for real-life on-the-job activities, but the teachers wanted something a little more, like lead-in activities, review activities, and short activities that “relate” to the trade area. This is true for both the undergraduate and graduate levels. Undergraduates take the introductory version and graduates take the graduate equivalent. Since the last visit, the entire graduate program has become an official UNC online program and most of the major courses at the undergraduate level are offered online or as essentially web-assisted courses. Because of a new standard on families being added by NC DPI, several courses have been modified in order to teach students, interns, and student teachers how to interact and work with families and the community. Because NC DPI also changed the rule on field experiences and student teaching being served at each level that the candidate will be licensed to teach, the program, in cooperation with the unit’s office of Internships and Student Teaching, has devised a tracking system for making sure that candidates serve an internship/student teaching at all levels for which they will be qualified to teach. Because of findings during program evaluation, the program has revised two courses in which ethics education is being emphasized more than in the past. The undergraduate course sequence on design has been revised by Dr. Rhodes in order to better reflect engineering design. This has come about based on his and Dr. Childress’ participation in the National Center for Engineering and Technology Education’s reform of the teacher education curriculum and their participation with NC DPI’s current revision of the standard course of study for Technology Education for the public schools. Since the last NC DPI visit, the Department took the two teacher education degrees, Technology Education and Vocational Industrial Education, which housed the licensure

areas of technology education, trade and industrial education, and workforce development director and combined them into one degree. This one degree, Technology Education, now has three concentrations at the undergraduate level: Technology Education, Teaching; Trade and Industrial Education, Teaching; and Training and Development for Industry, Non-Licensure. The graduate degree, Technology Education, has the following concentrations: Technology Education, Teaching; Trade and Industrial Education, Teaching; Workforce Development Director, and Training and Development for Industry, Non-Licensure. This has allowed the program to show increased program productivity (increased enrollment and graduation rates) while the two former degrees required the same resources as the one new degree. This also allows the UNC system to count the non-licensure students in the counts for the undergraduate and graduate programs. Finally, since TECH 767, Literature and Research in Technological Education (a required course), teaches essentially the same knowledge, skills, and dispositions as CUIN 711, Educational Research (an originally specified professional course); and since CUIN 711 (or any other course in the professional education group for the advanced master's) does not actually require students to carry out their research study, which they designed in the course; and since TECH 768 (a required course) does require this, TECH 711 was dropped from the professional courses for the master's programs in Technology Education and was replaced with INST 7XX (any instructional technology elective at the 700 level). Thus the advanced candidate is provided with a thorough research experience and exposure to instruction technology and instructional design.

Figure 1: Technology Education, Teaching Undergraduate Program of Study by Category.

University Studies: 25		
GCS 100 / UNST 100	1	University Experience
UNST 110	3	Critical Writing
UNST 120	3	The Contemporary World
UNST 130	3	Analytical Reasoning
UNST 140	3	African American Experience
UNST Elective[1]	3	
UNST Elective[1]	3	
UNST Elective[1]	3	
UNST Elective[1]	3	
General Education Courses Required Beyond University Studies: 19		
MATH 111	4	College Algebra and Trigonometry
MATH 112	4	Calculus for Non-Math Majors
ENGL 101	3	Ideas and Their Expressions II
PHYS 225	3	College Physics I
PHYS 235	1	Physics Lab
Natural Science Elective	4	Natural Science Elective must include a lab.
[1]University Studies Cluster: Must choose one cluster and take UNST courses only in that cluster for all UNST Electives.		
Professional Education Core Courses or Courses within the School of Education: 24		
CUIN 102	2	Introduction to Teacher Education I
HPER 200	2	Personal Health
CUIN 301	2	Philosophy and Social Foundations of Education
SPEC 350	3	Introduction to Exceptional Children
CUIN 400	3	Psychological Foundations of Education, Growth, and Devel
CUIN 436	3	Classroom Assessment and Evaluation
CUIN 560***	6	Student Teaching
CUIN 624	3	Teaching Reading in the Secondary School
***Capstone course for the curriculum.		
Program Area Courses for Technology Education, Teaching: 6		
GCS 133	3	Introduction to Drafting
Technical Elective**	3	
** Any course in Technology.		
Program Area Content-Pedagogy Courses: 21		
TECH 218	3	Introduction to Technology
TECH 219	3	Production Systems
TECH 382	3	Computer Applications
TECH 412	3	Introduction to Construction Systems
TECH 413	3	Introduction to Manufacturing Systems
TECH 414	3	Introduction to Communication Systems
TECH 415	3	Introduction to Transportation Systems
Program Area Courses in the Professional Education Core: 9		
TECH 462	3	Organization and Management of Technological Education
TECH 566	3	Industrial Education Teaching Methods
TECH 662/672	3	Course Construction/Curriculum Development
Second Academic Concentration (most selected concentration Interdisciplinary Technology): 18		
GCS 234 (SAC*)	3	Computer Aided Design
GCS 110 (SAC*)	3	Designing for Graphic Communication
MFG 293 (SAC*)	3	Power and Energy
ECT 299 (SAC*)	3	Basic Electricity and Electronics
GCS 263 (SAC*)	3	Evolution and Social Implications of Technology
MFG 472 (SAC*)	3	Computer Numerical Controlled Machining
*Second Academic Concentration, Interdisciplinary Technology. If another SAC is preferred, then the student must consult with the advisor.		
Free Electives: 6		
Free Elective	3	
Free Elective	3	
Colloquia (orientation and retention management): 1		
GCS 101	0	Freshman Colloquium I
GCS 102	0	Freshman Colloquium II
GCS 203	0	Sophomore Colloquium I
GCS 204	0	Sophomore Colloquium II
GCS 500	1	Senior Siminar
Total	**129**	

Figure 2: Trade & Industrial Education, Teaching Undergraduate Program by Category.

University Studies: 25		
GCS 100 / UNST 100	1	University Experience
UNST 110	3	Critical Writing
UNST 120	3	The Contemporary World
UNST 130	3	Analytical Reasoning
UNST 140	3	African American Experience
UNST Elective[1]	3	
UNST Elective[1]	3	
UNST Elective[1]	3	
UNST Elective[1]	3	
General Education Courses Required Beyond University Studies: 12		
MATH 111	4	College Algebra and Trigonometry
MATH 112	4	Calculus for Non-Math Majors
PHYS 225	3	College Physics I
PHYS 235	1	Physics Lab
[1]University Studies Cluster: Must choose one cluster and take UNST courses only in that cluster for all UNST Electives.		
Professional Education Core Courses or Courses within the School of Education: 24		
CUIN 102	2	Introduction to Teacher Education I
HPER 200	2	Personal Health
CUIN 301	2	Philosophy and Social Foundations of Education
SPEC 350	3	Introduction to Exceptional Children
CUIN 400	3	Psychological Foundations of Education, Growth, and Devel
CUIN 436	3	Classroom Assessment and Evaluation
CUIN 560***	6	Student Teaching
CUIN 624	3	Teaching Reading in the Secondary School
***Capstone course for the curriculum.		
Program Area Courses for Content Only: 3		
GCS 133	3	Introduction to Drafting
Program Area Courses for Content-Pedagogy: 21		
TECH 218	3	Introduction to Technology
TECH 219	3	Production Systems
TECH 382	3	Computer Applications
TECH 412	3	Introduction to Construction Systems
TECH 413	3	Introduction to Manufacturing Systems
TECH 414	3	Introduction to Communication Systems
TECH 415	3	Introduction to Transportation Systems
Program Area Courses in the Professional Education Core: 9		
TECH 462	3	Organization and Management of Technological Education
TECH 566	3	Industrial Education Teaching Methods
TECH 662/672	3	Course Construction/Curriculum Development
Selected Technical Specialty: 15		
Selected Technical Spec****	3	
Selected Technical Spec****	3	
Selected Technical Spec****	3	
Selected Technical Spec****	3	
Selected Technical Spec****	3	
*Second Academic Concentration, Interdisciplinary Technology. If another SAC is preferred, then the student must consult with the advisor.		
Second Academic Concentration (most selected concentration Interdisciplinary Technology): 18		
GCS 234 (SAC*)	3	Computer Aided Design
GCS 110 (SAC*)	3	Designing for Graphic Communication
MFG 293 (SAC*)	3	Power and Energy
ECT 299 (SAC*)	3	Basic Electricity and Electronics
GCS 263 (SAC*)	3	Evolution and Social Implications of Technology
MFG 472 (SAC*)	3	Computer Numerical Controlled Machining
*Second Academic Concentration, Interdisciplinary Technology. If another SAC is preferred, then the student must consult with the advisor.		
Colloquia (orientation and retention management): 1		
GCS 101	0	Freshman Colloquium I
GCS 102	0	Freshman Colloquium II
GCS 203	0	Sophomore Colloquium I
GCS 204	0	Sophomore Colloquium II
GCS 500	1	Senior Seminar
Total	**128**	

****** Selected Technical Specialties**

Construction Industries:
GCS 334, GCS 434, CM 215, CM 216, CM 317, CM 333, CM 412, CM 598

Computer-Aided Drafting/Design Industries:
GCS 333, GCS 334, GCS 433, GCS 434, GCS 435, GCS 533, GCS 534, GCS 536, GCS 631, GCS 632, GCS 633, GCS 644

Electronic Industries:
GCS 333, ECT 211, ECT 212, ECT 213, ECT 312, ECT 350, ECT 313, ECT 413, ECT 650

Manufacturing Industries:
MFG 191, MFG 472, MFG 474, MFG 475, MFG 480, MFG 481, MFG 491, MFG 495, MFG 596

Transportation Industries:
MFG 251, MFG 255, MFG 275, MFG 452, MFG 456, MFG 496

Printing and Publishing Industries:
GCS 120, GCS 130, GCS 250, GCS 330, GCS 331, GCS 332, GCS 416, GCS 418, GCS 430, GCS 581, GCS 585, GCS 590, GCS 601, GCS 635, GCS 636, GCS 636, GCS 670

Service Industries: as approved by advisor

The M.S. in Technology Education is a 39-hour, thesis-optional program of study. Individuals who are not licensed to teach may not be admitted to the master's program; they must qualify for an A license prior to admission to the program. The program is designed to meet the requirements for M licensure in North Carolina as mandated by the North Carolina Excellent Schools Act for master-level teacher education programs. The program checksheet is shown in Figure 3.

Figure 3: Master of Science Degree Program of Study for Technology Education, Teaching

Professional Education Courses: 12 Credit Hours		Credits
CUIN 619	Learning Theories	3
CUIN 721	Advanced Methods	3
INST 7XX	Instructional Technology Elective	3
CUIN 729	Diversity Issues in Public schools	3
Required Courses: 15 Credit Hours		
TECH 662/672	Technological Education Course Construction/Curriculum Development	3
TECH 762	Evaluation of Technological Education Programs	3
TECH 767	Research and Literature in Technological Education (includes research project design)	3
*TECH 717 or 718	Special Problems I/II (Products of Teaching Portfolio)	3
TECH 768	Technological Seminar (carry out research project)	3
**TECH 788	Comprehensive Final Exam	0
Concentration Courses: 12 Credit Hours		
TECH 6XX or 7XX	Specialty Course Elective	3
TECH 6XX or 7XX	Specialty Course Elective	3
TECH 6XX or 7XX	Specialty Course Elective	3
TECH 6XX or 7XX	Specialty Course Elective	3
*Portfolio	You must pass the portfolio requirement.	

* All majors must pass a Products of Teaching portfolio due the last full month of the semester in which you graduate. TECH 717 or 718 helps the student establish the portfolio.

** It is the student's responsibility to enroll in TECH 788, Comprehensive Final Exam for the semester in which he or she intends to graduate.

- All students must be qualified for a Class A, continuing teaching license in order to be admitted to the master's program; does not apply to Training.
- It is the student's responsibility to APPLY FOR GRADUATION through the School of Graduate Studies before the deadline posted on the University Calendar in the semester in which he or she intends to graduate.
- Pass Praxis II, Test 0050 with score of 580 if Technology Education, Teaching major.
- You must possess or qualify for the Class A teaching license in order to be admitted to and graduate from the master's program in Technology Education, Teaching or in Trade & Industrial Education, Teaching. Not required from Training and Development for Industry.
- You must get admitted to Teacher Education after your first 9 semester hours.

Specialty Course Electives

TECH 618 Technological Education for Special Needs Students
TECH 619 Construction Systems for Technological Education
TECH 620 Manufacturing Systems for Technological Education
TECH 621 Communication Systems for Technological Education
TECH 622 Transportation Systems for Technological Education
TECH 623 Research and Development in Technological Education
TECH 626 Curriculum Modification in Technological Education for Special Needs Populations
TECH 664 Occupational Exploration for Middle Grades
TECH 665 Middle Grades Industrial Laboratory
TECH 669 Safety in the Instructional Environment of Technological Education
TECH 682 Computer Applications for Education and Industrial Training
TECH 715 Advanced Research and Development Practices for Technological Education
TECH 717 Special Problems I
TECH 718 Special Problems II
GCS 601 Advanced Flexography
GCS 630 Multimedia and Videography
GCS 631 Advanced Computer Aided Design
GCS 632 Graphic Animation
GCS 634 Advanced Multimedia and Videography
GCS 635 Advanced Principles of Graphic Communications Technology
GCS 636 Electronic Imaging and Distance learning
GCS 638 CADD Management
GCS 641 Architectural Animation and Rendering
GCS 670 Electronic Imaging and Graphic Communication
GCS 719 Seminar in Computer Aided Drafting and Design

Figure 4: Master of Science Degree Program of Study for Trade and Industrial Education, Teaching

Professional Education Courses: 12 Credit Hours		Credits.
CUIN 619	Learning Theories	3
CUIN 721	Advanced Methods	3
INST 7XX	Instructional Technology Elective	3
CUIN 729	Diversity Issues in Public schools	3
Required Courses: 15 Credit Hours		
TECH 662/672	Technological Education Course Construction/Curriculum Development	3
TECH 762	Evaluation of Technological Education Programs	3
TECH 767	Research and Literature in Technological Education (includes research project design)	3
*TECH 717 or 718	Special Problems I/II (Products of Teaching Portfolio)	3
TECH 768	Technological Seminar (carry out research project)	3
**TECH 788	Comprehensive Final Exam	0
Concentration Courses: 12 Credit Hours		
TECH 6XX or 7XX	Specialty Course Elective	3
TECH 6XX or 7XX	Specialty Course Elective	3
TECH 6XX or 7XX	Specialty Course Elective	3
TECH 6XX or 7XX	Specialty Course Elective	3
*Portfolio	You must pass the portfolio requirement.	-
Total		39

* All majors must pass a Products of Teaching portfolio due the last full month of the semester in which you graduate. TECH 717 or 718 helps the student establish the portfolio.

** It is the student's responsibility to enroll in TECH 788, Comprehensive Final Exam for the semester in which he or she intends to graduate.

- All students must be qualified for a Class A, continuing teaching license in order to be admitted to the master's program; does not apply to Training.
- It is the student's responsibility to APPLY FOR GRADUATION through the School of Graduate Studies before the deadline posted on the University Calendar in the semester in which he or she intends to graduate.
- Pass Praxis II, Test 0050 if a Technology Education, Teaching major. Not required for T&I or Training
- You must possess or qualify for the Class A teaching license in order to be admitted to and graduate from the master's program in Technology Education, Teaching or in Trade & Industrial Education, Teaching. Not required from Training and Development for Industry.
- You must get admitted to Teacher Education after your first 9 semester hours.

Specialty Course Electives

GCS 601 Advanced Flexography
GCS 610 Internship in Industry I
GCS 611 Internship in Industry II
GCS 630 Multimedia and Videography
GCS 631 Advanced Computer Aided Design
GCS 632 Graphic Animation
GCS 633 Advanced Machine Design and Drafting
GCS 634 Advanced Multimedia and Videography
GCS 635 Advanced Principles of Graphic Communications Technology
GCS 636 Electronic Imaging and Distance learning
GCS 638 CADD Management
GCS 641 Architectural Animation and Rendering
GCS 644 Advanced Architectural Drafting and Design
GCS 670 Electronic Imaging and Graphic Communication
GCS 719 Seminar in Computer Aided Drafting and Design
GCS 731 Advanced Graphic Techniques
TECH 660 Career Development and Work-based Learning
TECH 661 Workforce Development Program Planning and Management
TECH 663 History and Philosophy of Technological Education
TECH 664 Occupational Exploration for Middle Grades
TECH 665 Middle Grades Industrial Laboratory
TECH 669 Safety in the Instructional Environment of Technological Education
TECH 670 Introduction to Workplace Training and Development
TECH 671 Methods and Techniques of Workplace Training and Development
TECH 682 Computer Applications for Education and Industrial Training
TECH 717 Special Problems I
TECH 718 special Problems II
CUIN 605 Concepts in Career Education

Figure 5: Master of Science Degree Program for Workforce Development Director

Professional Education Courses: 12 Credit Hours		Credits
CUIN 619	Learning Theories	3
CUIN 721	Advanced Methods	3
INST 7XX	Instructional Technology Elective	3
CUIN 729	Diversity Issues in Public schools	3
Required Courses: 15 Credit Hours		
TECH 662/672	*Technological Education Course Construction/Curriculum Development*	*3*
TECH 762	*Evaluation of Technological Education Programs*	*3*
TECH 767	Research and Literature in Technological Education (includes research project design)	3
*TECH 717 or 718	Special Problems I/II (Products of Teaching Portfolio)	3
TECH 768	Technological Seminar (carry out research project)	3
**TECH 788	Comprehensive Final Exam	0
Concentration Courses: 12 Credit Hours		
TECH 660	*Career Development and Work-based Learning*	3
TECH 661	*Workforce Development Program Planning and Management*	3
TECH 764	*Administration and Supervision of Technological Education*	3
TECH 6XX or 7XX	Specialty Course Elective	3
*Portfolio	You must pass the portfolio requirement.	-
***DPI Internship	Must complete NCDPI one year admin internship.	-
Total		39

* All majors must pass a Products of Teaching portfolio due the last full month of the semester in which you graduate. TECH 717 or 718 helps the student establish the portfolio.

** It is the student's responsibility to enroll in TECH 788, Comprehensive Final Exam for the semester in which he or she intends to graduate.

***Contact DPI and your local supervisor to arrange the official one-year administrative internship.

- All students must be qualified for a Class A, continuing teaching license in order to be admitted to the master's program; does not apply to Training.
- It is the student's responsibility to APPLY FOR GRADUATION through the School of Graduate Studies before the deadline posted on the University Calendar in the semester in which he or she intends to graduate.
- Pass Praxis II, Test 0410 with a score of 590 if a Workforce Development Director major. Not required for T&I or Training.
- You must possess or qualify for the Class A teaching license in order to be admitted to and graduate from the master's program in Technology Education, Teaching or in Trade & Industrial Education, Teaching or Workforce Development Director. Not required for Training and Development for Industry.
- You must get admitted to Teacher Education after your first 9 semester hours.

Specialty Course Electives

GCS 601 Advanced Flexography
GCS 610 Internship in Industry I
GCS 611 Internship in Industry II
GCS 630 Multimedia and Videography
GCS 631 Advanced Computer Aided Design
GCS 632 Graphic Animation
GCS 633 Advanced Machine Design and Drafting
GCS 634 Advanced Multimedia and Videography
GCS 635 Advanced Principles of Graphic Communications Technology
GCS 636 Electronic Imaging and Distance learning
GCS 638 CADD Management
GCS 641 Architectural Animation and Rendering
GCS 644 Advanced Architectural Drafting and Design
GCS 670 Electronic Imaging and Graphic Communication
GCS 719 Seminar in Computer Aided Drafting and Design
GCS 731 Advanced Graphic Techniques
TECH 660 Career Development and Work-based Learning
TECH 661 Workforce Development Program Planning and Management
TECH 663 History and Philosophy of Technological Education
TECH 664 Occupational Exploration for Middle Grades
TECH 665 Middle Grades Industrial Laboratory
TECH 669 Safety in the Instructional Environment of Technological Education
TECH 670 Introduction to Workplace Training and Development
TECH 671 Methods and Techniques of Workplace Training and Development
TECH 682 Computer Applications for Education and Industrial Training
TECH 717 Special Problems I
TECH 718 Special Problems II
TECH 764 Administration and Supervision of Technological Education
CUIN 605 Concepts in Career Education

Program Coordinators

The undergraduate coordinator for the Technology Education and Trade & Industrial Education licensure programs is Dr. Craig Rhodes. The graduate coordinator for the programs is Dr. Vincent Childress.

Individuals Full-time to the Institution Licensed in and Involved with the Program Area

Dr. Craig Rhodes has been undergraduate coordinator since 2003. He is licensed in Technology Education and taught at the high school level before pursuing his Ph.D. at the University of Minnesota in Technology Education. He advises all of the undergraduate students in the programs, is in charge of facilitating the programs' advisory committee, and maintaining Lab 103 Price Hall. Dr. Vincent Childress has been the graduate coordinator since 2003. He is licensed in Technology Education and Workforce Development Director. He taught at the middle school level before pursuing his Ph.D. in Technology Education at Virginia Tech. Before becoming graduate coordinator, he was the undergraduate coordinator at the time of the last NC DPI team visit. Together with the rest of the Department of GCSTS, the advisory committee, and students, they review the program twice per year, maintain and design the program curricula, participate in department, school, and university committees that influence the programs, and both participate in the Teacher Education Council in the School of Education. The department chairperson, Dr. Cynthia Gillispie-Johnson also participates in the Teacher Education Council.

Aggregated Praxis Pass Rates

There is not a Praxis II test required for Trade and Industrial Education. However the pass rates for the undergraduates and voluntarily reported Praxis II pass rates for licensure-only, provisional 35, and lateral entry teachers are also reported for Technology Education. The Work force Development Director license also requires a Praxis II test but no lateral nor M.S. students have matriculated to completion through the program.

Figure 6: Aggregated Praxis II Pass Rates for the Tech Ed Specialty Area Since Last Visit

	2005-2006*			2004-2005		2003-2004		2002-2003	
Test Name	Students Taking Exam	Percent-age Passing 1st Try	Percent-age Passing 2nd Try	Students Taking Exam	Percent- age Passing	Students Taking Exam	Percent- age Passing	Students Taking Exam	Percent-age Passing
Tech Ed Undergrad	2	50	100	0		0		3	100
Alternatively Licensed**	9	90		9	100	7	100	4	100
Unit Summary	-	-	100	-	100	-	100	-	93

Unit Praxis II Pass Data Needed

* There is no specialty area Praxis II or other exam required for Trade and Industrial Education.

** Alternatively Licensed Praxis II scores were reported to the program on a voluntary basis. Data is based only on Praxis II reports provided by the students.

Number of Program Completers Since Last Visit, 2002

In this section, program completers are those students who were admitted to Teacher Education, graduated, and earned a teaching license. The numbers for Alternatively Licensed teachers do not include the Provisional 35 enrollment, which is a category of alternative license that does not require that a Form V be submitted to NC DPI's Licensure Section. Alternatively Licensed teachers for licensure-only and lateral entry are the only students included in the numbers in Figures 7 and 8.

Figure 7: Program Completers

Technology Education, Teaching					
Program Level	2002-2003	2003-2004	2004-2005	2005-2006	Totals
Undergraduate	3	0	0	1	4
Graduate	6	4	4	4	18
Alternatively	0	4	6	11	21
Trade and Industrial Education, Teaching					
Undergraduate	0	0	1	1	2
Graduate	3	0	1	1	5
Alternatively	0	0	3	4	7
Workforce Development Director					
Graduate	0	0	0	0	0
Alternatively	0	0	0	0	0
Totals:	12	8	15	22	57

Number of Candidates Currently Enrolled in the Program, Fall 2005

Candidates are those students who have been admitted to Teacher Education. In this section only candidates are included. At the master of science, it means any teacher duly admitted to the program.

Figure 8: Candidates Currently Enrolled

Program Level	Academic Year	Admitted & Enrolled
Technology Education Degree Seekers		
Undergraduate	2005-2006	5
Graduate	2005-2006	9
Alternatively Licensed	2005-2006	20
Trade and Industrial Education Degree Seekers		
Undergraduate	2005-2006	2
Graduate	2005-2006	1
Alternatively Licensed	2005-2006	6
Workforce Development Director		
Graduate	2005-2006	2
Alternatively Licensed	2005-2006	1

Enrollment Trends in the Technology Education Program

The tables above, Figures 7 and 8, show that at the undergraduate level, very few students want to pursue teaching as a career and do not seek licensure. When compared to the table below in

Figure 9, it becomes clear that many students change majors from the teaching/licensure option to the non-licensure option, which is called the Training and Development for Industry concentration. This concentration exists at both the undergraduate and graduate levels. These concentrations provide excellent productivity for the program at the graduate level and tend to produce enough enrollment and matriculation at the undergraduate level to keep the program viable. This is because all three concentrations, Technology Education, Teaching; Trade and Industrial Education, Teaching; and Training and Development for Industry are all clustered under the same degree, Technology Education. The levels of enrollment regarding those students seeking licenses has remained fairly level, but what has increased has been the number of students seeking the non-licensure options.

Furthermore, it is interesting to note that the level of lateral entry, Provisional 35, and licensure-only students has remained fairly level over time. This enrollment is referred to below in Figure 9 as Alternative Licensure. The program is not currently receiving program productivity credit for these students. Now, however, we have started a new degree, the Master of Art in Teaching degree for Technology Education and Trade and Industrial Education. No students have matriculated to program completion, however, so this degree program leading to licensure is not under review for this NC DPI team visit. Nevertheless, while certification only students do not have to pursue this degree, they are beginning to take advantage of it. The numbers of Alternative Licensure students shown in the table below should start to fall and the numbers on the MAT should start to rise.

Figure 9: Plain Enrollment in the Technology Education Degree; All Concentrations, 2005 – 2006

Underlined numbers are those which are important for program productivity. The undergraduate degree is underproductive. The master's degree is very productive. The alternatively licensed teacher numbers below include Provisional 35 teachers.

Fall, 2005

Degree	Enrollment	Graduation Rate
BS in Technology Education Degree	19	4
Technology Education, Teaching Concentration	10	1
Trade & Industrial Education, Teaching Concentration	2	1
Training & Development for Industry (non-licensure)	7	2

Spring, 2006

Degree	Enrollment	Graduation Rate
BS in Technology Education Degree	19	5
Technology Education, Teaching Concentration	10	1
Trade & Industrial Education, Teaching Concentration	5	2
Training & Development for Industry (non-licensure)	4	2

Fall, 2005

Degree	Major Enrollment	MS	*Altern. Lic*.	Grad. Rate
MS in Technology Education Degree	60			
Technology Education, Teaching Concentration	34	12	22	2
Trade & Industrial Education, Teaching Concentration	13	3	10	2
Workforce Development Director Concentration	2		2	0
Training & Development for Industry (non-licensure)		11		2
Sub Totals	60	15	34	6

Spring, 2006

Degree	Major Enrollment	MS	Altern. Lic.	Grad. Rate
MS in Technology Education Degree	60			
Technology Education, Teaching Concentration	29	10	19	2
Trade & Industrial Education, Teaching Concentration	9	2	7	0
Workforce Development Director Concentration	2	1	1	0
Training & Development for Industry (non-licensure)		13		4
Sub Totals	53	13	27	6

Spring, 2006

Degree	Major Enrollment	MAT	Altern. Lic.	Grad. Rate
MAT in Technology Education Degree*	5			
Technology Education, Teaching Concentration	5	5	N/A	0
Trade & Industrial Education, Teaching Concentration	0	0	N/A	0

*First semester that this degree has operated. There are no program completers.

Conceptual Framework

A conceptual framework establishes the shared vision for the program's efforts in preparing educators to work effectively in P-12 schools. It provides direction for the program, courses, teaching, candidate performance, scholarship, service, and program accountability. The conceptual framework is knowledge-based, articulated, shared, coherent, consistent with the unit and/or institutional mission, and continuously evaluated.

Summary of the Unit's Conceptual Framework

The specific mission of the School of Education (SOE) is to prepare students for careers in elementary and secondary schools and industry, government and other agencies. Extracted from this mission is the vision, which is to provide high quality programs through research, effective teaching, field experiences and internships, on-going assessment, professional development, and other opportunities to ensure that all graduates meet high professional standards.

Data are collected and analyzed from each of these sources and used to improve programs to ensure that all students are nurtured and learn.

The School of Education has chosen to build its conceptual framework in keeping with the constructivist's approach. This means that the constructivist approach shall be the skeletal or structural framework within which faculty will be encouraged to build instruction and learning around a set of related theories. The Unit will not espouse one single theory, but will allow faculty to direct students in a deep understanding of the subject matter in keeping with one or more theories, which may (will) be in keeping with a constructivist perspective.

Constructivism is the "umbrella" or guiding force for those lessons and activities planned for college classroom use, as well as form the basis for application by teachers in training. This approach might indeed be called focused (within a constructivist approach) electicivism.

Students construct knowledge about reality, truth, and values through the interaction with materials, data, and experiences. Because candidates enter our programs with realities, truth, and values determined by their particular cultural, social, and economic experiences; our philosophy is that education, in order to be effective, must build on these fundamentals.

By adopting the metaphor "catalyst for learning" we see our philosophy borne out through the transformation of candidates who use diversity, assessment, reflection and technology as creative forces within the classroom to become lifelong learners. It is our belief that learning occurs through the resolution of cognitive conflicts resulting from the interaction with materials, data, and experiences.

Therefore, our philosophy leads our candidates to become leaders and teachers who will be able to understand diversity and use diversity as a creative force within the classroom. Further the candidates will understand a variety of methods of assessment and use these processes to inform their practice in the classroom.

1995-2006 Evolution of the Conceptual Framework of the Unit

As the conceptual framework has evolved over the past 10 years, the School of Education (SOE) at North Carolina A&T State University systematically involves external representatives, including: public school personnel, civic leaders, politicians, educators, researchers, business and industry representatives, parents, graduates, and other stakeholders to engage in program evaluation and improvement. The involvement of these constituents establishes the shared vision for the Unit's efforts in preparing educators for K-12 schools. The SOE consistently asks the question, "What do we do to improve preparation of professional educators?" The Unit consistently reviews literature, research, best

practices and analysis of data to determine the effectiveness of the conceptual framework— Professional Educators: Catalyst for Learning—and found that it continues to meet the needs to prepare professional educators including initial licensed teachers, advanced teachers, reading specialists, instructional technologists, master teachers, school counselors, and school administrators. Using the scientific definition that a catalyst initiates favorable conditions for a reaction to occur, the professional educator can be a catalyst for learning in that he/she facilitates learning opportunities for those with whom he/she interacts. The professional educator creates conditions or environments that allow favorable changes to occur in the behavior of his/her students. This conceptual framework is the underlining principle of the NCATE accreditation process. In 1995, the Unit's continuing accreditation emphasized the notion that we prepare professional educators as catalysts for learning. An input-process-output model was used to show how professional educators were prepared as catalysts for learning. In 2001, the conceptual framework was revised to reflect an output model that was aligned to standards and assessed knowledge, skills, and dispositions. The model allowed the Unit to develop an assessment system to collect and analyze data based on the Unit's standards (DART), state standards, and national standards, at the initial, advanced, and graduate levels. Since 2001, the most significant change has been the full implementation and evaluation of the conceptual framework as the guiding force for the teacher education program. The conceptual framework has been evaluated annually to determine if modifications are necessary and to establish the accountability of the Unit. At this point, we clearly review programs to ensure the alignment with standards; we clearly use data to improve programs; it also provides a structure for systematic, systemic evaluation of candidates to ensure knowledge, skills, and dispositions. The conceptual framework permeates all aspects of the program, including but not limited to: faculty, curriculum, internships, field experiences, resources, and candidate development. Perhaps the most salient aspect of the conceptual framework is the reflective component of the standards. The model is connected with an evaluation feedback loop that would allow changes to occur as needed.

The Unit's professional personnel also become catalysts for learning. We interact with our candidates and allow our candidates to engage in many educational experiences to ensure that they have the content knowledge, professional knowledge, communication skills, technology skills, and positive values toward learning and teaching as a professional, and that they understand that wise use of time is important in order to become catalysts for learning. Each of these experiences is monitored to ensure that candidates are internalizing and applying the knowledge and skills developed. Faculty and candidates understand the sources necessary for becoming and being catalysts for learning. Sources include, but are not limited to, the following: philosophies that influence learning: State Department of Education guidelines and competencies that dictate minimum expectations for program development and execution, professional organizations that recommend content and professional knowledge validity, research that helps us understand controlling and manipulating environments, and multicultural issues that help candidates appreciate and celebrate their diversity. The professional education core provides the learning theory, curriculum planning and design, strategies for the exceptional learner, clinical and field experiences, and assessment and evaluation as input experiences for the transformation of our candidates and faculty as catalysts for learning. The professional education core is regularly aligned to reflect best practices and research. For example, more emphasis has been placed on parental involvement in schools and outcome based learning for candidates and students in recent years.

The Unit reviews and evaluates its conceptual framework annually to ensure that it is knowledge-based, "articulated, shared, coherent, and consistent with the Unit and/or institutional mission." At the beginning of each academic year, the conceptual framework is reviewed by all of its constituent groups. These groups include the faculties, staffs, and administrators of the School of Education, the Teacher Education Council, the School Partnership, cooperating teachers, education majors, and the School of Education Advisory Board. Each group is given the opportunity to assess the conceptual framework and their understanding of whether or not we are doing what we purport to be doing. Additions were made to the conceptual framework model; and as stated previously, the faculty

also view themselves as being "catalysts for learning".

Over the last five years, the Unit has undergone many changes as a result of its assessment procedures, including but not limited to: programs, quality of candidates and faculty, use of technology in teaching and learning, diversity, and availability of a wide variety of resources. For example, a new graduate facility has been renovated and a new building is under construction to accommodate the increased enrollment and activities in this Unit. As the Unit has implemented the conceptual framework, the Unit standards are the guiding force for the improvement for the program as a whole and the faculty and candidates in particular. The standards—diversity, assessment, reflection, and technology—have been the impetus for continued excellence in teacher preparation. As we systematically reflect on the conceptual framework and the Unit standards changes have emerged in clinical practice to ensure that all candidates are engaged with diverse populations, that candidates can create situations where all students learn with instructional practices, an ongoing use of key assessments, such as Praxis II, ensure improve teaching and learning, and that the entire University is committed to preparing a highly qualified teaching force and other school personnel. With this backdrop, the Unit—including faculty, staff, and students—sees themselves as catalysts for learning through the motto: *Raising the Bar*. In other words, as the Unit has improved the performance of its candidates, it has been a catalyst for improving performance and programs throughout the university community.

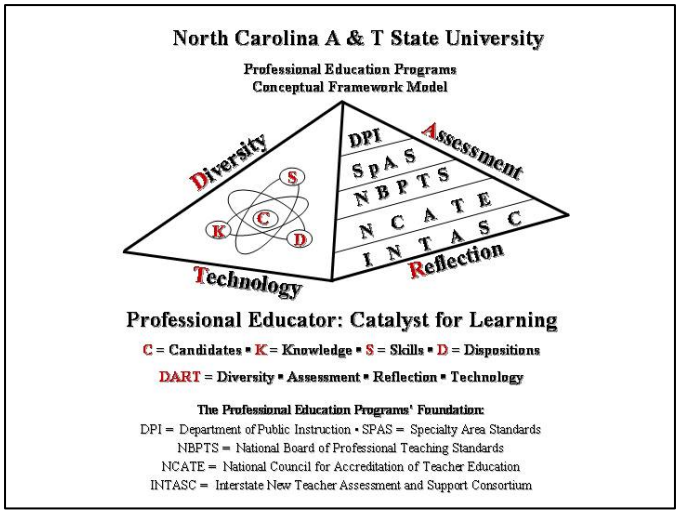
This conceptual framework guides what we do. It is a living idea that is operationalized by our actions, thoughts, and practices. This significantly changed the way the model is viewed, but also changed the way faculty, students, candidates, the University as a whole perceived the preparation of teachers and other educational professionals. The new model is represented much like an empirical chemical reaction of two reactants coming together in the presence of a catalyst (University (Unit)/ public school personnel/community/ clinical faculty) to produce a new product (a highly qualified candidate). This candidate would go out into the realm of public/private education to act as a catalyst for learning, changing the lives of many.

Summary of the Technology Education Programs' Conceptual Framework

The Conceptual Framework for the licensure programs of Technology Education, Trade and Industrial Education, and Workforce Development Director is consistent with the School of Education's Teacher Education program's and the Unit's conceptual framework. The cover of this document provides a graphic representation of the conceptual framework and it is also inserted below. It is well published on the Internet on the following program Web pages and is part of course readings:

http://www.ncat.edu/~childres/gc01000.html
http://www.ncat.edu/%7Echildres/gc01060.html
http://www.ncat.edu/%7Echildres/gc01050.html
http://www.ncat.edu/%7Echildres/gc01009.html

Figure 10: Conceptual Framework. C = Candidate, K = Knowledge, S = Skills, D = Dispositions.



The School of Education (a.k.a. the Unit) and all of its partners, including teaching candidates, teaching majors, and the programs of Technology Education, Trade and Industrial Education, and Workforce Development Director have selected as their Teacher Education program theme "The Professional Educator: A Catalyst for Learning." There are always two student meetings during the academic year during which students have input to the Conceptual Framework. From the theme, a conceptual framework has been developed which includes a rationale and organizing principles that

guide the development of the curriculum for professional education including the categorization of knowledge. The conceptual framework is research based.

The Teacher Education Unit's and these programs' visions, missions, and dispositions emerged directly from the University's mission. Both the Unit and University strive to transmit a cultural experience for our candidates to be transformed into catalysts for learning; something consistent with the Conceptual Framework (CF). The University's FUTURES Goal 1 calls for interdisciplinary study and high standards of achievement. This is reflected by the CF's foundation of standards (see Figure 10). FUTURES Goal 2 calls for discovery and engagement with partners. The CF's constructivists perspective is a reflection of this experiential goal. Candidates learn to create their own learning from the experiences with the faculty, interactions with the curricula and field experience opportunities, and other educational opportunities. Thus, because candidates create their learning outcomes from the interaction with their faculty and curricula, candidates are philosophically constructivists (National Research Council, 2000; Piaget, 1971; von Glasersfeld, 1989, 1991). The constructivist perspective on cognition is also a basis for action research, the teacher and the advanced teacher becoming researchers in their own classrooms (Noffke, 1997). (See the References at the end of this report.) While the constructivist view is primarily the philosophy by which education programs are structured, content specialists and school personnel programs have additional philosophical bases.

The conceptual framework is sufficiently broad as an umbrella to embrace all of the programs. The conceptual framework is the guiding force for program development and performance assessment. The outcome of the framework is the development of Unit standards for all programs, which are Diversity, Assessment, Reflection, and Technology (DART).

Since around 2000 and annually since that time, teachers from the public schools, teacher education students, professors, and administrators have come together to review the nature of the conceptual framework. As stated above at the heart of the conceptual framework is the candidate or emerging teacher; he or she is a Professional Educator: Catalyst for Learning. All of the programs that help to prepare teachers such as the Technology Education and Trade and Industrial Education programs (concentrations) also help to prepare teachers who have knowledge, skills, and dispositions related to the technical field of study and to Diversity, Assessment, Reflection, and Technology (meaning instructional technology). Technology Education and Trade and Industrial Education help to fulfill the conceptual framework by integrating those institutional proficiencies, DART, into their studies.

In the figure above, Figure 10, DART is surrounding the pyramid. The C on the left of the pyramid is the candidate who is learning the necessary knowledge, skills, and dispositions to become a Catalyst for Learning. To the right in the pyramid, are the organizations from which we have taken standards for learning. For example, we have to learn standards established by the NC Department of Public Instruction (NC DPI, 2006). DPI indicates that candidates must understand how to work with families. Some time during candidates' field experiences, student teaching, AND during their coursework, they should develop Products of Teaching that provide evidence that they understand how to work with the families of the students they will teach or are teaching. The master's degree concentrations are founded on standards mandated by DPI but are also based on the career and technical education standards of the National Board for Professional Teaching Standards (2000). For example, one of those standards indicates that the teacher works with the community and others to improve school programs and school to career transitions. A good example of a Product of Teaching that would help to ready the teacher or candidate to achieve that standard could certainly relate to the Technology Student Association or Skills USA. The undergraduate program is based on the standards of DPI and the Interstate New Teacher Assessment and Support Consortium (INTASC, 1992). Finally, both the graduate and undergraduate programs for Technology Education are based on the Standards for Technological Literacy

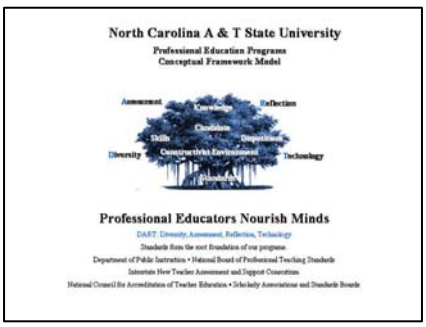
(International Technology Education Association, 2000). These are just some of the standards that the program is based on (see also National Association of Industrial and Technical Teacher Educators, 1997).

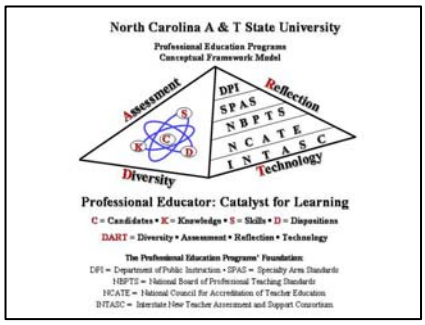
Evaluation and Revision of the Conceptual Framework

In 2002, the current conceptual framework was adopted as a replacement to a conceptual framework which had been based on a systems model. Instead of focusing so much on performance outcomes, it focused on a variety of inputs, processes, and outputs. The current conceptual framework is focused more on the performance of candidates during and after candidacy. Opportunities for revision to the conceptual framework occur at bi-annual teacher education student meetings, professional development school meetings, School of Education faculty meetings, and at Teacher Education Council meetings (data is shared in the last meeting of spring and changes are entertained at the first meeting of fall). It will become evident that through surveys the program evaluates its ability to integrate the conceptual framework across the program. Only minor revisions have been made to the conceptual framework.

Changes in the Conceptual Framework Since the Last NC DPI Team Visit

Although several forums are provided yearly to revise the Conceptual Framework and assessment systems, very few revisions have been needed. While the assessment system for the unit has grown according to the unit's promise to the National Council for the Accreditation of Teacher Education (NCATE), in each meeting which Dr. Rhodes and Dr. Childress have attended relating to conceptual framework revisions, no one has wanted to change it except for minor changes for clarity. This was until a recent PDS meeting in which a local principal suggested dropping the conceptual framework's pyramid symbol for the School of Education's banyan tree symbol (the banyan tree symbol currently has nothing to do with the Conceptual Framework pyramid symbol). In response, Dr. Childress developed the two alternative schemes shown below and shared them with the Teacher Education Council. The dart board concept was developed by his students. A discussion regarding this suggestion is ongoing. The third change is a minor change to help the current model be more clear.





There are several good qualities about the conceptual framework. It is simple. It is standards based. Students, candidates, professors, and teachers are able to understand it. It is based on educational theory. The DART concepts are excellent for the context of a historically black university located in a region of the state with a diverse socio-economic and racial population. That students have ongoing, diverse experiences at all levels of the education experience is another important feature.

How the Conceptual Framework is Evidenced in the Technology Education Programs

Students within the Technology Education programs interact with the Conceptual Framework in a variety of ways. First, all of these students take courses within the College of Education, and thus have multiple opportunities to interact with faculty and students from various education programs.

As mentioned above, the conceptual framework is available at four different locations on the programs' web pages.

It is explicitly taught as a unit in the following courses.

TECH 218, Introduction to Technology
TECH 382, Computer Applications
TECH 566, Industrial Education Teaching Methods
TECH 620, Manufacturing Systems
TECH 621, Communication Systems
TECH 622, Transportation Systems
TECH 660, Career Development and Work-Based Learning
TECH 669, Safety in the Instructional Environment of Technological Education
TECH 671, Methods and Techniques of Workplace Training and Development
TECH 767, Research and Literature in Technological Education

The components of the conceptual framework are also integrated across the curriculum. The following inventory of courses shows this integration of knowledge, skills, and dispositions from the conceptual framework integrated across the curriculum.

Diversity

CUIN 560, Student Teaching: Requires students address diversity in the lessons that they plan and deliver.
TECH 566, Industrial Education Teaching Methods: Diversity lesson and lesson plan related specifically to diversity; other lessons have place for addressing diversity per lesson.
CUIN 619, Advanced Learning Theories: Assessment frames and journal entries as they relate to reflection. Research paper if related to reflection.
CUIN 729, Diversity Issues in K-12 Schools: All assignments such as textbook analysis. Action research related to diversity.
CUIN 768, Teaching and Learning in the Multicultural Classroom: All assignments issued in this course will relate to diversity.

Assessment

CUIN 436, Classroom Assessment and Evaluation: Provides for an understanding of the statistics related to assessment, validity and reliability, and how to design and use the results of assessments.
CUIN 560, Student Teaching: Requires student developed assessment, and how to improve instruction.
TECH 566, Industrial Education Teaching Methods: Provides a lesson on assessment and requires the development to two specific assessments, and requires assessment be planned in each of the lesson plans developed.
TECH 762, Evaluation of Technological Education Programs: Career and occupational outlook unit curriculum analysis assignment. Other unit assignments in which student studies assessment and improvement of instruction.
TECH 662, Technological Education Course Construction: Unit plan.
CUIN 721, Advanced Methods and Internship: Assessment rubric included in lesson design assignment.
CUIN 729, Diversity in the K – 12 Classroom: Action research assignment if related to assessment.
CUIN 619, Advanced Learning Theories: Assessment frames and journal entries.

TECH 669, Safety in the Instructional Environment of Technological Education: Safety testing and documentation

Reflection

CUIN 301, Social Foundations of Education: Provides for student reflection on the 20 hour internship.

CUIN 400, Psychological Foundations of Education: Provides for student reflection on the 40 hour internship.

CUIN 560, Student Teaching: Requires daily reflections on instruction, assessment, and how to improve instruction via a journal, the collection of data, development and delivery of assessments and instruction.

TECH 566, Industrial Education Teaching Methods: Lesson plans with a section on reflection and how to improve instruction next time the lesson is taught. Provides for candidate reflection on the 60 hour internship.

TECH 717/718, Special Problems I and II: National Board of Professional Teaching Standards report.

CUIN 721, Advanced Methods and Internship: Critical thinking assignment. Reflective essay assignment.

CUIN 619, Advanced Learning Theories: Assessment frames and journal entries as they relate to reflection. Research paper if related to reflection.

TECH 762, Evaluation of Technological Education Programs: Any of the unit assignments in which the student ends up reflecting on instruction via assessment.

TECH 767, Research and Literature in Technological Education: Proposal for research study. TECH 768, Technological Seminar: Completed research document consisting of the proposal chapters 1 – 3 and chapter 4, Findings, and chapter 5, Conclusions and Recommendations.

Technology

TECH 218, Introduction to Technology: Requires understanding of basic computer functions and applications such as spreadsheets.

TECH 382, Computer Applications: Requires the use of spreadsheets, databases, PowerPoint and operating systems in order to enhance teaching and learning.

TECH 566, Industrial Education Teaching Methods: Technology section in required lesson plans. Media enhanced micro teaching. Teaching resources database.

TECH 767, Research and Literature in Technological Education: Proposal presentation in PowerPoint.

TECH 768, Technological Seminar: Completed research document presentation in PowerPoint. CUIN 7XX (now INST 7XX), Instructional Technology Elective at the 700 Level: Multimedia projects. Web-based development projects. Instructional technology design models.

GCS 636, Electronic Imaging in Distance Learning: Web-based development projects.

GCS 670, Electronic Imaging in Graphic Communication: Web-based development projects.

Research

It is important to note that research, both across the teaching profession and in the classroom, is a heavy emphasis. Teachers in the advanced master's degree program must design and deliver a research project related to education. This is done in TECH 767 and TECH 768, Research and Literature in Technological Studies, and Technological Seminar respectively. Undergraduates learn about educational, action research in CUIN 436, Educational Testing and Measurement.

Constructivism

Constructivism is taught in CUIN 400, CUIN 619, TECH 566, CUIN 721, and CUIN 729.

Figure 11: 2001-2002 and 2004-2005 Alumni Survey Ratings: Conceptual Framework (DART) Related
Scale of 1 to 5 with 5 being the best. Notice the improvement from one survey to the next.

3#	Extent to which you were taught student assessment.	-	5.0	-	4.0
36.	Student's preparation to use computer and instructional technology for teaching purposes.	4.6	5.0	3.0	3.7
37.	Faculty's encouragement of you to evaluate and reflect on your own learning and teaching.	4.6	5.0	3.6	4.3
41.	Extent to which you were taught about diversity.	3.5	4.0	2.6	3.8
42.	Program on the development of your teaching attitudes and dispositions.	4.3	5.0	3.3	3.3

Figure 12: 2001-2006 Principals' Survey Findings As Related to Conceptual Framework
Scale of 1 to 5 with 5 being the best.

	My technology education teacher is able to effectively:	Mean Rating
1	Provide overall a high quality instructional program.	4.4
4	Use the computer and instructional technology for teaching purposes.	5.0
5	Assess students and change instruction based on evaluation results.	4.4
7	Address the needs for students from diverse backgrounds.	4.7
8	Address the needs of exceptional children.	4.8
9	Reflect on instructional practices.	4.4
10	Demonstrate positive teaching attitudes and dispositions.	4.8
11	Work with parents and/or families.	4.8
12	Affect student achievement.	4.2

Samples of work that support the Conceptual Framework are provided in the supporting documentation in the Exhibit Room.

How the Conceptual Framework is Evidenced (continued)

Department and Program Goals and Objectives (Program Conceptual Framework)

The overall goal across all three concentrations (Technology Education, Trade & Industrial Education, Training & Development for Industry) at the undergraduate and graduate levels and the Workforce Development Director concentration at the master's level is to help students become Catalysts for Learning whether they end up in a career in industry or the public schools. This is the personification of the Conceptual Framework.

The specific goals and objectives which follow are available on the programs' Web pages at:
http://www.ncat.edu/%7Echildres/gc01060.html
http://www.ncat.edu/%7Echildres/gc01050.html
http://www.ncat.edu/%7Echildres/gc01009.html

TRADE AND INDUSTRIAL EDUCATION, TEACHING CONCENTRATION GOAL:
The goal of the licensure option of the Trade and Industrial Education concentration is to prepare students to develop cognitive and psychomotor skills in a technical specialization such as construction, drafting, graphics, electronics, manufacturing, or transportation. Students should become Catalysts for Learning. Graduates will be qualified to be licensed in North Carolina to teach trade and industrial education in secondary schools. Students will understand how to work with parents, families, and the overall community.

PROGRAM OBJECTIVES:
As specified by NCATE, Interstate New Teacher Assessment and Support Consortium (INTASC), Council on Technology Teacher Education – International Technology Education Association (CTTE-ITEA), National Association of Industrial and Technical Teacher Educators (NAITTE), National Board for Professional Teaching Standards (NBPTS), Institutional Standards: Diversity, Assessment, Reflection, and Technology (DART), and NC-DPI.
In order to become professional trade and industrial education teachers, who are catalysts for learning, students in the trade and industrial education program will:

- To develop competencies in communications, sciences, mathematics, and technical specialties.
- To develop affective and cooperative skills.
- To provide hands-on experiences with a variety of computer software programs and technological equipment.
- To develop proficiency in a selected technical specialization from one of the cluster areas.
- Develop instructional skill and appropriate teaching dispositions (in the context of the specialization) as specified under the INTASC guidelines for beginning teachers and NBPTS for advanced teachers including action research.
- Understand how to utilize a variety of teaching methods in a variety of laboratory settings as appropriate for the specialty area.
- Develop skill in the use of instructional technology within the context of the specialty area.
- Develop an appreciation for the differences in learners and how to address and capitalize on student diversity.
- Understand how to develop instructional curricula and programs.
- Learn hands-on experiences with a variety of computer software programs and technological equipment.
- Understand the impacts, evolution, and social implications of technology.

TECHNOLOGY EDUCATION, TEACHING CONCENTRATION GOAL:
The goal of the Technology Education concentration is to prepare students to become technologically literate and satisfy North Carolina Department of Public Instruction certification/licensure requirements for teaching technology education in the public schools; to prepare Catalysts for Learning. Students will understand how to work with parents, families, and the overall community.

PROGRAM OBJECTIVES:
As specified by NCATE, INTASC, CTTE-ITEA, DART, NBPTS, and NC-DPI...
In order to become professional technology education teachers, who are catalysts for learning, students in the technology education program will:

- Develop technological literacy and content expertise in areas specified by state and national guidelines, competencies, and standards.

- Develop instructional skill and appropriate teaching dispositions (in the context of technology education) as specified under the INTASC guidelines for beginning teachers and NBPTS for advanced teachers including action research.
- Describe how to utilize a variety of teaching methods in a variety of laboratory settings such as modular and general laboratories as appropriate for technology education.
- Develop skill in the use of instructional technology within the context of the subject area of technology education.
- Develop an appreciation for the differences in learners and how to address and capitalize on student diversity.
- Apply knowledge, skills, creativity, and resources to the solution of technological problems.
- Develop competencies in communications, sciences, mathematics, and technological specialties.
- Describe how to develop instructional curricula and programs (including applications of the Standards for Technological Literacy: Content for the Study of Technology).
- Learn hands-on experiences with a variety of computer software programs and technological equipment.
- Describe the impacts, evolution, and social implications of technology.

How the Conceptual Framework is Evidenced (continued)

Specific Portfolio Objectives for the Undergraduate Levels

The development of the portfolio, its reflections, its rubric, and advanced institutional standards (or advanced candidate proficiencies) are available for graduate students in TECH 717/718 and on the Web at: http://www.ncat.edu/%7Egillispc/productsofteachingportfolio.html

Figure 13: Portfolio Objectives for the Undergraduate

Standards/Criteria The candidate will for Knowledge, Skills, and Dispositions:
Teachers are successful in teaching a diverse population of students. (NCcore3, DART D)
Teachers understand how to design instruction that is meaningful to diverse students. (NCdivers1, ITEA-CTTE9, NAITTE 4, DART D)
Teachers understand how to address the unique needs of students as they relate to diversity. (NCdivers2, DART D)
Teachers work with parents and the community to influence learning for diverse students. (NCdivers3, DART D)
Teachers recognize diversity in society and use it to strengthen the classroom. (NCdivers4, DART D)
Teachers of diverse students contribute to the development of the school community and advance equality. (NCdivers5, NAITTE 6, DART D)
Teachers of diverse students are reflective practitioners committed to equality. (NCdivers6, DART D)
Teachers demonstrate understanding of instructional technology. (NCit1, (DART T)
Teachers effectively use instructional technology to support learning. (NCit2, (DART T)
Teachers plan for the use of technology. (NCit3, (DART T)
Teachers use technology for effective assessment. (NCit4, (DART T)
Teachers use technology to enhance their productivity. (NCit5, (DART T)
Teachers apply their understanding of technological issues in their instruction. (NCit6, (DART T)
Use assessment to assist students' reflection on their learning and improve instruction. (NCcore2; NCte5, NCti5, DART A)
Teachers are reflective about their practice. (NCcore5, DART R)
Teachers know how to teach students. (NCcore2, NCte3, NCti5, ITEA-CTTE 7, NAITTE 2)
Teachers know the content they teach. (NCcore1, NCte1, NCti1, ITEA-CTTE 1-5, NAITTE 2)
Teachers design, manage, and evaluate programs effectively. (NCte4, NCti3, ITEA-CTTE 8, NAITTE 5)
Teachers design, implement, and evaluate curricula. (NCte2, NCti2, ITEA-CTTE 6, NAITTE 3)
Teachers develop workplace knowledge and skills. (NCte7, NCti7)
Teachers integrate career development and readiness into the program. (NCte8, NCti8)
Teachers understand the developmental needs of students and reflect that in teaching. (NCcore6, ITEA-CTTE 9)
Teachers incorporate career and technical student organizations into instruction. (NCte6, NCti6)
Teachers conduct successful programs. (NCte10, NCti10, NAITTE 6, NAITTE 7)
Teachers are leaders. (NCcore4, NCte9, NCti4, NCti9, ITEA-CTTE 10, NAITTE 1, NAITTE 6)

Abbreviations Used
NCcore = North Carolina Core Standards

NCdivers = North Carolina Diversity Standards
NCit = North Carolina Instructional Technology Standards
NCte = North Carolina Technology Education Standards
NCti = North Carolina Trade and Industrial Education Standards
ITEA-CTTE = International Technology Education Association & the Council on Technology Teacher Education Program Standards
NAITTE = National Association of Industrial Technology Teacher Educators
DART = NC A&Ts Conceptual Framework Related Standards; Diversity, Assessment, Reflection, and Technology (meaning instructional technology)

Figure 14: Specific Portfolio Objectives for the Graduate Levels

Standards/Criteria The advanced candidate will for Knowledge, Skills, and Dispositions:
Create environment of equality/respect for diversity to ensure quality learning. (NBPTS IV; DART D; DPI Standard A Indicator 5; DPI Standard B Indicators 1&2&4; NCATE 1 Dispositions; NCATE 4 Learner Diversity)
Use assessment to assist students' reflection on their learning and improve instruction. (NBPTS VI; DART A; DPI Standard A Indicator 2; NCATE 1 Student Learning)
Analyze instructional effectiveness with self-reflection. (NBPTS X; DART R; DPI Standard B Indicator 3; NCATE 1 Professional Pedagogical)
Use technology to enhance teaching & learning. (DART T; DPI Standard A Indicator 6; NCATE 1 Pedagogy Content)
Personalize instruction and apply knowledge of human development to meet student needs. (NBPTS I; DPI Standard A Indicator 5; NCATE 1 Professional Pedagogical)
Use core knowledge of industry and academics to develop curriculum, instruction, learning, & assessment. (NBPTS II; DPI Standard D Indicators 1&2&3&4; NCATE 1 Content Knowledge)
Manage the laboratory for independent, group, and contextualized learning. (NBPTS III; DPI Standard B Indicator 5; NCATE 1 Pedagogical Content)
Foster experiential, conceptual, and performance learning that integrates academics. (NBPTS V; DPI Standard A Indicator 8; NCATE 1 Professional Pedagogical)
Develop student career decision-making, employability skills. (NBPTS VII; NCATE 1 Dispositions)
Develop understanding of competing demands of the world of work. (NBPTS VIII; NCATE 1 Dispositions)
Develop students' affective domain skills, values, and ethics. (NBPTS IX; NCATE 1 Dispositions)
Work with partners to improve school-to-work transitions. (NBPTS XI; DPI Standard E Indicator 3; NCATE 1 Dispositions; NCATE 1 Professional Pedagogical)
Work with others to improve schools & advance knowledge. (NBPTS XII; DPI Standard E Indicators 2&4&5; NCATE 1 Dispositions; NCATE 1 Professional Pedagogical)
Work with others including families to achieve common goals for all students. (NBPTS XIII; DPI Standard E Indicators 2&3&4&5; NCATE 1 Dispositions; NCATE 1 Professional Pedagogical)
Conduct related action research. (DPI Standard A Indicator 4; DPI Standard C Indicators 1&2&3; DPI Standard E Indicator 1; NCATE 1 Content Knowledge)

Abbreviations Used
DPI = North Carolina Advanced Licensure Standards
NCATE = National Council of Accreditation of Teacher Education
NBPTS = National Board of Professional Teaching Standards
DART = NC A&Ts Conceptual Framework Related Advanced Standards; Diversity, Assessment, Reflection, and Technology (meaning instructional technology)

Candidate Performance

Standard 1: Candidate Knowledge, Skills, and Dispositions

Candidates preparing to work in schools as teachers or other professional school personnel know and demonstrate the content, pedagogical, and professional knowledge, skills, and dispositions necessary to help all students learn. This includes working with families to support student learning. Assessments indicate that candidates meet state-approved standards and indicators for all teachers (core standards, diversity standards, and technology standards) and state-approved standards and indicators for the specialty area.

Provide Evidence that Candidates Meet the Core Standards

The core standards focus on the degree to which candidates know the content they teach, their ability to teach this content to diverse populations of students, the degree to which candidates reflect upon their teaching practice, and the ways in which they show respect for students. All of these are addressed and documented within subsequent discussions about the core, diversity, technology, specialty area standards, and are included later in this document. Separate sections will be devoted to the specialty area standards for Technology Education, Trade and Industrial Education, and Graduate programs. Separate folders containing supporting evidence are included for each of the content area standards as well as for the diversity, reflection, assessment, and technology standards. (See Exhibit Room.)

Figure 15: Assessment of Core Standards

Standard	Course and Number	Assessment Strategies
Standard 1: Teachers know the content they teach	TECH 218 TECH 412 TECH 413 TECH 414 TECH 415 TECH 416 TECH 436	Exams Technology Portfolio Projects Development of classroom activities
Standard 2: Teachers know how to teach students	CUIN 400 CUIN 560 TECH 566 TECH 382 TECH 762 TECH 662	Exams Curriculum Analysis Micro-teaching Lesson Plans Assessment development Course Development
Standard 3: Teachers are successful in teaching a diverse population of students (including special needs)	CUIN 400 SPED 350 PSYC 320 CUIN 560 TECH 462 TECH 566 TECH 618 TECH 626 TECH 762	Unit plan and lesson plans Lesson presentations Instructional materials using various media Differentiated lesson plans Facility planning Exams IEPs and Instructional Modifications Student Accommodations
Standard 4: Teachers are leaders	TECH 462 TECH 560 TECH 566	Micro-teaching Facility Mgmt CTSO involvement
Standard 5: Teachers are reflective about their practice	TECH 560 TECH 566 TECH 510	Journals Portfolio Reflection papers
Standard 6: Teachers respect and care about students	TECH 560	Reflection papers

The table below illustrates Technology Education student teachers' performance related to diversity as measured by items on the student teaching formal appraisals.

Figure 16: Student Teacher Ratings, 2003-2006

Item 1 – Management of Instructional Time

Stdt	Rating from Last Formal Appraisal	Year	Stdt	Rating from Last Formal Appraisal	Year
1	Above Standard from University Supervisor	2006	4	Well Above Standard from University Sprvsr.	2003
1	Above Standard from Cooperating Teacher	2006	4	Well Above Standard from Coop. Teacher	2003
2	Well Above Standard from University Sprvsr.	2006	5	Well Above Standard from University Supervisor	2003
2	Above Standard from Cooperating Teacher	2006	5	Above Standard from Cooperating Teacher	2003
3	Well Above Standard from University Sprvsr.	2003	6	Above Standard from University Sprvsr.	2003
3	Well Above Standard from Coop. Teacher	2003	6	Above Standard from Coop. Teacher	2003

Item 2 – Management of Student Behavior

Stdt	Rating from Last Formal Appraisal	Year	Stdt	Rating from Last Formal Appraisal	Year
1	Above Standard from University Supervisor	2006	4	Well Above Standard from University Sprvsr.	2003
1	Above Standard from Cooperating Teacher	2006	4	Well Above Standard from Coop. Teacher	2003
2	Well Above Standard from University Sprvsr.	2006	5	Above Standard from University Supervisor	2003
2	Above Standard from Cooperating Teacher	2006	5	Well Above Standard from Cooperating Teacher	2003
3	Well Above Standard from University Sprvsr.	2003	6	Above Standard from University Sprvsr.	2003
3	Well Above Standard from Coop. Teacher	2003	6	Above Standard from Coop. Teacher	2003

Item 3 – Instructional Presentation

Stdt	Rating from Last Formal Appraisal	Year	Stdt	Rating from Last Formal Appraisal	Year
1	At Standard from University Supervisor	2006	4	Well Above Standard from University Sprvsr.	2003
1	Above Standard from Cooperating Teacher	2006	4	Well Above Standard from Coop. Teacher	2003
2	Above Standard from University Sprvsr.	2006	5	Above Standard from University Supervisor	2003
2	Above Standard from Cooperating Teacher	2006	5	Above Standard from Cooperating Teacher	2003
3	Well Above Standard from University Sprvsr.	2003	6	At Standard from University Sprvsr.	2003
3	Well Above Standard from Coop. Teacher	2003	6	At Standard from Coop. Teacher	2003

Item 4 – Instructional Monitoring

Stdt	Rating from Last Formal Appraisal	Year	Stdt	Rating from Last Formal Appraisal	Year
1	Above Standard from University Supervisor	2006	4	Well Above Standard from University Sprvsr.	2003
1	Above Standard from Cooperating Teacher	2006	4	Well Above Standard from Coop. Teacher	2003
2	Well Above Standard from University Sprvsr.	2006	5	Well Above Standard from University Supervisor	2003
2	At Standard from Cooperating Teacher	2006	5	Well Above Standard from Cooperating Teacher	2003
3	Well Above Standard from University Sprvsr.	2003	6	Above Standard from University Sprvsr.	2003
3	Well Above Standard from Coop. Teacher	2003	6	Above Standard from Coop. Teacher	2003

Item 5 – Instructional Feedback

Stdt	Rating from Last Formal Appraisal	Year	Stdt	Rating from Last Formal Appraisal	Year
1	Above Standard from University Supervisor	2006	4	Well Above Standard from University Sprvsr.	2003
1	Above Standard from Cooperating Teacher	2006	4	Well Above Standard from Coop. Teacher	2003
2	Well Above Standard from University Sprvsr.	2006	5	Above Standard from University Supervisor	2003
2	At Standard from Cooperating Teacher	2006	5	Well Above Standard from Cooperating Teacher	2003
3	Well Above Standard from University Sprvsr.	2003	6	Above Standard from University Sprvsr.	2003
3	Well Above Standard from Coop. Teacher	2003	6	Above Standard from Coop. Teacher	2003

Item 6 – Facilitation of Instruction

Stdt	Rating from Last Formal Appraisal	Year	Stdt	Rating from Last Formal Appraisal	Year
1	Above Standard from University Supervisor	2006	4	Above Standard from University Sprvsr.	2003
1	Above Standard from Cooperating Teacher	2006	4	Well Above Standard from Coop. Teacher	2003
2	Well Above Standard from University Sprvsr.	2006	5	Well Above Standard from University Supervisor	2003
2	At Standard from Cooperating Teacher	2006	5	Well Above Standard from Cooperating Teacher	2003
3	Well Above Standard from University Sprvsr.	2003	6	At Standard from University Sprvsr.	2003
3	Well Above Standard from Coop. Teacher	2003	6	At Standard from Coop. Teacher	2003

Item 8 – Performing Non-Instructional Duties

Stdt	Rating from Last Formal Appraisal	Year	Stdt	Rating from Last Formal Appraisal	Year
1	At Standard from University Supervisor	2006	4	Above Standard from University Sprvsr.	2003
1	At Standard from Cooperating Teacher	2006	4	Well Above Standard from Coop. Teacher	2003
2	Well Above Standard from University Sprvsr.	2006	5	Well Above Standard from University Supervisor	2003
2	Above Standard from Cooperating Teacher	2006	5	Well Above Standard from Cooperating Teacher	2003
3	Well Above Standard from University Sprvsr.	2003	6	Well Above Standard from University Sprvsr.	2003
3	Well Above Standard from Coop. Teacher	2003	6	Well Above Standard from Coop. Teacher	2003

Figure 17: 2001-2002 and 2004-2005 Alumni Survey Ratings: Core Standards

Scale of 1 to 5 with 5 being the best. Notice the improvement from one survey to the next.

	Standard	Mean Bachelor 2001-02	Mean Bachelor 2004-2005	Mean Master 2001-02	Mean Master 2004-2005
27.	Teaching of technology teaching methods.	4.8	5.0	3.3	4.5
30.	Teaching of discipline and classroom management.	3.0	4.5	3.3	3.8
32.	Experiences for providing ideas for learning activities.	4.8	4.5	3.3	4.0
33.	Teaching of instructional planning.	4.5	5.0	3.0	4.0
34.	Field experiences.	4.1	4.0	2.3	3.0
35.	Student-teaching.	4.25	4.0	n/a	4.0
3#	Extent to which you were taught student assessment.	-	5.0	-	4.0
36.	Student's preparation to use computer and instructional technology for teaching purposes.	4.6	5.0	3.0	3.7
37.	Faculty's encouragement of you to evaluate and reflect on your own learning and teaching.	4.6	5.0	3.6	4.3
41.	Extent to which you were taught about diversity.	3.5	4.0	2.6	3.8
42.	Program on the development of your teaching attitudes and dispositions.	4.3	5.0	3.3	3.3

Figure 18: 2001-2006 Principals' Survey Findings As Related to Core Standards

Scale of 1 to 5 with 5 being the best.

	My technology education teacher is able to effectively:	Mean Rating
1	Provide overall a high quality instructional program.	4.4
3	Manage students and discipline.	4.2
4	Use the computer and instructional technology for teaching purposes.	5.0
5	Assess students and change instruction based on evaluation results.	4.4
6	Sponsor a club like TSA or Skills USA or work with the community.	4.7
7	Address the needs for students from diverse backgrounds.	4.7
8	Address the needs of exceptional children.	4.8
9	Reflect on instructional practices.	4.4
10	Demonstrate positive teaching attitudes and dispositions.	4.8
11	Work with parents and/or families.	4.8
12	Affect student achievement.	4.2

Provide Evidence that Candidates Meet the Diversity Standards

The diversity standards focus on candidates' ability to understand the educational needs of diverse learners, to develop instructional experiences and environments that promote learning among diverse students, and to communicate with parents and colleagues in the development of learning programs that assist diverse learners. The standards help candidates develop the knowledge, skills, and dispositions to develop positive learning environments that enable all students to be successful.

Figure 19: Assessment of Diversity Standards

Diversity Standard	Course & Number	Assessment Strategies
Standard 1: Teachers understand the central concepts, tools of inquiry, and structures of the discipline(s) they teach and can create classroom environments and learning experiences that make these aspects of subject matter accessible, meaningful, and culturally relevant for diverse learners.	CUIN 400 SPED 350 PSYC 320 CUIN 560 TECH 462 TECH 566 TECH 762	▪ Evaluation of materials for bias ▪ Differentiated instruction ▪ Unit plans and lesson plans ▪ Lesson presentations ▪ Development of instructional materials ▪ Resource file ▪ Facility and equipment plans ▪ Development of assessments ▪ Exams
Standard 2: Teachers understand how students' cognitive, physical, socio-cultural, linguistic, emotional, and moral development influences learning and address these factors when making instructional decisions.	CUIN 400 PSYC 320 TECH 566 TECH 662 TECH 672 TECH 462 TECH 560	▪ Unit plan and lesson plans ▪ Lesson presentations ▪ Instructional materials using various media ▪ Differentiated lesson plans ▪ Facility planning ▪ Exams
Standard 3: Teachers work collaboratively to develop linkages with parents/caretakers, school colleagues, community members and agencies that enhance the educational experiences and well being of diverse learners.	CUIN 400 CUIN 301 CUIN 560 TECH 566	▪ Public Relations products ▪ Reflection on participation with CTSO events ▪ Parent-teacher conferences
Standard 4: Teachers acknowledge and understand that diversity exists in society and utilize this diversity to strengthen the classroom environment to meet the needs of individual learners.	CUIN 400 GCS 263 TECH 566 TECH 462 CUIN 301 TECH 662/672 CUIN 560	▪ Differentiated lesson plans ▪ Quizzes and tests ▪ Lesson presentations ▪ Development of instructional support materials ▪ Facility planning ▪ Technology portfolio
Standard 5: Teachers of diverse students demonstrate leadership by contributing to the growth and development of their colleagues, their school and the advancement of educational equity.	CUIN 400 TECH 566 TECH 662/672 TECH 462 TECH 560	▪ Peer evaluations ▪ Self-evaluation assessment ▪ Reflective journals
Standard 6: Teachers of diverse students are reflective practitioners who are committed to educational equity.	TECH 566 CUIN 560	▪ Observation reports ▪ Reflective journals

The tables below illustrate Technology Education student teacher and intern performance related to diversity as measured by items on the student teaching formal appraisals and assessment of intern by cooperating teacher. There is also data from alumni surveys.

Figure 20: Student Teacher Ratings, 2003-2006
Item 3.9 – Creates instructional opportunities that are adapted to diverse learners.

Stdt	Rating from Last Formal Appraisal	Year	Stdt	Rating from Last Formal Appraisal	Year
1	Above Standard from University Supervisor	2006	4	Well Above Standard from University Sprvsr.	2003
1	Above Standard from Cooperating Teacher	2006	4	Well Above Standard from Coop. Teacher	2003
2	Above Standard from University Sprvsr.	2006	5	Above Standard from University Supervisor	2003
2	Above Standard from Cooperating Teacher	2006	5	Above Standard from Cooperating Teacher	2003
3	Well Above Standard from University Sprvsr.	2003	6	At Standard from University Sprvsr.	2003
3	Well Above Standard from Coop. Teacher	2003	6	At Standard from Coop. Teacher	2003

Intern Performance for Diversity Measured by Cooperating Teacher

Figure 21 Student Interactions: Communicated freely with students at a level of appropriateness, sensitivity, and understanding.

Intern	Semester	Rating
1	Fall, 2002	Well Above Standard
2	Fall, 2002	Above Standard
3	Fall, 2004	Above Standard
4	Fall, 2005	Above Standard
5	Fall, 2005	Well Above Standard

Figure 22: 2001-2002 and 2004-2005 Alumni Survey Ratings: Diversity
Scale of 1 to 5 with 5 being the best. Notice the improvement from one survey to the next.

Survey	**Undergraduate**	**Graduate**
2001-2002	3.5	2.6
2004-2005	4.0	3.8

Figure 23: 2001-2006 Principals' Survey Findings As Related to Diversity
Scale of 1 to 5 with 5 being the best.

	My technology education teacher is able to effectively:	Mean Rating
1	Provide overall a high quality instructional program.	4.4
7	Address the needs for students from diverse backgrounds.	4.7
8	Address the needs of exceptional children.	4.8
10	Demonstrate positive teaching attitudes and dispositions.	4.8
11	Work with parents and/or families.	4.8
12	Affect student achievement.	4.2

Samples of work that support the Diversity Standards are provided are provided in supporting documentation folders in the Exhibit Room.

Provide Evidence that Candidates Meet the Technology Standards and Portfolio Requirements

The NETS-T standards were adopted to set benchmarks for candidates' ability to use information

technologies to support the teaching and learning process. Students in the Technology Education and Trade and Industrial Education and Workforce Development Director programs have long employed a variety of information technologies to create teaching tools, for record keeping, for instructional planning, and for communicating with colleagues, students, and parents. The vast majority of students entering teacher education programs do so with solid knowledge of basic computer applications, including word processing, presentation software, spreadsheets, and the Internet. During their time in the program, they build on this repertoire through the use of CAD software for facility planning and technical drawing; the use of imaging software to create images that enhance PowerPoint lectures and projects; the use of digital video and audio to create multimedia instructional packages; the use of grading software to track student progress; the use of statistical software to process data gathered through research. Additionally, there are other specialized forms of software that are used within the technical fields of study, including specialized 3-D imaging used in technical drawing, and applications that can be used to design and analyze structures, among other things. Students also demonstrate their proficiency in using Web-based applications such as email, web page development software, and Internet search engines on a regular basis.

Per North Carolina mandate for pre-service teaching candidates, all undergraduate students are required to demonstrate their knowledge of information technologies, and their ability to integrate them into instruction, through compilation of a "technology portfolio." The portfolio is a collection of artifacts that show candidate proficiency in meeting each of the 24 NETS-T standards. The portfolio is reviewed and evaluated by the major advisor, the cooperating teacher, and the student teaching supervisor. The matrix below displays selected courses, and selected assessment strategies that may be used in various courses/assignments that address the technology standards.

Figure 24: Assessment of Technology Standards

Standard	Course and Number	Assessment
Standard 1: Teachers demonstrate a sound understanding of technology operations and concepts	All TECH courses CUIN 560	Courses in technology education department make use of information technologies as a component of both course content and course requirements. Portfolio
Standard 2: Teachers plan and design effective learning environments and experiences supported by technology	TECH 462/669 TECH 566 TECH 560 TECH 662 TECH 510 TECH 382	Develop facility safety plan Lesson plans Multimedia instructional materials
Standard 3: Teachers implement curriculum plans that include methods and strategies for applying technology to maximize student learning.	TECH 412 TECH 413 TECH 414 TECH 415 TECH 566 TECH 560	Curriculum Analysis of state curriculum guides Microteaching Using state test bank items
Standard 4: Teachers apply technology to facilitate a variety of effective assessment and evaluation strategies.	TECH 566 TECH 662 TECH 762	Create content tests Create rubrics
Standard 5: Teachers use technology to enhance their productivity and professional practice.	TECH 462/669 TECH 566 TECH 560	Technology Portfolio Enhance lectures Record keeping
Standard 6: Teachers understand the social, ethical, legal, and human issues surrounding the use of technology in PK-12 schools and apply those principles in practice.	GCS 263 TECH 412 TECH 413 TECH 414 TECH 415 TECH 416 CUIN 560	Ethics assignments Debate and case studies based on technological issues.

Figure 25: Student Teacher Ratings, 2003-2006
Item 3.11 – Uses technology to support instruction.

Stdt	Rating from Last Formal Appraisal	Year	Stdt	Rating from Last Formal Appraisal	Year
1	Above Standard from University Supervisor	2006	4	Well Above Standard from University Sprvsr.	2003
1	Above Standard from Cooperating Teacher	2006	4	Well Above Standard from Coop. Teacher	2003
2	Above Standard from University Sprvsr.	2006	5	Above Standard from University Supervisor	2003
2	Above Standard from Cooperating Teacher	2006	5	Above Standard from Cooperating Teacher	2003
3	Well Above Standard from University Sprvsr.	2003	6	At Standard from University Sprvsr.	2003
3	Well Above Standard from Coop. Teacher	2003	6	At Standard from Coop. Teacher	2003

Figure 26: 2001-2002 and 2004-2005 Alumni Survey Ratings: Technology
Scale of 1 to 5 with 5 being the best. Notice the improvement from one survey to the next.

Survey	Undergraduate	Graduate
2001-2002	4.6	3
2004-2005	5.0	3.7

Since its inception in 2000, all Technology Education and Trade and Industrial Education candidates have met the NETS-T standards requirement as demonstrated by successful completion of the technology portfolio.

Figure 27: 2001-2006 Principals' Survey Findings As Related to Technology
Scale of 1 to 5 with 5 being the best.

	My technology education teacher is able to effectively:	Mean Rating
1	Provide overall a high quality instructional program.	4.4
4	Use the computer and instructional technology for teaching purposes.	5.0
12	Affect student achievement.	4.2

Samples of work that support the Technology Standards are provided in supporting documentation folders in the Exhibit Room.

Provide Evidence that Candidates Meet the Specialty Area Standards

There are three sets of specialty area standards that apply to the collective Technology Education licensure programs (Technology Education, Trade and Industrial Education, and Standards for the Master's Degree Licensure). To facilitate the organization of this document for readability, these standards are addressed in separate sections, beginning below.

Specialty Area Standards and Indicators for Technology Education

The NCDPI specialty area standards for technology education consist of ten statements that address candidates' instructional and management abilities. Each of the ten statements includes supporting "indicators" that help to illustrate the intent of the standard. These indicators were used in identifying courses and experiences that support each standard. The matrix below includes the standard, a listing of the courses that support the standard, and a description of activities within each course that address the standard.

The undergraduate programs culminate with a capstone of Student Teaching and a product called

the Products of Teaching Candidate's Portfolio.

Figure 28: Cross Reference of Standards and Evidence for the Undergraduate in Technology Education

For reference purposes, the full title of each course within the Major is provided below:

TECH 218 Introduction to Technology
TECH 219 Invention and Innovation
GCS 263 Evolution and Social Implications of Technology Education
TECH 382 Computer Applications for Technological Studies
TECH 412 Introduction to Construction Systems
TECH 413 Introduction to Manufacturing Systems
TECH 414 Introduction to Communication Systems
TECH 415 Introduction to Transportation Systems
TECH 416 Introduction to Biotechnology Systems
TECH 462 Organization and Management of Technology Education
TECH 510 Research and Development in Technological Systems
TECH 566 Technology Education Teaching Methods
TECH 662 Technology Education Course Construction
TECH 672 Curriculum Development Using Microcomputers in Technological Education

Specialty Area Standards	Course	Assessment
Standard 1: Teachers possess knowledge and abilities in Technology Education	TECH 218 TECH 219 GCS 263 TECH 412 TECH 413 TECH 414 TECH 415 TECH 416 TECH 566	Exams and quizzes Content activities and project work in all courses Participate in class discussions Reflect on field experiences
Standard 2: Teachers design, implement, and evaluate curriculum	CUIN 436 GCS 263 TECH 218 TECH 412 TECH 413 TECH 414 TECH 415 TECH 416 TECH 566 CUIN 560	Create lesson plans Create activities Develop instructional materials Evaluate instructional resources Curriculum Analysis assignment
Standard 3: Teachers use a variety of research-based instructional strategies that enhance the teaching and learning process	TECH 218 GCS 263 TECH 566 TECH 662 CUIN 560	Design and Implement Teaching Strategies Create lesson plans based on learning outcomes Evaluate teaching of others
Standard 4: Teachers design, create and manage learning environments and programs that promote technological literacy	TECH 382 TECH 662 TECH 462 CUIN 560	Create facility plans in alignment with learning outcomes Design record keeping tools such as safety documents and assessments Assess the safety of a technology education learning environment Programs plans that incorporate various teaching strategies for various learning styles

Table continued on next page.

Standard 5: Teachers demonstrate instructional and assessment methods that are appropriate for Technology Education programs.	TECH 462 TECH 566 TECH 382 TECH 662 TECH 672 CUIN 560 CUIN 436	Create instruments to monitor student performance Create self-evaluation tools Create cognitive assessments using a variety of test items types Create rubrics to assess classroom projects and activities Maintain a reflective journal
Standard 6: Teachers coordinate the Technology Student Association, career-technical student organization, according to state and national guidelines.	TECH 462 TECH 218	Participate in state TSA conference Serve as coordinators for TSA events Create promotional products for TSA
Standard 7: Teachers use strategies that facilitate student development of workplace knowledge and skills.	TECH 412 TECH 413 TECH 414 TECH 415	▪ Participate in activities that model real-world work activity in electronics, construction, and manufacturing
Standard 8: Teachers integrate career development into the program, include career planning and readiness.	TECH 412 TECH 413 TECH 414 TECH 415 TECH 566	▪ Describe workplace issues such as gender equity in technological fields
Standard 9: Teachers are committed to professional development.	TECH 462 TECH 566 CUIN 560	▪ Discuss the function of a professional development plan ▪ Participate in extracurricular professional activities such as TECA and EPT
Standard 10: Teachers conduct successful Technology Education programs.	TECH 462 TECH 566 TECH 560 TECH 669	▪ Describe the program evaluation process ▪ Create public relations products that can be used to advertise the technology education program ▪ Identify and implement good safety practices in the laboratory, and describe the importance of risk management ▪ Maintain organized records of all work

Figure 29: Student Teacher Ratings, 2003-2006

Item 3.2 – Understands the central concepts, tools of inquiry, and structures of the discipline...

Stdt	Rating from Last Formal Appraisal	Year	Stdt	Rating from Last Formal Appraisal	Year
1	Above Standard from University Supervisor	2006	4	Well Above Standard from University Sprvsr.	2003
1	Above Standard from Cooperating Teacher	2006	4	Well Above Standard from Coop. Teacher	2003
2	Above Standard from University Sprvsr.	2006	5	Above Standard from University Supervisor	2003
2	Above Standard from Cooperating Teacher	2006	5	Above Standard from Cooperating Teacher	2003
3	Well Above Standard from University Sprvsr.	2003	6	At Standard from University Sprvsr.	2003
3	Well Above Standard from Coop. Teacher	2003	6	At Standard from Coop. Teacher	2003

Figure 30: 2001-2002 and 2004-2005 Alumni Survey Ratings: Specialty Area Standards
Scale of 1 to 5 with 5 being the best. Notice the improvement from one survey to the next.

	Standard	Mean Bachelor's 2001-2002	Mean Bachelor's 2004-2005	Mean Master's 2001-2002	Mean Master's 2004-2005
27.	Teaching of technology teaching methods.	4.8	5.0	3.3	4.5
28.	Teaching of the facilities management.	4.8	4.5	3.3	4.0
29.	Teaching of safety management.	4.8	4.5	4.0	4.0
30.	Teaching of discipline and classroom management.	3.0	4.5	3.3	3.8
32.	Experiences for providing ideas for learning activities.	4.8	4.5	3.3	4.0
33.	Teaching of instructional planning.	4.5	5.0	3.0	4.0
34.	Field experiences.	4.1	4.0	2.3	3.0
35.	Student-teaching.	4.25		n/a	
3#.	Extent to which you were taught student assessment.	-	5.0	-	4.0
36.	Student's preparation to use computer and instructional technology for teaching purposes.	4.6	5.0	3.0	3.7
37.	Faculty's encouragement of you to evaluate and reflect on your own learning and teaching.	4.6	5.0	3.6	4.3
38.	Encouragement of your participation in professional activities like TECA, TSA or VICA.	4.8	5.0	4	3.8
39.	Teaching of professionalism, professional history, and educational philosophy.	4.6	4.5	4	4.1
40.	Preparation in the systems of technology or technology content. (Technology Education majors only)	4.8	5.0	4	4.8
41.	Extent to which you were taught about diversity.	3.5	4.0	2.6	3.8
42.	Program on the development of your teaching attitudes and dispositions.	4.3	5.0	3.3	3.3

Figure 31: 2001-2006 Principals' Survey Findings As Related to Specialty Area Standards
Scale of 1 to 5 with 5 being the best.

	My technology education teacher is able to effectively:	Mean Rating
1	Provide overall a high quality instructional program.	4.4
2	Manage safe program facilities.	4.7
3	Manage students and discipline.	4.2
4	Use the computer and instructional technology for teaching purposes.	5.0
5	Assess students and change instruction based on evaluation results.	4.4
6	Sponsor a club like TSA or Skills USA or work with the community.	4.7
7	Address the needs for students from diverse backgrounds.	4.7
8	Address the needs of exceptional children.	4.8
9	Reflect on instructional practices.	4.4
10	Demonstrate positive teaching attitudes and dispositions.	4.8
11	Work with parents and/or families.	4.8
12	Affect student achievement.	4.2

Supporting documentation for each of the NCDPI Specialty Area standards for Technology Education is provided in folders in the Exhibit Room.

Specialty Area Standards and Indicators for Trade and Industrial Education

The NCDPI specialty area standards for trade and industrial education consist of ten statements that address candidates' instructional and management abilities. Each of the ten statements includes supporting "indicators" that help to illustrate the intent of the standard. These indicators were used in identifying courses and experiences that support each standard. The matrix below includes the standard, a listing of the courses that support the standard, and a description of activities within each course that address the standard.

Figure 32: Cross Reference of Standards and Evidence for the Undergraduate in Trade and Industrial Education

For reference purposes, the full title of each course is provided below:
GCS 133 Introduction to Drafting Technology
GCS 234 Computer-Aided-Drafting
ECT 211 Electric Circuits I
GCS 610 Internship in Industry I
GCS 611 Internship in Industry II
TECH 660 Career Development and Work-Based Learning
TECH 661 Workforce Development Program Planning and Management
TECH 670 Introduction to Workplace Training and Development
TECH 671 Methods and Techniques of Workplace Training and Development

Selected Technical Specialty Areas:

Construction Industries: GCS 334, GCS 434, CM 215, CM 216, CM 317, CM 333, CM 412, CM 598

Computer-Aided Drafting/Design Industries: GCS 333, GCS 334, GCS 433, GCS 434, GCS 435, GCS 533, GCS 534, GCS 536, GCS 631, GCS 632, GCS 633, GCS 644

Electronic Industries: GCS 333, ECT 211, ECT 212, ECT 213, ECT 312, ECT 350, ECT 313, ECT 413, ECT 650

Manufacturing Industries: MFG 191, MFG 472, MFG 474, MFG 475, MFG 480, MFG 481, MFG 491, MFG 495, MFG 596

Transportation Industries: MFG 251, MFG 255, MFG 275, MFG 452, MFG 456, MFG 496

Printing and Publishing Industries: GCS 120, GCS 130, GCS 250, GCS 330, GCS 331, GCS 332, GCS 416, GCS 418, GCS 430, GCS 581, GCS 585, GCS 590, GCS 601, GCS 635, GCS 636, GCS 636, GCS 670

Service Industries: as approved by advisor

Please note that technical content knowledge is also supported by the SAC as specified on page 4.

Specialty Area	Course	Assessment
Standard 1: Teachers demonstrate competence in a skilled trade area.	GCS 133 ECT 211 GCS 234 CUIN 560 Other Selected Technical Specialty Areas	▪ Attain satisfactory performance on tests and quizzes within all courses ▪ Adequately complete all required activities, writing, and other project work in all courses ▪ Achieve satisfactory mid-term and exit evaluations on internship and student teaching

Table continued on next page.

Standard 2: Teachers design and implement an instructional program that prepares students for active participation as citizens and workers within the occupational area.	TECH 566 TECH 462 CUIN 560	▪ Assess the structure and content of T&I programs observed through early field placements ▪ Create instructional materials using a variety of media that address educational outcomes on course blueprints ▪ Design an instructional facility that is current and that addresses training needs within the skill area
Standard 3: Teachers analyze the need for Trade and Industrial Education programs, implement a program according to needs, and develop a means to evaluate program results	TECH 462 CUIN 436 TECH 662	▪ Prepare safety evaluations and safety plans for school shops, and identify OSHA standards for the trade area ▪ Develop an equipment maintenance record-keeping system ▪ Describe the process of program evaluation ▪ Identify appropriate professional standards organizations, where applicable, for the trade area ▪ Identify legal issues associated with safety in a classroom setting, and strategies for minimizing risk in the lab
Standard 4: Teachers engage in a continuous process of professional development in the industry.	CUIN 560 TECH 566 GCS 610 GCS 611 Other Technical Specialty Areas	▪ Prepare reflection papers on early field experiences and student teaching in T&I classroom settings ▪ Adequately complete all required activities, writing, and other project work in all courses ▪ Achieve satisfactory mid-term and exit evaluations on internship and student teaching
Standard 5: Teachers demonstrate instructional and assessment methods that are appropriate for Career-Technical Education programs.	CUIN 560 TECH 566 CUIN 436 TECH 671	▪ Create lesson plans and other instructional materials that link to course goals and objectives, using a variety of media ▪ Write internship self-evaluation papers ▪ Write student teaching reflection journal ▪ Create paper and pencil tests and performance assessments, including rubrics, to test student knowledge and skills in the content area ▪ Prepare and deliver skills demonstrations in practice and classroom settings
Standard 6: Teachers coordinate the SkillsUSA, the career-technical student organization, according to state and national guidelines.	TECH 462 CUIN 560	▪ Participate in judging SkillsUSA events at the regional or state annual conferences ▪ Create promotional materials for the CTSO

Table continued on next page.

Standard 7: Teachers use strategies that facilitate student development of workplace knowledge and skills.	TECH 671 TECH 660 CUIN 560	▪ Participate in activities that model real-world work activity in the skilled trade area through advanced course work ▪ Describe work-based learning strategies that can be implemented in T&I programs ▪ Demonstrate classroom management strategies that will help maximize time on task in the classroom ▪ Prepare instructional materials that incorporate current, real-world examples from within the trade area
Standard 8: Teachers integrate career development into the program, include career planning and readiness.	TECH 660 CUIN 560 TECH 462	▪ Participate in activities that model real-world work activity in the skilled trade area through advanced course work ▪ Describe work-based learning strategies that can be implemented in T&I programs ▪ Demonstrate classroom management strategies that will help maximize time on task in the classroom
Standard 9: Teachers are committed to professional development. .	TECH 462	▪ Discuss the function of a professional development plan ▪ Participate in extracurricular professional activities such as EPT
Standard 10: Teachers conduct successful Trade and Industrial Education programs. .	TECH 462 TECH 661 CUIN 560	▪ Describe the program evaluation process ▪ Create public relations products that can be used to advertise the technology education program ▪ Identify and implement good safety practices in the laboratory, and describe the importance of risk management ▪ Maintain organized records of all work

Figure 33: 2001-2002 and 2004-2005 Alumni Survey Ratings: Specialty Area Standards
Scale of 1 to 5 with 5 being the best. Notice the improvement from one survey to the next.

	Standard	Mean Bachelor's 2001-2002	Mean Bachelor's 2004-2005	Mean Master's 2001-2002	Mean Master's 2004-2005
27.	Teaching of technology teaching methods.	4.8	5.0	3.3	4.5
28.	Teaching of the facilities management.	4.8	4.5	3.3	4.0
29.	Teaching of safety management.	4.8	4.5	4.0	4.0
30.	Teaching of discipline and classroom management.	3.0	4.5	3.3	3.8
32.	Experiences for providing ideas for learning activities.	4.8	4.5	3.3	4.0
33.	Teaching of instructional planning.	4.5	5.0	3.0	4.0
34.	Field experiences.	4.1	4.0	2.3	3.0
35.	Student-teaching.	4.25		n/a	
3#.	Extent to which you were taught student assessment.	-	5.0	-	4.0
36.	Student's preparation to use computer and instructional technology for teaching purposes.	4.6	5.0	3.0	3.7
37.	Faculty's encouragement of you to evaluate and reflect on your own learning and teaching.	4.6	5.0	3.6	4.3
38.	Encouragement of your participation in professional activities like TECA, TSA or VICA.	4.8	5.0	4	3.8
39.	Teaching of professionalism, professional history, and educational philosophy.	4.6	4.5	4	4.1
40.	Preparation in the systems of technology or technology content. (Technology Education majors only)	4.8	5.0	4	4.8
41.	Extent to which you were taught about diversity.	3.5	4.0	2.6	3.8
42.	Program on the development of your teaching attitudes and dispositions.	4.3	5.0	3.3	3.3

Figure 34: 2001-2006 Principals' Survey Findings As Related to Specialty Area Standards
Scale of 1 to 5 with 5 being the best.

	My technology education teacher is able to effectively:	Mean Rating
1	Provide overall a high quality instructional program.	4.4
2	Manage safe program facilities.	4.7
3	Manage students and discipline.	4.2
4	Use the computer and instructional technology for teaching purposes.	5.0
5	Assess students and change instruction based on evaluation results.	4.4
6	Sponsor a club like TSA or Skills USA or work with the community.	4.7
7	Address the needs for students from diverse backgrounds.	4.7
8	Address the needs of exceptional children.	4.8
9	Reflect on instructional practices.	4.4
10	Demonstrate positive teaching attitudes and dispositions.	4.8
11	Work with parents and/or families.	4.8
12	Affect student achievement.	4.2

Separate folders for each of the ten NCDPI Specialty Area standards for T&I Education programs can be found in supporting documentation files in the Exhibit Room.

Standards for the Master's Degree License in Technology Education, Trade and Industrial Education, and the Workforce Development Director Add-On License

Teachers granted the master's degree license are expected to have demonstrated knowledge, skills, and dispositions that are derived from research findings, reports of best practice, NC DPI master's standards and the National Board for Professional Teaching Standards. Teachers seeking the Workforce Development Director add-on license are expected to have demonstrated knowledge skills and dispositions that are derived from the NC DPI standards for Principals, Superintendents, Curriculum Directors, and Supervisors. All candidates who enter the Technology Education master's programs already hold the "A" license and are full-time teachers. Additionally, if candidates are not currently working in a classroom setting, they will identify appropriate public school settings in which to complete selected course requirements. Evidence of prior successful teaching experience can also serve as a foundation upon which advanced teaching skills are built. The following is a matrix which cross references the NC DPI master's degree standard and the NC DPI specialty area standard for Workforce Development Director with the courses in which the standard is addressed.

Figure 35: Cross Reference of Standards and Evidence for the Master's in Technology Education, Trade and Industrial Education, and the Workforce Development Director Levels

NBPTS Version of the Standard The candidate will for Knowledge, Skills, and Dispositions:	NC DPI Master's Level Licensure Standard *Note: Standards are not in order, but all are addressed.* The candidate will for Knowledge, Skills, and Dispositions:	Courses and How Each Helps Address the Standard
Create environment of equality/respect for diversity to ensure quality learning. (*DPI Standard A Indicator 5; DPI Standard B Indicators 1&2&4*; NCATE 1 Dispositions; NCATE 4 Learner Diversity; NBPTS IV; DART D; *DPI Standard 23-5 Indicator 2*)	DPI Standard A & Indicator 5 The candidate demonstrates instructional expertise by applying the theoretical, philosophical, and research bases for educational practice in P-12 settings to improve student learning. 5. The candidate understands and links subject matter and students' developmental and diverse needs in the context *of* school settings. DPI Standard B Indicators 1&2&4 The candidate incorporates knowledge of the nature of the learner, learning processes, variations in learning abilities and learning styles, and strategies for evaluating learning into the planning, delivery, and evaluation of instruction. 1. The candidate seeks to increase understanding of and respect for differences in students, including exceptionalities. 2. The candidate designs and delivers instruction that is responsive to differences among all learners. 4. The candidate understands and respects differences between the learning behaviors and outcomes expected in diverse communities. Workforce Development Director DPI Standard 23-5 & Indicator 2 Graduates…promote the success of…students by demonstrating respect for the rights of others. 2. Candidates act responsibly by making …decisions based upon ethical and legal principles...Continued Next Page	CUIN 619, Advanced Learning Theories: Assessment frames and journal entries as they relate to reflection. Research paper if related to reflection. TECH 666, Technological Education Teaching Methods and Internship (new proposed course): Diversity lesson plan; other lesson plans with a section on diversity. Assignment that demonstrates understanding of discipline-related laws. CUIN 729, Diversity Issues in K-12 Schools: All assignments such as textbook analysis. Action research related to diversity. TECH 764, Administration and Supervision of Technological Education: Assignments that demonstrate knowledge of school law. CUIN 768, Teaching and Learning in the Multicultural Classroom: All assignments issued in this course will relate to diversity.

Use assessment to assist students' reflection on their learning and improve instruction. (*DPI Standard A Indicator 2*; NCATE 1 Student Learning; NBPTS VI; DART A; *DPI Standard 23-3 Indicator 2*)	DPI Standard A & Indicator 2 The candidate demonstrates instructional expertise by applying the theoretical, philosophical, and research bases for educational practice in P-12 settings to improve student learning. 2. The candidate designs and modifies instruction and learning environments based on assessment of student learning problems and successes. Workforce Development Director DPI Standard 23-3 & Indicator 2 Graduates…promote the success of…students by managing…in a way that promotes a safe, efficient…environment. 2. Candidates…manage operations…to maximize…accountability.	CUIN 619, Advanced Learning Theories: Assessment frames and journal entries. TECH 662, Technological Education Course Construction: Unit plan. TECH 666, Technological Education Teaching Methods and Internship (new proposed course): Lesson plans with a section on reflection and how to improve instruction next time the lesson is taught. Content test. Safety test. TECH 669, Safety in the Instructional Environment of Technological Education: Safety testing and documentation CUIN 721, Advanced Methods and Internship: Assessment rubric included in lesson design assignment. CUIN 729, Diversity in the k – 12 Classroom: Action research assignment if related to assessment. TECH 762, Evaluation of Technological Education Programs: Career and occupational outlook unit curriculum analysis assignment. Other unit assignments in which student studies assessment and improvement of instruction.
Analyze instructional effectiveness with self-reflection. (*DPI Standard B Indicator 3;* NCATE 1 Professional Pedagogical; NBPTS X; DART R; *DPI Standard 23-3 Indicator 2*)	DPI Standard B Indicator 3 The candidate incorporates knowledge of the nature of the learner, learning processes, variations in learning abilities and learning styles, and strategies for evaluating learning into the planning, delivery, and evaluation of instruction. 3. The candidate reflects on and modifies instruction that fosters student learning. Workforce Development Director DPI Standard 23-3 & Indicator 2 Graduates…promote the success of…students by managing…in a way that promotes a safe, efficient…environment. 2. Candidates…manage operations…to maximize…accountability.	CUIN 619, Advanced Learning Theories: Assessment frames and journal entries as they relate to reflection. Research paper if related to reflection. TECH 666, Technological Education Teaching Methods and Internship (new proposed course): Lesson plans with a section on reflection and how to improve instruction next time the lesson is taught. TECH 717/718, Special Problems I and II: National Board of Professional Teaching Standards report. CUIN 721, Advanced Methods and Internship: Critical thinking assignment. Reflective essay assignment. TECH 762, Evaluation of Technological Education Programs: Any of the unit assignments in which the student ends up reflecting on instruction via assessment. TECH 767, Research and Literature in Technological Education: Proposal for research study. TECH 768, Technological Seminar: Completed research document consisting of the proposal chapters 1 – 3 and chapter 4, Findings, and chapter 5, Conclusions and Recommendations.

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Use technology to enhance teaching & learning. (*DPI Standard A Indicator 6*; NCATE 1 Pedagogy Content; DART T; *DPI Standard 23-2 Indicator 5*)	DPI Standard A & Indicator 6 The candidate demonstrates instructional expertise by applying the theoretical, philosophical, and research bases for educational practice in P-12 settings to improve student learning. 6. The candidate uses technology to create learning environments that support students' learning. Workforce Development Director DPI Standard 23-2 & Indicator 5 Graduates…support…by applying best practices to student learning…and professional development…. 5. Candidates…implement…programs by…promoting technology…	GCS 636, Electronic Imaging in Distance Learning: Web-based development projects. TECH 666, Technological Education Teaching Methods and Internship (new proposed course): Technology section in required lesson plans. Media enhanced micro teaching. GCS 670, Electronic Imaging in Graphic Communication: Web-based development projects. TECH 767, Research and Literature in Technological Education: Proposal presentation in PowerPoint. TECH 768, Technological Seminar: Completed research document presentation in PowerPoint. CUIN 7XX, Instructional Technology Elective at the 700 Level: Multimedia projects. Web-based development projects. Instructional technology design models.
Personalize instruction and apply knowledge of human development to meet student needs. (DPI Standard A Indicator 5; NCATE 1 Professional Pedagogical; NBPTS I)	DPI Standard A & Indicator 5 The candidate demonstrates instructional expertise by applying the theoretical, philosophical, and research bases for educational practice in P-12 settings to improve student learning. 5. The candidate understands and links subject matter and students' developmental and diverse needs in the context *of* school settings.	CUIN 619, Advanced Learning Theories: Mnemonics. Comparison frames. TECH 666, Technological Education Teaching Methods and Internship (new proposed course): Required lesson plans. Required micro teaching videos. Field experience report.
Use core knowledge of industry and academics to develop curriculum, instruction, learning, & assessment. (DPI Standard D Indicators 1&2&3&4; NCATE 1 Content Knowledge; NBPTS II)	DPI Standard D & Indicators 1-4 The candidate demonstrates advanced depth and breadth of knowledge and skills in the academic discipline and in education. 1. The candidate analyzes and articulates relationships between and among theory, philosophy, research findings, and current practice as appropriate to the discipline. 2. The candidate analyzes and articulates relationships between and among theory, philosophy, research findings, and current practice across disciplines. 3. The candidate demonstrates theoretical and applied advanced content knowledge. 4. The candidate understands current knowledge and trends in education.	TECH 619, Construction Systems Curriculum analysis. All industry/technology models/projects. TECH 620, Manufacturing Systems Curriculum analysis. All industry/technology models/projects. TECH 621, Communication Systems Curriculum analysis. All industry/technology models/projects. TECH 622, Transportation Systems Curriculum analysis. All industry/technology models/projects. TECH 662, Technological Education Course Construction: Unit plan. Curriculum analysis unit assignments. TECH 666, Technological Education Teaching Methods and Internship (new proposed course): Unit plan. Lesson plans. Micro teaching videos. Teacher made content test. Teacher made safety test.

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Manage the laboratory for independent, group, and contextualized learning. (*DPI Standard B Indicator 5*; NCATE 1 Pedagogical Content; NBPTS III; *DPI Standard 23-3 Indicator 3*)	DPI Standard B Indicator 5 The candidate incorporates knowledge of the nature of the learner, learning processes, variations in learning abilities and learning styles, and strategies for evaluating learning into the planning, delivery, and evaluation of instruction. 5. The candidate creates and maintains a classroom environment conducive to learning in which all learners feel welcome and can be successful. Workforce Development Director DPI Standard 23-3 & Indicator 3 Graduates…promote the success of…students by managing…in a way that promotes a safe, efficient…environment. 3. Candidates manage resources by focusing...priority to student learning and safety	TECH 662, Industrial Education Course Construction: Design of the instructional program. TECH 666, Technological Education Teaching Methods and Internship (new proposed course): Lesson plans. Micro teaching videos. Unit plan. TECH 669, Safety in the Instructional Environment of Technological Education: Lab design. Lab management plan. Safety instruction documentation system. CUIN 721, Advanced Teaching Methods: Unit plan. Assignments on African Americans, native Americans, etc. TECH 764, Administration and Supervision of Technological Education: School law related to lab safety and management. NC DPI One Year Administrative Internship: Products of experiences from Internship for Workforce Development Director which involve supporting programs designed for diverse learners
Foster experiential, conceptual, and performance learning that integrates academics. (DPI Standard A Indicator 8; NCATE 1 Professional Pedagogical; NBPTS V)	DPI Standard A & Indicator 8 The candidate demonstrates instructional expertise by applying the theoretical, philosophical, and research bases for educational practice in P-12 settings to improve student learning. 8. The candidate demonstrates the ability to integrate literacy across the curriculum.	TECH 619, Construction Systems Curriculum analysis. All industry/technology models/projects. TECH 620, Manufacturing Systems Curriculum analysis. All industry/technology models/projects. TECH 621, Communication Systems Curriculum analysis. All industry/technology models/projects. TECH 622, Transportation Systems Curriculum analysis. All industry/technology models/projects. TECH 666, Technological Education Teaching Methods and Internship (new proposed course): Unit plan. Lesson plans. Micro teaching videos. Teacher made content test. Teacher made safety test.
Develop student career decision-making, employability skills. (NBPTS VII; NCATE 1 Dispositions)	No DPI equivalent standard	TECH 619, Construction Systems Curriculum analysis. All industry/technology models/projects. TECH 620, Manufacturing Systems Curriculum analysis. All industry/technology models/projects. TECH 621, Communication Systems Curriculum analysis. All industry/technology models/projects. TECH 622, Transportation Systems Curriculum analysis. All industry/technology models/projects. TECH 660, Career Development and Work Based Learning: Community data mining/survey assignment. TECH 762, Evaluation of Technological Education Programs: Career and occupational outlook unit curriculum analysis assignment.

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Develop understanding of competing demands of the world of work. (NBPTS VIII; NCATE 1 Dispositions)	No DPI equivalent standard	TECH 660, Career Development and Work Based Learning: Career related assignments. TECH 661, Workforce Development Program Planning and Management: Occupational outlook related assignments.
Develop students' affective domain skills, values, and ethics. (NBPTS IX; NCATE 1 Dispositions)	No DPI equivalent standard	TECH 618, Technology Education for Special Needs Students: Drug awareness assignment. TECH 666, Technological Education Teaching Methods and Internship (new proposed course): Lesson plans showing application of student affective domain teaching and learning; Bloom's Taxonomy applications. Products of experiences from Internship and teaching. CUIN 729, Diversity in the K12 Schools: Assignments relating to students appreciating the diversity of other students.
Work with partners to improve school-to work transitions. (DPI Standard E Indicator 3; NCATE 1 Dispositions; NCATE 1 Professional Pedagogical; NBPTS XI)	DPI Standard E & Indicator 3 The candidate engages in continued professional development and provides leadership at the classroom, school, and community levels, and within the profession. 3. The candidate participates, formally and informally, in appropriate professional communities.	TECH 618, Technology Education for Special Needs Students: Discussion and other assignments that may be related to the importance of school to work transitions for students with certain special needs. TECH 660, Career Development and Work Based Learning: Career development plan. TECH 661, Workforce Development Program Planning and Management: Program needs standards related assignments. TECH 666, Technological Education Teaching Methods and Internship (new proposed course): Products of experiences from Internship and teaching.
Work with others to improve schools & advance knowledge. (*DPI Standard E Indicators 2&4&5*; NCATE 1 Dispositions; NCATE 1 Professional Pedagogical; NBPTS XII; *DPI Standard 2 Indicator 3*)	DPI Standard E & Indicators 2, 4, 5 The candidate engages in continued professional development and provides leadership at the classroom, school, and community levels, and within the profession. 2. The candidate seeks, evaluates, and as appropriate, acts on input from educators, parents, students, and other members of the community for continuous improvement. 4. The candidate participates in collaborative leadership to address educational problems. 5. The candidate provides leadership in working with parents and strengthening the home-school partnership. Workforce Development Director DPI Standard 23-2 & Indicator 3 Graduates…support…by applying best practices to student learning…and professional development…. 3. Candidates…assist…personnel in…applying best practices…	TECH 662, Industrial Education Course Construction: Selection of teaching strategies. TECH 660, Career Development and Work Based Learning: Community data mining/survey assignment. TECH 666, Technological Education Teaching Methods and Internship (new proposed course): Products of experiences from Internship and teaching. CUIN 721, Advanced Methods: Products of experiences from Internship and teaching.

Chart continued on next page.

Work with others including families to achieve common goals for all students. (*DPI Standard E Indicators 2&3&4&5*; NCATE 1 Dispositions; NCATE 1 Professional Pedagogical; NBPTS XIII; *DPI Standard 23-1 Indicator 2 Standard 23-4 Indicators 1, 2, 3*)	DPI Standard E & Indicators 2, 3, 4, 5 The candidate engages in continued professional development and provides leadership at the classroom, school, and community levels, and within the profession. 2. The candidate seeks, evaluates, and as appropriate, acts on input from educators, parents, students, and other members of the community for continuous improvement. 3. The candidate participates, formally and informally, in appropriate professional communities. 4. The candidate participates in collaborative leadership to address educational problems. 5. The candidate provides leadership in working with parents and strengthening the home-school partnership. DPI Workforce Development Director Standard 23-4 & Indicators 1, 2, 3 Graduates…have knowledge and ability to promote…students by collaborating with families and other community members responding to diverse needs. Workforce Development Director DPI Standard 23-1 & Indicator 2 Graduates…facilitate...articulation…of a school…vision…supported by the school community. 2. Candidates…manage operations…to maximize…accountability.	TECH 661, Workforce Development Program Planning and Management: Program needs standards related assignments. TECH 662, Industrial Education Course Construction: Design of the instructional program. TECH 666, Technological Education Teaching Methods and Internship (new proposed course): Products of experiences from Internship and teaching. CUIN 721, Advanced Methods: Products of experiences from Internship and teaching. TECH 764, Administration and Supervision of Technological Education: Coordination with the school community related products. NC DPI One Year Administrative Internship: Products of experiences from Internship for Workforce Development Director which involve supporting programs designed for diverse learners
Conduct related action research. (DPI Standard A Indicator 4; DPI Standard C Indicators 1&2&3; DPI Standard E Indicator 1; NCATE 1 Content Knowledge)	DPI Standard A & Indicator 4 The candidate demonstrates instructional expertise by applying the theoretical, philosophical, and research bases for educational practice in P-12 settings to improve student learning. 4. The candidate incorporates findings from educational literature into school and classroom strategies to improve student learning. DPI Standard C & Indicators 1, 2, 3 The candidate uses research to examine and improve instructional effectiveness and student achievement. 1. The candidate critically reads and applies historical and contemporary educational literature, including theoretical, philosophical, and research materials. 2. The candidate uses student and school performance data to improve student learning, classroom processes, and school practices. 3. The candidate investigates educational problems through action research. DPI Standard E & Indicators 1 The candidate engages in continued professional development and provides leadership at the classroom, school, and community levels, and within the profession. 1. The candidate initiates professional inquiry though reading, dialogue, reflection, professional development, and action research.	CUIN 619, Advanced Learning Theories: Action research assignment. TECH 717/718, Special Problems I and II: Special problem report. CUIN 729, Diversity in the K – 12 Classroom: Action research assignment. TECH 767, Research and Literature in Technological Education: Proposal for research study. TECH 768, Technological Seminar: Completed research document consisting of the proposal chapters 1 – 3 and chapter 4, Findings, and chapter 5, Conclusions and Recommendations.

Chart continued on next page.

Graduates…promote the success of all students by articulating…social…legal…contexts… (*DPI Standard 23-6 Indicators 1, 2, 3*)	Workforce Development Director DPI Standard 23-6 & Indicators 1, 2, 3 Graduates…promote the success of all students by completing an internship… 1. Candidates articulate policies... 2. Candidates analyze…social...contexts… 3. Candidates communicate beyond the school...policies…	TECH 660, Career Development and Work Based Learning: Community data mining/survey assignment. TECH 661, Workforce Development Program Planning and Management: Program needs standards related assignments. NC DPI One Year Administrative Internship: Products of experiences from Internship for Workforce Development Director which involve supporting programs designed for diverse learners TECH 764, Administration and Supervision of Technological Education: Coordination with the school community related products. Assignments that demonstrate knowledge of school law.
Graduates…promote the success of all students by completing an internship… (*DPI Standard 23-7 Indicator 1*)	Workforce Development Director DPI Standard 23-7 & Indicator 1 Graduates…promote the success of all students by completing an internship… 1. Candidates complete a full-time internship...	NC DPI One Year Administrative Internship: Products of experiences from Internship for Workforce Development Director which involve supporting programs designed for diverse learners

Figure 36: 2001-2002 and 2004-2005 Alumni Survey Ratings: Specialty Area Standards

Scale of 1 to 5 with 5 being the best. Notice the improvement from one survey to the next.

	Standard	Mean Master's 2001-2002	Mean Master's 2004-2005
27.	Teaching of technology teaching methods.	3.3	4.5
28.	Teaching of the facilities management.	3.3	4.0
29.	Teaching of safety management.	4.0	4.0
30.	Teaching of discipline and classroom management.	3.3	3.8
32.	Experiences for providing ideas for learning activities.	3.3	4.0
33.	Teaching of instructional planning.	3.0	4.0
34.	Field experiences.	2.3	3.0
35.	Student-teaching.	n/a	
3#.	Extent to which you were taught student assessment.	-	4.0
36.	Student's preparation to use computer and instructional technology for teaching purposes.	3.0	3.7
37.	Faculty's encouragement of you to evaluate and reflect on your own learning and teaching.	3.6	4.3
38.	Encouragement of your participation in professional activities like TECA, TSA or VICA.	4	3.8
39.	Teaching of professionalism, professional history, and educational philosophy.	4	4.1
40.	Preparation in the systems of technology or technology content. (Technology Education majors only)	4	4.8
41.	Extent to which you were taught about diversity.	2.6	3.8
42.	Program on the development of your teaching attitudes and dispositions.	3.3	3.3

When asked on the program's alumni survey if the advanced candidate thought that the program prepared the candidate WELL for National Board Certification:
8 responded Yes and 0 responded No.

Figure 37: 2001-2006 Principals' Survey Findings As Related to Master's Degree Standards
Scale of 1 to 5 with 5 being the best.

	My technology education teacher is able to effectively:	Mean Rating
1	Provide overall a high quality instructional program.	4.4
2	Manage safe program facilities.	4.7
3	Manage students and discipline.	4.2
4	Use the computer and instructional technology for teaching purposes.	5.0
5	Assess students and change instruction based on evaluation results.	4.4
6	Sponsor a club like TSA or Skills USA or work with the community.	4.7
7	Address the needs for students from diverse backgrounds.	4.7
8	Address the needs of exceptional children.	4.8
9	Reflect on instructional practices.	4.4
10	Demonstrate positive teaching attitudes and dispositions.	4.8
11	Work with parents and/or families.	4.8
12	Affect student achievement.	4.2

The graduate programs culminate with a capstone product called Products of Teaching Candidate's Portfolio.

Sample Products of Learning, which provide evidence for all Master's Degree License standards, are provided with the supporting documentation for the Technology Education programs in the Exhibit Room.

Provide Evidence that Candidates Can Work with Families to Support Student Learning

Several standards address the importance of working with families, including Core Standard 3, Diversity Standard 3, and Technology Standard 5, and National Board of Professional Teaching Standards - Standard VIII. Candidates learn about and work with families in several ways throughout the curriculum. Some of these opportunities include:

TECH 566, Industrial Education Teaching Methods includes lesson on the role of Maslow's Hierarchy of Needs and the positive and negative influence of the family. It also directly addresses way to include the family in the education process. Our standard lesson plan format forces students to consider how to include the family in each lesson written. The 60 hour internship also provides opportunities for candidates to work with families.

CUIN 560 Student Teaching candidates have numerous opportunities to work with families to support student learning. They participate in parent-teacher conferences, and may interact with the parents regarding the students' behavior or academic progress. They may prepare and send home communications regarding the educational program during their student teaching semester. In addition, the topic of working with families to support student learning is typically addressed in various forms at the student teacher seminar held about mid-term.

The table below illustrates Technology Education student teacher's performance related to families as measured by items on the student teaching formal appraisals.

Figure 38: Student Teachers Rated on Working with Families since Last Visit

Item 7 – Foster relationships with school colleagues, parents, and community...to support students.

Stdt	Rating from Last Formal Appraisal	Year	Stdt	Rating from Last Formal Appraisal	Year
1	Above Standard from University Supervisor	2006	4	Well Above Standard from University Sprvsr.	2003
1	At Standard from Cooperating Teacher	2006	4	Well Above Standard from Coop. Teacher	2003
2	Well Above Standard from University Sprvsr.	2006	5	Above Standard from University Supervisor	2003
2	Above Standard from Cooperating Teacher	2006	5	At Standard from Cooperating Teacher	2003
3	Well Above Standard from University Sprvsr.	2003	6	Well Above Standard from University Sprvsr.	2003
3	Well Above Standard from Coop. Teacher	2003	6	Well Above Standard from Coop. Teacher	2003

Figure 39: 2001-2006 Principals' Survey Findings as Related to Working With Parents and Families

Scale of 1 to 5 with 5 being the best.

	My technology education teacher is able to effectively:	Mean Rating
11	Work with parents and/or families.	4.8
12	Affect student achievement.	4.2

Evidence that Candidates Can Work with Families: Graduate Program

Because nearly all graduate candidates are full-time teachers in their own classrooms, they have many opportunities and requirements to communicate and work with families as part of their day-to-day teaching practice. Those candidates who are not currently working in their own classrooms have opportunities to demonstrate their capacity to work with families. Examples are included in Figure 40 below.

Figure 40: Working with Families

Work with others including families to achieve common goals for all students. (*DPI Standard E Indicators 2&3&4&5;* NCATE 1 Dispositions; NCATE 1 Professional Pedagogical; NBPTS XIII; *DPI Standard 23-4*)	DPI Standard E & Indicators 2, 3, 4, 5 The candidate engages in continued professional development and provides leadership at the classroom, school, and community levels, and within the profession. The candidate seeks, evaluates, and as appropriate, acts on input from educators, parents, students, and other members of the community for continuous improvement. The candidate participates, formally and informally, in appropriate professional communities. The candidate participates in collaborative leadership to address educational problems. The candidate provides leadership in working with parents and strengthening the home-school partnership. DPI Workforce Development Directors Standard 23-4 & Indicators 1, 2, 3 Graduates…have knowledge and ability to promote…students by collaborating with families and other community members responding to diverse needs.	TECH 661, Workforce Development Program Planning and Management Design of new programs to meet the needs of the community. CUIN 721, Advanced Methods: Products of experiences from Internship and teaching. TECH 764, Administration and Supervision of Technological Education: Coordination with the school community related products. NC DPI One Year Administrative Internship: Products of experiences from Internship for Workforce Development Director which involve supporting programs designed for diverse learners

Samples of work that support candidates' ability to work with families to support student learning are provided in supporting documentation folders in Exhibit Room.

Evidence of graduate candidates' ability to work with families can be found in the Products of Learning found in the Exhibit Room.

Candidate Qualifications

Standard 1A: Undergraduate Candidate Qualifications

Teacher candidates have at least a minimum 2.50 cumulative grade point average at the time of admission to and completion of an initial teacher preparation program. Undergraduate degree-seeking candidates attain passing scores on the PPST (PRAXIS I) tests for admission to the teacher education program. Progression in the program is limited until formal admission to the program has been granted. Formal admission to the program occurs at least one semester prior to student teaching.

Identify Program Admission Criteria

For freshmen to be accepted in a teacher program, TEC recently agreed students must have an 860 SAT. The Technology Education Program, like all undergraduate teacher education programs at North Carolina A & T State University, requires that students meet four formal checkpoints. Students must:

- Hold a cumulative GPA of at least 2.8, with no exceptions granted
- Pass an interview which ascertains the applicant's teaching knowledge, teaching dispositions, and personal attributes.
- Have completed and passed with acceptable scores the Praxis I
- Complete the 16 Personality Factors Test

These requirements are noted on the program check sheet, in the published University catalog, in the *Undergraduate Teacher Education Handbook* and on advising sheets provided to students.

Describe How Progress is Limited until Formal Admission Has Been Granted

Progression of potential undergraduate candidates in teacher education programs is limited to introductory courses until formal admission requirements have been satisfied. The University registration system is set so that candidates cannot register for restricted education courses until they are fully admitted into teacher education. Formal admission to teacher education must occur at least one semester, excluding summer, prior to student teaching. This process is supervised by the advisor and the Unit. Application forms are required for admission to Teacher Education, internship placements, and student teaching.

Students must receive a minimum grade of "C" in all courses within the Technology Education professional education sequence. If the cumulative GPA falls below 2.8, student progress in the program will be delayed until/unless the GPA improves. No student is allowed to enroll in *CUIN 560* until receiving a satisfactory score on Praxis II. Prior to enrolling in *CUIN 560,* candidates must meet with the program coordinator to discuss and get approval for the student teaching recommended placement.

Describe How Progress is Monitored to Ensure that Formal Admission Occurs No Later than One Semester Prior to Student Teaching

The School of Education, in conjunction with the University Registrar's Office, maintains control over enrollments in CUIN 560. The unit has worked with the Registrar's office to place registration controls on CUIN 560 Student Teaching so that candidates are not able to register for student teaching unless they are fully admitted to teacher education one full semester, excluding summer, prior to the student teaching semester. More importantly, the program advisor meets regularly with students in the program for advisement purposes, and advising records that show expected date of student teaching are maintained for each student.

Standard 1B. Licensure-Only Candidates

Requirements for licensure-only candidates are clearly described. In determining requirements, consideration is given to alternative means of demonstrating the knowledge and competencies for licensure.

Describe Program Policies and Procedures for Licensure-Only Candidates

In the context of this standard, Licensure-Only will include the following alternatively licensed teachers and technology professionals. A person with a(n):

- Provisional 22 license who is currently employed as a teacher.
- Provisional LL license who is currently employed as a teacher.
- Provisional 4L license who is currently employed as a teacher.
- Provisional 3L license who is currently employed as a teacher.
- Temporary Permit license who is currently employed as a teacher.
- Alternative license that is not a Provisional 35 license who is currently employed as a teacher.

(At this institution, all of the candidates described above are commonly referred to as "lateral entry.")

- A bachelor's or master's degree in some area of technology and who may have work experience in a technology field.

(At this institution, the person described immediately above is commonly referred to as "licensure-only.")

This is because each of these people need to have the Dean of the School of Education complete Form V, Verification of Approved Program Completion when he or she completes the licensure program.

This context does not apply to teachers who work in cooperation with a Regional Licensing Center or who possess a Provisional 35 license. While these people are welcome to enroll in courses at NC A&T SU, their matriculation and performance in the classroom is not under the purview of the NC DPI visiting team. This category of student/candidate does not have to provide Form V from this institution upon completion of requirements.

As a courtesy, the Dean of the School of Education and the Teacher Education Council decided to allow teachers with a 2.5 or higher GPA gain admission to the licensure-only programs. However, the candidate must maintain a 2.8 GPA in order to be admitted to Teacher Education and complete a licensure-only program. If a student indicates that he or she is currently teaching, he or she must provide the advisor with a copy of the alternative license and the letter that accompanied it from NC DPI. A program of study is established for the student. After the first 9 semester hours of course work, the student must apply for admission to Teacher Education.

Admission to Teacher Education requires:

- A 2.8 or higher GPA.
- Pass an Interview which ascertains the applicant's teaching knowledge, teaching dispositions, and personal attributes such as neatness, professionalism, judgment, etc.
- Conduct a 16 Personality Factors Test which measures a person's personal qualities which may correspond to various teaching dispositions such as empathy, sensitivity, etc.
- The applicant completes page one of the application and provides it to the advisor. On page one the applicant describes extra curricular activities, the school where he or she is teaching, and whether or not he or she has ever been convicted of a crime or had a teaching license revoked.

- The advisor and the department chairperson complete page two of the Teacher Education application, during which time they review the applicant's GPA and status regarding the Interview and the 16 Personality Factors Test; the advisor and the chairperson must recommend admission or recommend non-admission on this page.
- The advisor submits the application to the Teacher Education program housed in the School of Education.

The School of Education will notify the candidate of admission and will notify the advisor.
At this point, if the candidate is a student in the MAT, he or she will be eligible to enroll in methods courses.

Upon completion of the program of study, including a 2.8 GPA or higher, a "C" or better grade in each course, a passing score for Praxis II, internship and/or student teaching, or satisfactory teaching evaluations by his or her principal, then the candidate is cleared to apply for a Class A teaching license. The School of Education will apply for the license on behalf of the candidate.

Other than Traditional Coursework, Describe Means through Which Licensure-Only Candidates Can Demonstrate They Meet State Standards

If a licensure-only applicant does not want to pursue a degree such as a master's degree, the University will allow him or her to apply as a Post Baccalaureate Student (PBS; meaning a none degree seeking student). The University's process for making application for admission to the University as a PBS is shorter compared to the process for applying to a degree program. The PBS does not qualify for financial aid, however.

Licensure-only students with a 2.5 GPA or better do not have to take Praxis I.

This program has now managed to streamline the Teacher Education Interview and 16 Personality Factors Test by allowing for telephone conference call interviews and online administration of the 16 Personality Factors Test. As an online program, this has been a large step forward in better serving licensure-only students. However, for in-person Interviews and 16 Personality Factors Tests, the School of Education accommodates students by offering special dates and times during which students may take the Interview and Test.

If a licensure-only candidate is currently teaching in a school, then student teaching will be waived so long as the candidate provides successful teaching evaluations conducted by his or her principal.

If a licensure-only candidate has a technology-related degree and/or 300 hours or more of technology-related work experience, then the program will not force the candidate to participate in 300 to 600 hours of technical internship and/or technical coursework usually unrelated to the process of teaching. (However, it is important to note that Technology Education, Teaching licensure-only students have to take two of the four technology systems courses, which are content-pedagogy courses that ensure teachers develop activity ideas.)

The Products of Teaching Portfolio does not only have to include products developed while in courses. It may also include products developed while teaching at school during the period of matriculation in the licensure program.

For internship, if a licensure-only candidate is currently teaching in the schools, then he or she does not have to quit work to participate in the 60 field experience. Instead, he or she will conduct a self-

observation and work with a mentor teacher at the school where they both teach.

For micro-teaching, the licensure-only teaching candidate is welcome to videotape instruction in his or her own classroom or laboratory instead of teaching to a class of fellow methods students who pretend to act as a public school class.

All candidates in the Technology Education program are required to pass the Praxis II Specialty Area exam. There is no specialty area exam for T&I licensure, but documented work experience is required to forego technical internship.

Samples that document candidate qualifications and licensure only information are provided in supporting documentation folders in Exhibit Room.

Assessment System and Evaluation

Standard 2: Assessment System and Evaluation

The program has an assessment system that collects and analyzes data on candidate and graduate performance. An annual review of the specialty area is conducted and the resulting data are applied, as appropriate, to program improvement.

Describe the system for the collection and analysis of data on candidate performance

The most basic part of the program review process is annual benchmarking of candidates.

The benchmarking points for the undergraduate program are admission, admission to Teacher Education, admission to student teaching, student teaching, and graduation. The benchmarking points for the graduate program are admission to the University program, annual (including admission to Teacher Education), and graduation.

To gather this information, the coordinators look it up on the University's computer system, receive data from the unit, and are provided items such as portfolios by the students. Now, however, the coordinators will be able to even look up portfolios on the system because we have switched from a CD based portfolio to a web based portfolio located at College Live Text. For other data, the coordinators administer surveys, and they analyze the feedback.

Candidate Benchmarking and Transitions

For the undergraduate program, the annual benchmarks and transitions are:

Benchmarking
Admission SAT score of 860 or higher, admission GPA set at the University minimum.

Transition Gateway: Admission to the University

Benchmarking
GPA of 2.8 or higher, Pass Praxis I, 16 Personality Factors Test, Teacher Education Interview, Submit Teacher Education Application

Transition Gateway: Admission to Teacher Education

Benchmarking
GPA, Praxis II (Dr. Rhodes offers Praxis II review sessions), Submit Student Teaching Application

Transition Gateway: Admission to Student Teaching

Benchmarking
GPA, Student Teaching Appraisals, Technology Portfolio

Transition Gateway: Graduation
GPA, Products of Teaching Portfolio

Intermittent Benchmarking

Principals' survey for teacher performance

For the graduate program, the annual benchmarks and transitions are:

Benchmarking
2.6 GPA or higher at admission, admission recommendations, GRE, hold an earned Class A license

Transition Gateway: Admission to the University

Annual Benchmarking, Admission to Teacher Education, Passing TECH 717/718 Portfolio
GPA or 3.0 or higher at benchmark point, whether or not the candidate has been admitted to Teacher Education
Get admitted to Teacher Education
Pass TECH 717/718 which is the portfolio course

Transition Gateway: Student becomes an Advanced Candidate

Annual Benchmarking
Comprehensive final exam grade, Products of Teaching Portfolio P/F, GPA of 3.0 or higher

Transition Gateway: Graduation and Advanced Licensure, M License

Intermittent Benchmarking
Performance on the job through principals' survey

Benchmarking summaries and letters are included in the evidence box.

Figure 43: Benchmarking Summary Data for the BS Programs in Technology Education *Licensure Concentrations:* 2004-2005

Students with unsatisfactory progress: 4
Students with satisfactory progress: 11

Number admitted to Teacher Education: 3
Number not admitted to Teacher Education: 12

The average GPA for BS students with satisfactory progress is: 3.71

The average GPA for BS students with unsatisfactory progress is: 1.82

Of those students who have made unsatisfactory progress, none had previously been admitted to Teacher Education.

None of these students had attempted Praxis II.

Praxis I Pass Rates; BS

Year	Fail	Pass	
2002	0	1	
2003	2	0	
2004	3	3	
2005	2	1	
2006	2	0	The Bridge Program has been put in place to address the failure rate of Praxis I.

Figure 44: Benchmarking Summary Data for the BS Programs in Technology Education *Licensure Concentrations*: 2005-2006

Students with satisfactory progress: 13
Students with unsatisfactory progress: 6
Of those students who have made unsatisfactory progress, none had previously been admitted to Teacher Education.
Praxis I not attempted and should not yet have attempted: 3
Praxis I not attempted but should have attempted: 1
Praxis I passed: 8
Praxis I not passed: 7

Number admitted to Teacher Education: 6
Number not admitted to Teacher Education: 12

The average GPA for BS students with satisfactory progress: 3.6
The average GPA for BS students with unsatisfactory progress: 2.0

Praxis II Passed: 3

Figure 45: Benchmarking Summary Data for the MS in Technology Education and Its Four Concentrations: 2003-2004

Students with unsatisfactory progress: 3
Students with satisfactory progress: 17

Students with unsatisfactory progress have been directed to develop a plan of improvement in cooperation with Dr. Childress, the Graduate Coordinator.

The average GPA for students with satisfactory progress is: 3.8

The average GPA for students with unsatisfactory progress is: 1.8

All students had satisfactory recommendations as part of their admissions.

Not all GPAs from previous degrees were reported on the University System.

Not all GRE scores were posted on the University System.

Therefore, the Technology Education program will need to start recording that information as applications come in.

Update, January 26, 2005
Three students are being processed in order to dismiss them from the Master of Science in Technology Education for failing to comply with their academic improvement plans or for failing to comply with the Department's request to establish and academic improvement plan.

Figure 46: Benchmarking Summary Data for the MS and Lateral Entry Programs in Technology Education *Licensure Concentrations*: 2004-2005

Students with unsatisfactory progress: 2; 1 MS, 1 Lateral
Students with satisfactory progress: 16; 6 MS, 10 Lateral
Graduated MS: 6

All MS students who graduated passed their Products of Teaching Portfolios and Comprehensive Final Exams.

The lateral student with unsatisfactory progress has been informed that he no longer qualifies for entry into Teacher Education and may no longer pursue his lateral program at A&T.

The MS student with unsatisfactory progress has been informed that the School of Graduate Studies has been asked to dismiss her from the

MS.

The average GPA for MS students with satisfactory progress is: 3.85

The average GPA for MS students who graduated is: 3.96

The average GPA for Lateral students with satisfactory progress is: 3.83

The GPAs for students with unsatisfactory progress are: 2.3 (lateral), 2.7 (MS)

Of the 10 Lateral Entry students with satisfactory progress, and who have had adequate opportunity, seven have not yet applied for admission to Teacher Education. They have been informed in their benchmarking letters that enrollment holds will be placed on their accounts to prevent further enrollment in Spring, 2006 unless they get admitted.

All students had satisfactory recommendations as part of their admissions.

Not all MS students had GRE scores, but this is because of one year when the program did not require GRE scores. That error was quickly corrected.

Figure 47: Benchmarking Summary Data for the MS and Lateral Entry Programs in Technology Education *Licensure Concentrations*: 2005-2006

Students with unsatisfactory progress: 6; 0 MS, 6 Lateral
Students with satisfactory progress: 33; 12 MS, 21 Lateral
Graduated MS: 5

All MS students who graduated passed their Products of Teaching Portfolios and Comprehensive Final Exams.

The lateral students with unsatisfactory progress have been informed that they no longer qualify for entry into Teacher Education and may no longer pursue their lateral programs at A&T unless their GPAs are brought to above a 2.8.

The average GPA for MS students with satisfactory progress is: 3.83

The average GPA for MS students who graduated is: 3.66

The average GPA for Lateral students with satisfactory progress is: 3.61

The GPAs for Lateral students with unsatisfactory progress are: 2.25

Of the 21 Lateral Entry students with satisfactory progress, and who have had adequate opportunity, seven have not yet been admitted to Teacher Education. They have been informed in their benchmarking letters that enrollment holds will be placed on their accounts to prevent further enrollment in Spring, 2006 unless they get admitted and that receiving Form V depends on their being admitted.

All students had satisfactory recommendations as part of their admissions.

Not all MS students had GRE scores, but this is because of one year when the program did not require GRE scores. That error was quickly corrected.

Six students were determined to be listed as the wrong major or have not yet contacted Dr. Childress so he can determine if they need Form V or if they are Provisional 35 students, who are like teachers who go through the Regional Licensing Center for a license. These six students have been told in their benchmark letters to change majors and/or contact Dr. Childress to determine a correct program of study, and their GPAs are not included in the averages cited above in the benchmarking summary.

Describe the formal annual review of the program

At the heart of the program assessment system is the advisory committee. It meets twice per academic

year and reviews improvements needed by the program. Advisory committee minutes are included in the evidence box. This is when the program formally is evaluated. Advisory committee members are provided with collected data and then provide recommendations for program improvement.

Describe the Program and Program Operations Assessment

Program and program operations are assessed by the advisory committee, alumni surveys, principal surveys, graduate students responses to program evaluation item integrated with the comprehensive final exam, student evaluations of teaching, chairperson's department assessment.

When there have been a sufficient number of candidates graduating, an alumni survey is sent out. There have been two surveys conducted since the last NC DPI team visit.

When a sufficient number of students write back giving the program permission to survey their principals, a principals' survey is conducted. There has been one principals' survey conducted since the last NC DPI visit.

Survey summaries and surveys are included in the evidence box.

A question asking candidates how the program can be improved is asked on every comprehensive final exam administered (graduate level only).

All data is collected, analyzed, summarized, and changes are made to the program based on decisions by the faculty, decisions of the advisory committee, and any overall recommendations from the unit since summary data is shared with it. A summary of this feedback is located in the evidence box.

The program is also evaluated by the chairperson and a program coordinator when it is placed on the low producing list by the University. The report written to defend the undergraduate program is included in the evidence box.

Finally, the chairperson evaluates all programs in the department in an annual review of the department. That report is also included in the evidence box.

Evidence of what the program has done to improve based on data collected during program assessment is also located in the evidence box.

Summarize what the data that have been collected and analyzed indicate

Summary of Program Assessment Data Collected Since the Last NC DPI Visit

Figure 48: 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.
Return Rate: 70%

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 is required)
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. (We now have three field experiences and student teaching; student teaching is now all semester)
2 bachelor's - More discipline management instruction (We beefed up the lab management and discipline unit)
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. (We are making students write plans earlier)
1 bachelor's and 1 master's – More curriculum development. (We are making students analyze the curriculum earlier)
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, but this summary data was provided to the unit.)

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 41are 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

Chart continued on next page.

1 means poor and 5 means superior.

	Rate the:	Mean Bachelor's	Mean Master's
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
27.	Teaching of technology teaching methods.	4.8	3.3
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
31.	Professor's evaluation of your performance.	4.8	4
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
36.	Student's preparation to use computer and instructional technology for teaching purposes.	4.6	3
37.	Faculty's encouragement of you to evaluate and reflect on your own learning and teaching.	4.6	3.6
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
40.	Preparation in the systems of technology or technology content. (Technology Education majors only)	4.8	4
41.	Extent to which you were taught about diversity.	3.5	2.6
42.	Program on the development of your teaching attitudes and dispositions.	4.3	3.3
43.	Technology Education of VIE program overall.	4.5	3.6

The undergraduate program appears to need no improvements based on the Likert type rating scale above except for discipline. 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) which may lateral entry teachers take.
- 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.)
- Field experience was addressed by adding a new course to the MAT, our new degree, which will strongly emphasize an internship for graduate candidates. The MS students can participate.

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.)

Figure 49: Summary Report for the Technology Education Program Survey for 2004 - 2005

The alumni responding to this survey, sent out in the fall semester of the 2004 – 2005 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: 2 of 3 immediately graduated undergraduate students.
9 of 14 immediately graduated graduate students.
Response Rate: 64% efforts were made to increase the response rate.

Item 3: When asked if he or she began or continued teaching after graduation all respondents indicated that they did begin or continue to teach.

Item 4: When asked if he or she is still teaching all respondents indicated that they are still teaching. One graduate student took one year off.

Item 5: When asked if he or she took the Praxis II test:
6 responded yes
4 responded no
It should be noted that the Trade and Industrial Education and Training and Development for Industry students are not required to take Praxis II.

Of those 6 that indicated that they took Praxis II, the following scores were reported:
670 bachelor's degree, Pass
580 bachelor's degree, Pass
690 master's degree, Pass
640 master's degree, Pass
540 master's degree, Not Passing
In North Carolina, a 580 is required to pass.
One respondent could not recall his or her score.

Item 6: When asked if he or she felt prepared to teach upon graduating from the program:
Yes: 2 bachelor's degree
No: 0 bachelor's degree
Yes: 7 master's degree
No: 0 master's degree

All comments follow:
bachelor's – Excellent preparation and knowledge supplied by both schools
master's – Reinforced my teaching
master's – Well prepared
master's – Program well designed
master's – Gave good opportunity for understanding teaching
master's – Program made me versatile
master's – Valid program

Item 7: When asked what the program could do to better prepare him or her for public school teaching:
Summarized comments
2 bachelor's and 2 master's - More time student teaching (We now teach the whole semester)
1 master's - More special education pedagogy (We now offer additional TECH special ed course)
2 master's - More discipline management instruction (We now added a better unit on managing the entire instructional process)
1 master's - Learn to apply the research of others instead of learning to conduct research ourselves (no action)
1 master's - More activity ideas (As a result, Trade and Industrial Education majors will have to take systems courses in the newly proposed MAT degree. These are the courses that provide many activity ideas.)

Item 8: When asked what experiences or courses prepared him or her well:
Summarized comments
1 bachelor's – Student teaching
1 bachelor's and 4 master's – Technology Education Teaching Methods
1 bachelor's and 2 master's – Systems courses (content-pedagogy)
2 master's – Research methods Tech 767 and 768
1 master's – Diversity in the classroom

Item 9: When asked what experiences or courses prepared him or her poorly:
Summarized comments
2 bachelor's and 4 master's – None
1 master's – Coop course (This is taken to mean Tech 717/718, Special Problems. As a result, this course has been revised.)

Items 10 through 13: 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.)

Item 14: When master's degree graduates were asked if they were prepared well to conduct action research:
Yes: 8
No: 0
All comments
Nothing to improve; research experience was tedious but useful.

Item 15: When asked if completing the master's degree helped prepare the graduate for National Board Certification:
Yes: 8
No: 0

Items 16 through 38: 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 30, 31, 35, and 36 are directly related to the Conceptual Framework of the Teacher Education unit: DART – Diversity, Assessment, Reflection, and Technology.

Please note further that:
Item 21 rates teaching methods
Item 25 rates professor feedback
Item 34 rates content-pedagogy
Item 38 is the overall rating of the program

1 means poor and 5 means superior.

	Rate the:	Mean Bachelor's	Mean Master's
16.	Quality of instruction in the program.	4.5	4.2
17.	Appropriateness of the content/objectives.	4.5	4.1
18.	Qualification of the program professors.	5	4.5
19.	Advisement by program professors.	5	4.5
20.	Program facilities.	4	3.5
21.	Teaching of technology teaching methods.	5	4.5
22.	Teaching of the facilities management.	4.5	4
23.	Teaching of safety management.	4.5	4
24.	Teaching of discipline and classroom management.	4.5	3.8
25.	Professor's evaluation of your performance.	5	4.5
26.	Experiences for providing ideas for learning activities.	4.5	4
27.	Teaching of instructional planning.	5	4
28.	Field experiences.	4	3
29.	Student-teaching.	4	4
30.	Student's preparation to use computer and instructional technology for teaching purposes.	5	3.7
31.	Faculty's encouragement of you to evaluate and reflect on your own learning and teaching.	5	4.3
32.	Encouragement of your participation in professional activities like TECA, TSA or VICA.	5	3.8
33.	Teaching of professionalism, professional history, and educational philosophy.	4.5	4.1
34.	Preparation in the systems of technology or technology content. (Technology Education majors only)	5	4.8
35	Extent to which you were taught student assessment.	5	4
36.	Extent to which you were taught about diversity.	4	3.8
37.	Program on the development of your teaching attitudes and dispositions.	5	3.3
38.	Technology Education of VIE program overall.	4.5	4.25

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:

- Development of teaching attitudes and dispositions. (A unit on teaching ethics has been added to TECH 666, Methods and Internship for the master's)
- Field experience (This may be beyond the program's control. At the master's level, field experience is controlled by the instructor teaching CUIN 721; however, now TECH 666 has been added as Methods and Internship for the master's).
- Program facilities. (We have just gotten a commitment from the Department to upgrade computers and add more learning stations)

Finally, when asked to write any additional comments:
1 bachelor's – Diversity instruction only covered gender; needs to cover different races. (This issue will be addressed in Tech 566 through a revision to the course.)
1 master's – Dr. Glenz and Dr. Childress were good instructors and support people.

It is important to note the significant improvement in ratings from the 2002 survey to this 2005 survey.

Figure 50: Summary of Technology Education Student Program Improvement Feedback from Comprehensive Final Exams, 2003-2004

1. I have to say that my progression through this program has been almost seamless due to the fact that the structure of the courses tie into one another.
2. Each course builds from the other. This has truly helped me in acquiring the knowledge.
3. Dr. Childress is always available and sells the strengths of this program through his knowledge of the content as well as his evident love for this program.
4. In the beginning I thought that being so far from the home campus would be a negative. However, each course was laid out in such a way that it became a non-factor.
5. The use of discussion boards and group work plays a key role in giving a sense of community in a distance education environment.
6. A couple of the courses however simply gave a syllabus and due dates for tests and projects.
7. In conclusion, this has been an experience that will forever guide my teachings.
8. I can't thank this university enough for the opportunity to grow in so many different ways.
9. I have gained role models, subject knowledge, relationships, and the confidence to become the best that I can be in this field.
10. I feel strongly that a student should be tracked.
11. I would recommend an auto-emailer go out to the graduation students prior to each semester as steps to graduate.
12. A monthly or weekly seminar can be provided by chat room, on-site class, and teleconferencing.
13. Allow input from professionals outside the classroom.
14. I would like to have used more case studies for review and evaluation.
15. Because Blackboard is available, the possibility of introducing an international/multicultural… professional to participate in the course from another culture, country, etc.
16. It is highly suggested that we review the modules used in the vocational education program. While they were very helpful for visual aid, examples, and full of information, some were outdated. (Note: These modules were taken out of circulation.)
17. Honestly, there are not many changes that I see the program needing. The most important change that I feel has and will impact the program has already taken place.
18. Allowing the program to shift to offering the option of taking classes online is the most wonderful move that this department has made.
19. I am convinced that as the word gets out into the "teaching world" that teachers can actually get a master's degree in technology education within the confinements of their own home the program will grow tremendously.
20. I feel that the broad perspective of courses covered in the program truly do allow one to complete the program with an overall package of what it takes to be well rounded as an excellent classroom teacher.
21. Even though it is an online program, major classes should have to meet face-to-face three times per semester.
22. Some professors contact the online students each week and provide feedback.
23. Some professors do not take advantage of the modes of communication available to the online course system and do not communicate enough with the students.

24. There should be an orientation course that helps students understand program requirements like the Products of Teaching Portfolio. (This has been addressed by a redesign of TECH 717/718.)
25. Program provided good blend of theory and practice.
26. Flexible schedule.
27. Please do not add an internship unless a student is in need of gaining experience on an individual basis.
28. Some School of Education courses did not deliver online instruction correctly.
29. The Technology Education program is a great program.
30. Offering courses online has been an improvement to the department.
31. Sometimes core classes are not offered when you need them; like when you need a specific course close to graduation.

Figure 51: Summary of Technology Education Student Program Improvement Feedback from Comprehensive Final Exams, 2004-2005

1. ...overall, my experience has been just as rewarding as the on-campus classes if not even more beneficial.
2. ...threaded discussions in the online environment invites other students to discuss their true beliefs and feelings about curriculum related issues without feeling intimidated or embarrassed.
3. Some programs [CUIN] offered most of the classes online but not all. This still may cause problems...
4. My advisor has been very helpful in explaining what needs to be and how to do.
5. I am thrilled with the online graduate program for technology education. Being able to further my education is extremely important to me and the online format, in light of my proximity to campus, for the entire degree made it possible.
6. I was able to communicate extensively with my peers and instructors, making the distance disappear. I knew what was expected and the timeframe in which my assignments were due, and I knew where to locate pertinent information for each course.
7. ...inviting some practicing professionals to speak with/to the students and deliver lectures will boost the awareness. This will also, provide inexperienced students with internship opportunities in the industry.
8. Establishing a student chapter of the ASTD...
9. The department should have industry contacts available.
10. The amount of work given in Dr. Childress' class at the very most is overwhelming, but doable; however, all the projects are memorable and enjoyable and allow the student to give insight on the textbook as well as real life application.
11. Though Dr. Childress' offers very detailed notes, the ability to contact him as needed and for the most part as much as needed, other professors in Technology Education do not call back if at all, respond slowly if at all, and give very minimally detailed notes.
12. The instructors in my program are great. They are easy to keep in touch with.
13. The feedback with my online classes was better than I expected.
14. I was nervous and frustrated at first because of the unfamiliar online ways of learning, but the instructors (especially my advisor) worked with me and I became comfortable with the process.
15. I would recommend this program to anyone who teaches a Trade and Industrial Education.

Figure 52: Summary of Technology Education Student Program Improvement Feedback from Comprehensive Final Exams, 2005- 2006

1. I came to appreciate the many great attributes offered by the program. With the faculty and staff serving as the heart of this program, the capabilities of our seasoned professors are at best, first-rate. Most of the faculty conduct themselves as professionals in an institution of higher learning, but at the same time display a very important human characteristic needed to be an educator, compassion.
2. The resources and technology requirements provided or recommended by the instructors for the TECH and GCS courses have been efficient in preparing students to serve in the classroom or workplace.
3. Technology wise, this program is above standard when it comes to preparing students for the classroom.
4. The availability of the courses for the program of study has been easily accessible and catering to working students, exceeding my expectations.
5. Due to the fact that the program is as advanced in technology with distance learning, it is easy for students to get lost in the shuffle between the department and the School of Education, causing him or her to miss important information

dealing with his or her program of study, graduation and ultimate goals beyond the program (such as licensures updating). Within the department there should be a better system of keeping students informed with not just the Department of Graphics Communications Systems and Technological Studies issues but with School of Education information as well.

6. I believe the Technology Education program is an excellent program.
7. Being able to complete my coursework online made a huge difference in my ability to obtain a masters degree. Because of my work and family schedule, it was almost impossible for me to attend the traditional face-to-face instructional classes.
8. It did require a lot of studying and self-discipline.
9. I found all of the NCAT instructors to be knowledgeable, helpful, considerate of their students, and fair.
10. The courses I took were very well constructed and although, I was at a distance, I still felt, as I was part of the traditional classroom because of the interactive chats and discussions with other classmates.
11. My only recommendation would be that more online programs be offered to students like me with hectic schedules. I've really enjoyed the experience!
12. As a student who is employed full time I appreciate the opportunity to take a number of my classes online.
13. There is one criticism that I have regarding the distance learning program. My primary concern is the lack of communication by some of the professors from which I have taken classes. There have been times when weeks would pass between any sort of announcement or assignment and emails relating to course content were seemingly ignored. I am very intuitive and consider myself to be low maintenance but when I ask a question of a professor I do expect a response. The fact that a course is offered online should not remove the responsibility of the professor to stay in contact with his or her students. That is my only recommendation for improving the graduate program.
14. The graduate program in which I enrolled was mostly on-line. I was very pleased with the program because of its flexibility.
15. The discussion board allowed me to voice my opinions and view opinions of classmates. This service was quite interesting because I consider myself somewhat of a quiet person. However, it was required that we participate and from this requirement, more information was transmitted.
16. A set structure for each professor would be the only recommendation that I would suggest because files were put in different places according to professors. For example, one professor may put most of the curriculum work in the course materials file and another professor may put the work into the tools file. It became frustrating at times because if you were not familiar with the professor's method of organization, some work may go undone. If all professors would address where you could find assignments within the announcements board, maybe confusion would be lessened.
17. The graduate program at North Carolina A & T State University provides a unique experience between the professional world and academia. I enjoyed the fact that courses were offered online. It provided an opportunity for the full time employee to incorporate a heavy academic workload into their many personal responsibilities.
18. Some instructors take away from the overall effectiveness of online courses. Often times the students feel like they are always in a gray area. This can be a result from assignments being unclear and slow responses from instructors via email. Online instructor interaction would be my biggest area of improvement of the graduate program.
19. As a graduate student at NC A&T State University I had no idea what to expect in the way of curriculum development. I started out in the Adult Education program and after the first semester found that it was not the program for me. When reading about the program I understood us to be able to be at least a community college instructor once we completed the program. To my surprise I was told during the second month of class that in order to be a community college instructor I had to have 18 graduate hours in a discipline. I was not going to gain that from the Adult Education so I did research on the Technology Education program. Though I was unable to go into the Technology Education Teaching discipline I was able to complete the Training and Development program. This gave me the hope of continuing to teach.
20. I really liked the way that the program was set up. We had courses from the Technology Department as well as from the Education Department, which I felt made me a very well rounded student.
21. I also liked the fact that most of my classes were online. This made it easier to work and do family activities and not have to go to class certain days of the week.
22. If I had to make any changes to the program I would first suggest that the first meeting for the online classes be in person. I had a Class in the education department, which had a mandatory first class on campus meeting. This meeting gave students the chance to answer questions, gather into groups for group projects and decide if they were going to stay in the class or drop. This meeting also took care of all the preliminary housekeeping such as contact information.
23. The next change that I would make is to have set days in which class work is due. It was hard when certain teachers posted assignments to blackboard at random times. I think that some kind of uniformity would have helped me to stay

more organized. Organization was a big key to success in the program therefore the more consideration professors gave to helping their students stay organized the more successful the student will be.

24. Overall I think that the Technology Education curriculum was well developed and well planned. I thoroughly enjoyed the program and was happy with my change in major. I would recommend the Training and Development concentration to any of my friends perusing a master's degree.
25. Personally, I am please with the overall direction of the School of Technology and the Graduate program. All of the professors have been accommodating and available to assist with questions or concerns either through e-mail or phone calls.
26. There is one thing that I would recommend; that is at least one class meeting for the on-line classes for social interaction, networking and an overview of what to expect from the on-line course. Because everyone's interpretation of the information list on the blackboard is different, this would give the class an idea of expectations and alleviate unnecessary phone calls and e-mails to the professors.

Figure 53: Summary of Technology Education Student Program Improvement Feedback from Comprehensive Final Exams, Summer and Fall, 2006

1. I find that the material that I compiled during my three years as a student did not adequately support the material that I see in the [comprehensive exam] questions. I do feel that I had a rigorous education however. [Nevertheless, the student did pass the comprehensive final exam.]
2. Many instructors also failed to provide feedback to any material sent to them or even to provide discussion with other classmates during the term.
3. [In a specifically named course] absolutely no feedback on any assignments was provided.
4. I however, feel that the support that was provided by a few choice professors should be a shining example for others in the program. Dr. Childress, Dr. Whitaker, and Dr. Gilbert all provided assignments back with a grade and their own reflections/ feedback. This was greatly appreciated and helpful in guiding me through their classes.
5. If one area can be improved over the next year I think that this could be the most important one. Please take the time to add this requirement [Live Text Portfolio] to your courses and also check to see that it is done.
6. A positive aspect of the GCS and TECH courses for this program of study is its asynchronous delivery. For many adult learners, distance education is preferred.
7. Many of the courses were well planned and professionally delivered. However, the need for communication within some courses needs to be improved.
8. TECH 762: Evaluation of Technology Education Programs [taught by Dr. Rhodes] is a great course. The modules are exceptional and have added to my understanding of this area tremendously.
9. The most positive learning experience was from TECH 767 and 768. The knowledge gained from these courses was invaluable. Many of the fears associated with research and the writing of a literature review were alleviated, providing a path for successful completion of the two courses. However, the success of this course must be attributed to its teacher, advisor, and mentor to many, Dr. Childress. His calm demeanor and exceptional delivery of the concepts are valued by this student as well as many others.
10. The graduate program in which I enrolled was mostly on-line. I was very pleased with the program because of its flexibility. The discussion board allowed me to voice my opinions and view opinions of classmates. This service was quite interesting because I consider myself somewhat of a quiet person. However, it was required that we participate and from this requirement, more information was transmitted.
11. A set structure for each professor would be the only recommendation that I would suggest because files were put in different places according to professors. For example, one professor may put most of the curriculum work in the course materials file and another professor may put the work into the tools file. If all professors would address where you could find assignments within the announcements board, maybe confusion would be lessened.
12. All of the professors are accommodating and available to assist…through emails or phone calls.
13. I would recommend that at least one class [per semester, per course be face-to-face for orientation.]

Content knowledge is assessed in a wide variety of ways, most importantly in all courses taken within the Department. Many courses are lab-based, so there is a combination of paper and pencil and performance assessments used. This achievement is reflected in the Products of Teaching Portfolios. Additionally, the Praxis II specialty area exam for Tech Ed gives an indicator of content knowledge. Scores for Tech Ed program completers are shown below.

Figure 54: Aggregated Praxis II Pass Rates for the Specialty Area Since Last Visit

	2005-2006*			2004-2005		2003-2004		2002-2003	
Test Name	Students Taking Exam	Percent-age Passing 1st Try	Percent-age Passing 2nd Try	Students Taking Exam	Percent- age Passing	Students Taking Exam	Percent- age Passing	Students Taking Exam	Percent-age Passing
Tech Ed Undergrad	1	0	100	0	-	0	-	3	100
Alternatively Licensed**	9	90	-	9	100	7	100	4	100
Unit Summary	-	-	100	-	100	-	100	-	93

* There is no specialty area Praxis II or other exam required for Trade and Industrial Education.

** Alternatively Licensed Praxis II scores were reported to the program on a voluntary basis. Data is based only on Praxis II reports provided by the students.

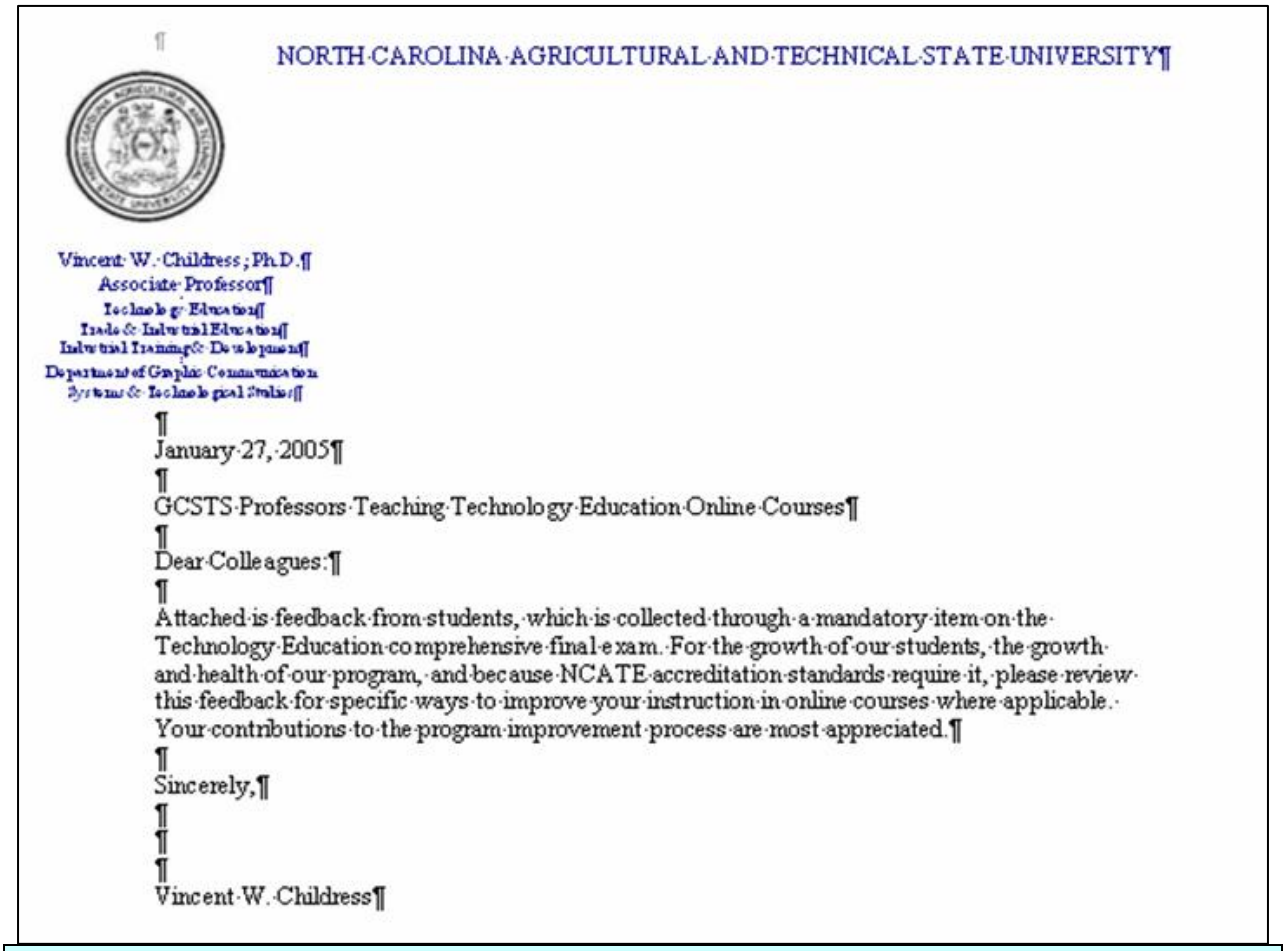
Identify improvements in the program and program operations made on the basis of the data

In order to implement some of the changes needed as indicated by comprehensive exam feedback, the following memo (Figure 55) was sent to program faculty and the department chairperson. Additionally, the following things were done to improve based on data.

1. CUIN 102 was added to provide more practice for preparing for Praxis I.
2. We are making students write lesson plans earlier in TECH 412 through 621, the systems courses or content-pedagogy courses, and in CUIN 301 and 400 which are field experience courses.)
3. We are making students analyze the curriculum earlier in the systems courses.
4. We added the Workforce Development Director concentration in order to focus the coursework on the directorship and passing Praxis II test 410/administration.)
5. Added Diversity lesson for TECH 566
6. Improved discipline and lab management for TECH 566
7. Added a reading on school discipline and the law for TECH 566
8. TECH 666 program now has an enhanced field experience for graduate students.
9. T&I students have to take the systems courses at the undergraduate level and in the MAT in order to get activity ideas to use with the students.
10. CUIN 560, Student Teaching, now gets students out to the classroom so they teach all semester.
11. We are now offering TECH 618, a technology education special education course.
12. A unit on teaching ethics has been added to TECH 666, Methods and Internship for the master's
13. Added a unit to all courses on how to use College Live Text, but this was especially tailored for TECH 717/718, our new online Products of Teaching Portfolio format.
14. Added a unit on how to pursue National Board Certification to TECH 717/718.
15. Added a unit on the conceptual framework just to be thorough. This improvement was not based on data.
16. The following memo was sent to all professors of TECH courses in order to share MS students' comments especially the comments about professors not being available to help them.
17. The suggested activities for the field experiences have been revised based on feedback.

18. Created new policy for offering face-to-face meetings for online courses that require lab work such as TECH 619, 620, 621, and 622.
19. Created new policy for required face-to-face meetings to test out or proctored testing out for machine safety for the online course, TECH 669, Safety in the Instructional Environment of Technological Education.
20. Created new policy for requiring online methods students for TECH 566 who are undergraduate, on-campus students to team with other undergraduate methods classes in order to have meaning micro teaching sessions that will be videotaped and evaluated by their respective professors.
21. Added optional live chats to online methods classes.
22. In cooperation with DPI, we have added the Bridge Program so that students will be better prepared to pass Praxis I.
23. The TEC has changed the admission policy for freshmen to requiring an SAT of 860 or better so that freshmen and sophomores will be better prepared to pass Praxis I.

Figure 55: Memo of Program Improvement to Faculty



NORTH CAROLINA AGRICULTURAL AND TECHNICAL STATE UNIVERSITY

Vincent W. Childress, Ph.D.
Associate Professor
Technology Education
Trade & Industrial Education
Industrial Training & Development
Department of Graphic Communication
Systems & Technological Studies

January 27, 2005

GCSTS Professors Teaching Technology Education Online Courses

Dear Colleagues:

Attached is feedback from students, which is collected through a mandatory item on the Technology Education comprehensive final exam. For the growth of our students, the growth and health of our program, and because NCATE accreditation standards require it, please review this feedback for specific ways to improve your instruction in online courses where applicable. Your contributions to the program improvement process are most appreciated.

Sincerely,

Vincent W. Childress

Samples documents referred to in the assessment system are provided in supporting documentation folder in Exhibit Room.

Program Capacity

Standard 3: Field Experiences and Clinical Practice

The program and its school partners design, implement, and evaluate field experiences and clinical practice so that teacher candidates and other school personnel develop and demonstrate the knowledge, skills, and dispositions necessary to help all students learn.

Standard 3A: Field Experiences and Clinical Practice

Sequentially planned field experiences for undergraduate degree-seeking candidates begin early in a candidate's program and culminate in a continuous and extended minimum ten-week period of student teaching in the area in which the candidate is seeking licensure. All field experiences are supervised and formal evaluations involving university faculty, cooperating teachers, and candidates occur as appropriate. (Note: Service as a teacher assistant does not fulfill the requirements for student teaching.)

Describe the Early Field Experiences and the Sequence in Which They Occur

There is a continuous sequence of field experiences prior to student teaching. CUIN 301 Social Foundations of Education provides a 20 hour field experience for the pre-candidate. CUIN 400, Educational Psychology, provides a 40 hour field experience for candidates, and TECH 566 provides a 60 hour field experience for candidates and licensure-only/lateral entry candidates and teachers. Involvement with students increases in frequency as the level of the field experience increases. Therefore, the CUIN 301 experience involves less interaction with students than does the CUIN 400 experience. The student is expected to help with tutoring and lab management tasks in the CUIN 400 experience. In the TECH 566 field experience, the cooperating teacher is encouraged to allow the intern to teach some lessons by late in the experience, and the intern helps students on a regular basis during that experience. The entire experience is designed to help candidates develop knowledge, skills, and dispositions needed by effective teachers. The suggested activities listed in the field experience handbook for the various levels was recently revised.

Ensuring that candidates are provided field experiences at each level of school for which the license qualifies them

The Technology Education and Trade & Industrial Education teachers are qualified to teach both the middle school and high school levels. Therefore, if the intern has had a middle school experience in CUIN 301 and CUIN 400, then we make sure that the TECH 566 field experience is conducted at the high school level. If it is possible, we try to have the TECH 566 or TECH 666 intern student teach with the same cooperating teacher from that field experience. If by the time the candidate is ready to student teach he or she has only had experience at one level, then the student teaching is conducted at the other level, thus ensuring that the candidate has experience at each level for which the license qualifies him or her.

Describe the Student Teaching Requirement, Including Length of Time and Setting, For Those Seeking an Initial Teaching License

Candidates complete a 15-week student teaching experience in a Tech Ed or T&I program under the guidance of a cooperating teacher and two university supervisors (one from the unit and the academic supervisor from the Technology Education program). At the beginning of the experience, candidates observe and assist in the classroom. They then gradually assume classes until they are teaching the full load, which they do for a minimum of six weeks before gradually turning classes back to the cooperating teacher. During the student teaching experience, candidates complete weekly reflective journals, finalize their technology portfolios, prepare lesson plans, and participate in seminars with their peers and university supervisors. Candidates are observed throughout student teaching by the cooperating teacher, and typically are observed a minimum of five times by their supervisor. Observation reports are completed at each formal observation, and mid-term and exit evaluations are completed by the supervisor and cooperating teacher.

For those seeking advanced licensure through the graduate program, field experiences are required, although these will be much less structured than the undergraduate experience. In most cases, candidates teach full time in their own classrooms, and complete a variety of assignments focused on planning and evaluating instruction. In cases where candidates do not teach full time, an individual plan of work is established that engages them in a local school setting. All advanced candidates complete an observation report which causes them to reflect on their own practice. Non-teaching, licensure-only candidates complete a 10-week, full time internship in which the cooperating teacher allows them to teach. However, we have not had such a candidate matriculate to the point of internship. Plans are being put in place for this to occur.

Describe the Involvement of P-12 Partners in Field Experiences and Clinical Practice

Program faculty, the unit's Director of Field Experiences, and school-based partners share in developing learning experiences for candidates. Having Professional Development School Partners in place helps this process run smoothly and collaboratively. These activities range from planning the field experience, to collaboration on evaluation tools used for the field experience, to troubleshooting any difficulties that may arise. Joint meetings are held for the academic supervisors and cooperating teachers and student teachers once per semester. At the school sites, consultations are held between university supervisors and cooperating teachers, both formally and informally, to monitor progress of student teachers. Cooperating teachers also help evaluate technology portfolios, units of instruction, and lesson plans, as well as assist the unit supervisor in assigning the final grade for the course.

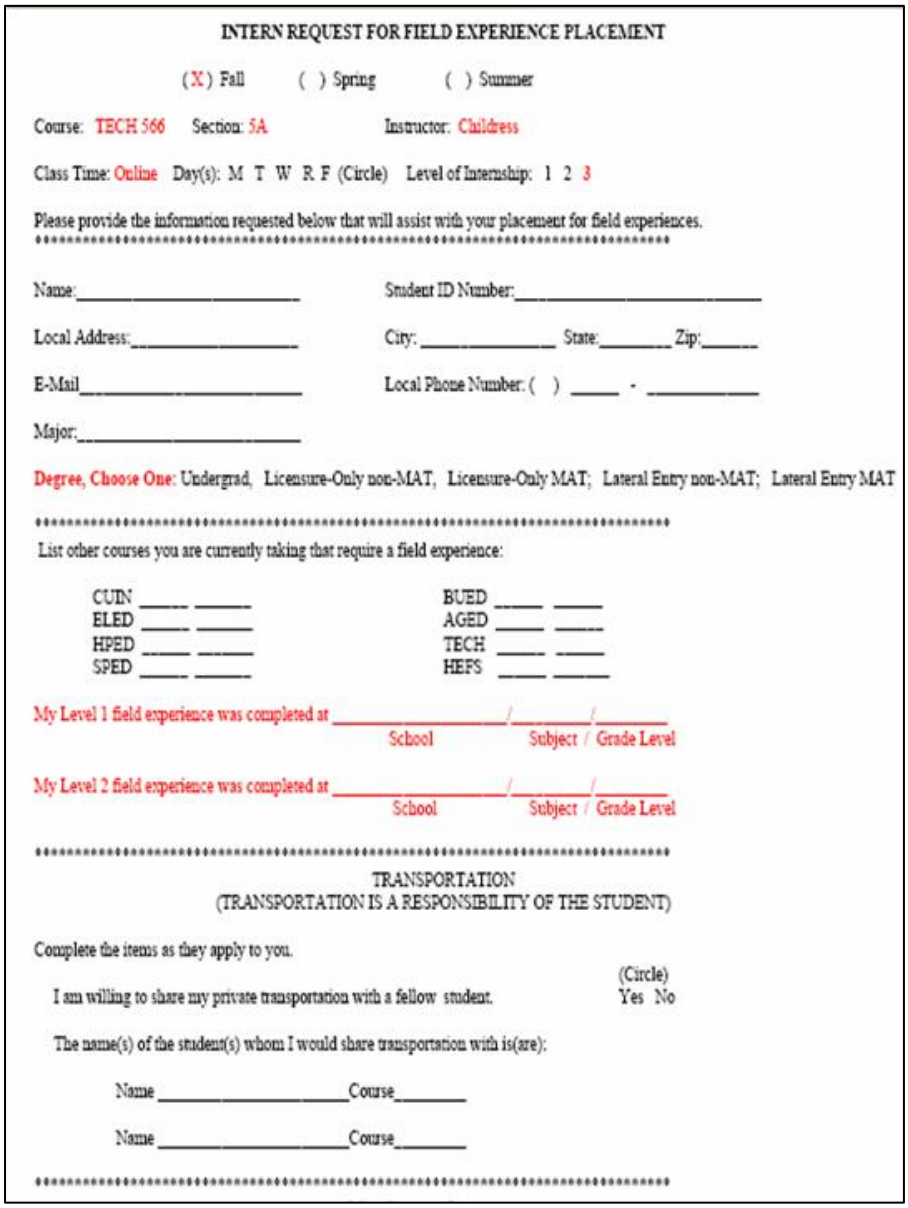
Identify the Criteria and Processes Used for Making Field Placements

To qualify for placement in a field experience at and above the CUIN 400 level, the candidate must be admitted to Teacher Education, which means that he or she has a GPA of 2.8, passed the 16 Personality Factors Test, and passed the Teacher Education Interview, was reviewed by the advisor and department chair, and recommended by them for admission to Teacher Education. Once the candidate has enrolled in CUIN 400 and TECH 566 or TECH 666, then he or she completes a field experience application. The professor for the respective course considers the placement and makes a recommendation to the Director of Field Experiences and Student

Teaching. She, in turn, secures the placement with the cooperation of the school's principal and cooperating teacher.

The Technology Education and Trade & Industrial Education teachers are qualified to teach both the middle school and high school levels. Therefore, if the intern has had a middle school experience in CUIN 301 and CUIN 400, then we make sure that the TECH 566 field experience is conducted at the high school level. If it is possible, we try to have the TECH 566 intern student teach with the same cooperating teacher from that field experience. If by the time the candidate is ready to student teach he or she has only had experience at one level, then the student teaching is conducted at the other level, thus ensuring that the candidate has experience at each level.

Figure 56: The following is a photo of the field experience placement application.



INTERN REQUEST FOR FIELD EXPERIENCE PLACEMENT

(X) Fall ( ) Spring ( ) Summer

Course: TECH 566 Section: 5A Instructor: Childress

Class Time: Online Day(s): M T W R F (Circle) Level of Internship: 1 2 3

Please provide the information requested below that will assist with your placement for field experiences.

****

Name:_____ Student ID Number:_____

Local Address:_____ City:_____ State:_____ Zip:_____

E-Mail_____ Local Phone Number: ( ) _____ - _____

Major:_____

Degree, Choose One: Undergrad, Licensure-Only non-MAT, Licensure-Only MAT; Lateral Entry non-MAT; Lateral Entry MAT

****

List other courses you are currently taking that require a field experience:

CUIN _____ _____	BUED _____ _____
ELED _____ _____	AGED _____ _____
HPED _____ _____	TECH _____ _____
SPED _____ _____	HEFS _____ _____

My Level 1 field experience was completed at _____/_____/_____
School Subject / Grade Level

My Level 2 field experience was completed at _____/_____/_____
School Subject / Grade Level

****

TRANSPORTATION
(TRANSPORTATION IS A RESPONSIBILITY OF THE STUDENT)

Complete the items as they apply to you.

(Circle)
I am willing to share my private transportation with a fellow student. Yes No

The name(s) of the student(s) whom I would share transportation with is(are):

Name _____Course_____

Name _____Course_____

****

Describe the Procedures Used to Prepare Cooperating Teachers and Field-Based Supervisors for Their Roles

Both the candidate and cooperating teacher receive introductory information as well as the *Student Teaching Handbook*, which details procedures for carrying out the student teaching process. The handbook describes the roles and responsibilities of the candidate, the cooperating teacher, and the unit and academic supervisor. It also contains copies of all evaluation reports, as well as a description of the process for recommendation for initial licensure.

At the beginning of the semester, university supervisors attend a meeting with the Director of Field Experiences for updates and information related to the student teaching experience. Candidates meet with the Director of Field experiences on the first day of their student teaching semester, also receiving updates and information on student teaching. All student teachers are directed to provide specified handouts and a handbook to cooperating teachers the following day.

The student teacher, the cooperating teacher, and university supervisor attend a workshop at the beginning of the semester during which they learn the entire process plus learn issues and solutions related to education.

Describe How Candidates in Field Experiences are Supervised and Evaluated

Interns in non-student teaching field experiences are evaluated by the cooperating teacher on their knowledge, skills, and dispositions, including their interactions with students, and on their attendance, neatness, and professionalism. Clinical Teachers from A&T are also in the schools helping with the field experience process. Student teachers are supervised and evaluated by their cooperating teachers and their university supervisors, who assess both individual lessons and overall performance. The cooperating teacher supervises daily. The supervisor completes a minimum of five observations, noting strengths and weaknesses and meets individually with the student teacher to debrief after the observation. The supervisor also meets with the cooperating teacher, and the cooperating teacher completes observation forms that are given to the candidate, the cooperating teacher, and the unit Director of Field Experiences and Student Teaching. The cooperating teacher and student teacher jointly complete the Mid-Term Evaluation in the *Student Teaching Handbook*. The final evaluation of the student teacher's performance is the joint responsibility of the supervisor, the cooperating teacher, and the director. The director, supervisor, and a cooperating teacher evaluate the student teacher's technology portfolio. In addition, every student develops weekly reflections for the portfolio which are read by the supervisor. The student teacher must also provide evidence that he or she is using assessment data to improve instruction and make decisions about student achievement.

Describe How Field Experiences and Clinical Practice Are Evaluated

Interns and student teachers are surveyed at the end of their experiences by the Director of Field Experiences and Student Teaching each semester, and her findings are shared with the program. For all of the spring, 2006 student teachers' portfolios for Diversity, 18 scored at Target, 20 scored at Acceptable, and 0 at Unacceptable. For Assessment, 28 scored at Target, 11 scored at Acceptable, and 0 at Unacceptable. For Reflection, 11 scored at Target, 26 scored at Acceptable, and 0 at Unacceptable. For Technology, 12 scored at Target, 25 scored at Acceptable, and 0 at Unacceptable. Cooperating teacher and student teacher focus groups are also conducted. Because student teacher focus groups revealed that student teachers felt that online methods classes were

not preparing them for the initial pressure of student teaching, the program added the policy of combining online methods undergraduate students and under enrolled on-campus methods classes for the purpose of micro teaching. This has been done even though methods students not only micro teach in methods class, but they also teach a couple of lessons in the 60 hour field experience associated with the methods class0.

Figure 57: Cooperating teacher satisfaction with Student Teaching for all teachers.

Statements/Questions	Spring 2005 Percentage Yes	Spring 2005 Percentage No	Fall 2005 Percentage Yes	Fall 2005 Percentage No	Total Average Percentage Yes	Total Average Percentage No
1. Being a cooperating teacher has been a positive experience for me.	100	0	100	0	100	0
2. My student teacher was adequately prepared by the university to assume the role of student teacher.	100	0	100	0	100	0
3. Did you and your student teacher participate in the orientation program?	57	43	83	17	70	30
4. Were contact and communications between you and the university supervisor adequate and helpful?	57	43	83	17	70	30
5. Were contact and communications between you and your student teacher adequate and helpful?	100	0	100	0	100	0
6. Did the evaluation forms required by the university give an adequate assessment of your student teacher's performance?	86	14	100	0	93	7

Figure 58: Intern Performance Assessment Fall 2005 and Spring 2006

Survey Categories	Fall 2005 Total Average	Spring 2006 Total Average	Yearly Total Average
Content Matter: Familiarity with and knowledge of specific subject matter.	4.1	406	4.3

Student Interactions: Communicated freely with students at a level appropriateness, sensitivity, and understanding.	4.5	4.6	4.5
Interaction with School Personnel: Communicated appropriately on world, educational, and social issues.	4.3	4.4	4.3
Communication Skills: Speech and grammar appropriate for each educational setting.	4.6	4.4	4.5
Writing Skills: Appropriate use of writing skills and techniques.	4.3	4.0	4.1
Management Skills: Was able to properly manage time, assignments, and students.	3.9	4.4	4.1
Attendance: Present at the regular scheduled days and designated times.	4.2	4.6	4.4
Personal Appearance: Extent of grooming, cleanliness, and presentation was appropriate.	4.5	4.6	4.5
Attire: Dress was appropriate and distinguished intern from students.	4.2	4.6	4.4
Initiative: Actively sought experience that would lead to growth and enhanced performance.	4.1	5.0	4.5
Cooperation: Was a team player and worked toward the general good of the school.	4.2	4.8	4.5
Responsibility: Was responsible for actions and non-actions.	4.4	5.0	4.7
Total Averages	4.3	4.6	4.4

Fall 2005: n=16
Spring 2006: n=5

Samples that document field experiences are provided in supporting documentation folder in Exhibit Room.

Field Experiences and Clinical Practices: Graduate Program

Because most candidates are full-time teachers, the field experiences generally involve the candidates' own school or classroom. However, if a candidate is not currently employed in a school setting, he or she must secure an appropriate school setting for carrying out selected field experiences. For the MS degree, field experience is coordinated in CUIN 721, Advanced Methods and Internship. Teachers must reflect on their practice and try to implement theory-based pedagogy at an advanced level. The experience culminates with a detailed write-up.

Program Diversity

Standard 4: Diversity

The program designs, implements, and evaluates curriculum and experience for candidates to acquire and apply the knowledge, skills, and dispositions necessary to help all students learn. These experiences include working with diverse higher education and school faculty, diverse candidates, and diverse students, their families, and other significant adults in their lives in public school settings.

Describe How Diversity is Addressed in the Curriculum and in Clinical Practice

As described in the conceptual framework section of this report, diversity is provided through the curriculum in the following courses.

CUIN 301, Study of different aspects and types of diversity; not just race, but socio economic, sexual preference, religion… Reflective observation in the 20 hour field experience.

SPED 350, Introduces students to the accommodation and modifications for exceptional children

CUIN 400, Study of different theories and types of diversity; Gardner, etc. Reflective observation and interviews of teachers/families in 40 hr field experience.

CUIN 560, Student Teaching: Requires students address diversity in the lessons that they plan and deliver.

TECH 566, Industrial Education Teaching Methods: Diversity lesson and lesson plan related specifically to diversity; other lessons have place for addressing diversity per lesson.

CUIN 619, Advanced Learning Theories: Assessment frames and journal entries as they relate to reflection. Research paper if related to reflection.

CUIN 729, Diversity Issues in K-12 Schools: All assignments such as textbook analysis. Action research related to diversity.

CUIN 768, Teaching and Learning in the Multicultural Classroom: All assignments issued in this course will relate to diversity.

Describe the diversity of the higher education and P-12 faculty with whom candidates interact. Give specific numbers that reflect the ethnic, racial, and gender diversity at the institutional, unit, program, and P-12 levels.

Candidates have opportunities to interact with diverse faculty in higher education and P-12 settings. The following tables indicate the race and gender of higher education and P-12 faculty.

Figure 59 Diversity of Institution Faculty – NC A&T State University – 2005-2006

	Full Time		Part Time	
	Male	Female	Male	Female
College of Agriculture				
American Indian	1			
Asian	4		2	
Black	13	9	4	1
Hispanic				
White	8	6	2	
Other		1		
Subtotal	**26**	**16**	**8**	**1**

College of Arts and Science				
American Indian	7			1
Asian		2	2	3
Black	33	18	40	80
Hispanic		1	1	2
White	24	10	32	18
Other				
Subtotal	**64**	**31**	**75**	**104**
College of Business				
American Indian				
Asian	6			
Black	16	19	3	2
Hispanic				
White	16	9	1	1
Other				
Subtotal	**38**	**28**	**4**	**3**
College of Education				
American Indian				
Asian	1	2		
Black	7	19	6	8
Hispanic				
White	3	7	1	5
Other				
Subtotal	**11**	**28**	**7**	**13**
College of Engineering				
American Indian				
Asian	29	5	2	
Black	18	4	2	
Hispanic	1		1	
White	22	4	3	1
Other	3			
Subtotal	**73**	**13**	**8**	**1**
College of Nursing				
American Indian				
Asian				
Black		8	1	10
Hispanic			1	
White		5		2
Other				

Subtotal	**0**	**13**	**2**	**12**
School of Technology				
American Indian				
Asian	4			
Black	14	4	7	8
Hispanic			1	
White	5		1	1
Other	1			
Subtotal	**24**	**4**	**9**	**9**

Figure 60: Diversity of Program Faculty – Department of Graphic Communication Systems and Technological Studies

	Full-time		Part-time		
	Female	Male	Female	Male	Totals
White	0	2	1	2	5
Black	4	4	4	0	12
Hispanic	0	0	0	0	0
Asian	0	0	0	0	0
East Indian	0	2	0	0	2
Other	0	0	0	0	0
Total	4	8	5	2	19

Figure 61: Diversity of Student Populations at Cooperating Schools for Student Teaching

School	A.INDN Male	A.INDN Female	ASIAN Male	ASIAN Female	HISPAN Male	HISPAN Female	BLACK Male	BLACK Female	WHITE Male	WHITE Female	TOTAL
N.W. Middle Sch.	0	1	1	1	29	46	182	189	229	221	899
Smith High School	2	2	20	23	53	36	143	159	815	805	2058
*Dudley High School	1	3	4	9	28	18	*786	*842	9	4	1704
W. Forsyth H.S.	6	5	73	75	82	73	600	596	64	49	1623
*W. Stokes High S. (rural)	1	2	2	2	4	4	25	12	*525	*515	1092
*** Both students interned at Kiser MS also which has a more diverse student body.**											
Kiser MS	2	0	10	9	23	23	257	265	175	176	940

Describe how the program provides opportunities and experiences for candidates to interact with diverse higher education and school faculty

The institution, unit, and the program are committed to achieving a diverse faculty and student body. The institution actively seeks to recruit and retain diverse faculty. All candidates have the opportunity to work with individuals who differ with regard to race, gender, ethnicity, age, ability, and experience at the institution and in P-12 settings. There is much student diversity in technology education classrooms across the region.

It must also be noted that within the technology education community, the number of female teachers remains relatively small. NCA&T's Technology Education program has Dr. Sonya Draper, Dr. Elinor Blackwell, and Dr. Cynthia Gillispie-Johnson to serve as a role model for students. There is also an increasing number of female technology teachers in North Carolina at the P-12 level.

Describe the diversity of the candidates in the program. Give specific numbers that reflect the ethnic, racial, and gender diversity.

The undergraduate student body within the program is diverse. The numbers are shown below.

Figure 62: Race and Gender in Technology Education Undergraduate Students, 2005-2006

Race	Female	Male
White	3	11
Black	7	7

Describe how the program provides opportunities and experiences for candidates to interact with diverse candidates/peers.

There is good diversity among students in the Technology Education program. Within their technology education classes, candidates work together on projects and within the Technology Education Collegiate Association (TECA). In addition, candidates take many of their major requirements with other GCSTS Department students, and therefore interact with diverse students in class activities, discussions, projects, field trips, observations, and extra-curricular activities. Candidates also take their professional education classes with other teacher education candidates in the unit.

Describe the diversity (including exceptionalities) of the P-12 students with whom candidates work in clinical experiences. Give specific numbers that reflect the ethnic, racial, gender, and socioeconomic diversity and exceptionalities.

Candidates complete the majority of their early field experiences in Guilford County. Candidates encounter various forms of diversity in Tech Ed and T&I classrooms, including gender, ethnic, socio-economic, and racial diversity, as well as a range of exceptionalities among students. Demographics for 2003-2004 for these school districts are provided in the tables below.

Figure 63: Diversity of Student Populations at Cooperating Schools for Student Teaching

School	A.INDN Male	A.INDN Female	ASIAN Male	ASIAN Female	HISPAN Male	HISPAN Female	BLACK Male	BLACK Female	WHITE Male	WHITE Female	TOTAL
N.W. Middle Sch. (suburban)	0	1	1	1	29	46	182	189	229	221	899
Smith High School (urban)	2	2	20	23	53	36	143	159	815	805	2058
*Dudley HS (urban)	1	3	4	9	28	18	*786	*842	9	4	1704
W. Forsyth H.S. (urban)	6	5	73	75	82	73	600	596	64	49	1623
*W. Stokes High S. (rural)	1	2	2	2	4	4	25	12	*525	*515	1092
*** Both students interned at Kiser MS also which has a more diverse student body.**											
Kiser MS	2	0	10	9	23	23	257	265	175	176	940

Figure 64: Diversity of Teacher Populations at Cooperating School Systems for Student Teaching and TECH 566 Methods Internships

School System	Number of Student Teaching Placements	Number of TECH 566 Internship Placements	Percentage of White to Minority
Guilford County	4	8	73 : 27
Kiser MS	0	2	50 : 50
Dudley HS	1	0	14 : 86
Smith HS	1	0	29 : 71
Stokes County	1	0	98 : 2
Forsyth County	1	0	87 : 13
Alamance Cnty.*	0	1	88 : 12

*Placements have been made there in the past.

Figure 65: Exceptionalities, Partner School Systems (2005-2006)

LEA	ALAMANCE-BURLINGTON	FORSYTH COUNTY	GUILFORD COUNTY	STOKES COUNTY
EXCEPTIONALITY				
Emotionally Handicapped	143	264	424	42
Hearing Impaired	36	77	124	10
Specific Learning Disabled	1249	2364	3568	538
Other Health Impaired	442	748	2152	67
Speech-Language Impaired	655	2300	1996	326
Multi-Handicapped	39	57	171	9
Developmentally Delayed	0	0	0	0
Autistic	123	165	405	21
Educable Mentally Handicapped	298	719	617	112
Orthopedically Impaired	26	101	69	12
Severely/Profoundly Mentally Handicppd	3	22	44	6
Trainable Mentally Handicapped	19	113	134	22
Traumatic Brain Injured	11	19	29	3
Visually Impaired	8	20	29	2
Deaf/Blind	0	0	4	0
Developmentally Delayed	146	190	623	52
ALL EXC. CLASSES	3198	7159	10389	1222

Figure 66: Percentage of Students Living Below Poverty Line

School System	Percentage of Students Below Poverty Line
Guilford County	14.7
Stokes County	13.3
Forsyth County	14.5
Alamance County*	12.0

*Placements have been made there in the past.

Describe how the program ensures that candidates interact with diverse P-12 students in public school settings.

Candidates complete early field experiences in public school settings primarily in Guilford County Schools. The Technology Education program coordinator works with the candidates and the Director of Field Experiences to determine appropriate student teaching sites for candidates. To the extent possible, candidates are placed in exemplary Tech Ed or T&I programs with highly qualified cooperating teachers. The contemporary Tech Ed or T&I classroom provides candidates with many forms of diversity including gender, ethnicity, socio economic status, and exceptionalities. The table below indicates the student teaching placements since the last NC DPI visit.

Figure 67: Student Teaching Placements – Technology Education

2002-2003 (3)	2003-2004 (0)	2004-2005 (0)	2005-2006 (1)	2006-2007
NW Middle School Guilford County			West Stokes HS Stokes County	Dudley High School Guilford County
Smith High School Guilford County				
West Forsyth HS Forsyth County				

Diversity – Graduate Program

Describe how diversity is addressed in the curriculum and in clinical practice.

Diversity is integrated into master's candidates' coursework and field experiences. Since most candidates are full-time teachers, the field experiences generally involve candidates' particular schools and classrooms. However, if a candidate is not currently employed in a school setting, he or she must secure an appropriate school setting for the field experiences. Diversity is one consideration for determining such placements.

As described in the conceptual framework section of this report, diversity is provided through the curriculum in the following courses.

CUIN 619, Advanced Learning Theories: Assessment frames and journal entries as they relate to reflection. Research paper if related to reflection.
CUIN 729, Diversity Issues in K-12 Schools: All assignments such as textbook analysis. Action research related to diversity.
CUIN 768, Teaching and Learning in the Multicultural Classroom: All assignments issued in this course will relate to diversity.
TECH 767 and 768, Research Courses, Students conduct action research in their own classrooms and laboratories.

Describe the diversity of the higher education and P-12 faculty with whom candidates interact. Give specific numbers that reflect the ethnic, racial, and gender diversity at the institutional, unit, program, and P-12 levels.

Candidates have opportunities to interact with diverse faculty in higher education and P-12 settings. The following tables indicate the race and gender of higher education and P-12 faculty.

Figure 68: Diversity of Institution Faculty – NC A&T State University – 2005-2006

	Full Time		Part Time	
	Male	Female	Male	Female
College of Agriculture				
American Indian	1			
Asian	4		2	
Black	13	9	4	1
Hispanic				

White	8	6	2	
Other		1		
Subtotal	**26**	**16**	**8**	**1**
College of Arts and Science				
American Indian	7			1
Asian		2	2	3
Black	33	18	40	80
Hispanic		1	1	2
White	24	10	32	18
Other				
Subtotal	**64**	**31**	**75**	**104**
College of Business				
American Indian				
Asian	6			
Black	16	19	3	2
Hispanic				
White	16	9	1	1
Other				
Subtotal	**38**	**28**	**4**	**3**
College of Education				
American Indian				
Asian	1	2		
Black	7	19	6	8
Hispanic				
White	3	7	1	5
Other				
Subtotal	**11**	**28**	**7**	**13**
College of Engineering				
American Indian				
Asian	29	5	2	
Black	18	4	2	
Hispanic	1		1	
White	22	4	3	1
Other	3			
Subtotal	**73**	**13**	**8**	**1**
College of Nursing				
American Indian				
Asian				
Black		8	1	10

Hispanic			1	
White		5		2
Other				
Subtotal	**0**	**13**	**2**	**12**
College of Technology				
American Indian				
Asian	4			
Black	14	4	7	8
Hispanic			1	
White	5		1	1
Other	1			
Subtotal	**24**	**4**	**9**	**9**

Figure 69: Diversity of Program Faculty – Department of Graphic Communication Systems and Technological Studies

	Full-time		Part-time		
	Female	Male	Female	Male	Totals
White	0	2	1	2	5
Black	4	4	4	0	12
Hispanic	0	0	0	0	0
Asian	0	0	0	0	0
East Indian	0	2	0	0	2
Other	0	0	0	0	0
Total	4	8	5	2	19

Figure 70: Diversity of Student Populations at Cooperating Schools for Student Teaching

School	A.INDN Male	A.INDN Female	ASIAN Male	ASIAN Female	HISPAN Male	HISPAN Female	BLACK Male	BLACK Female	WHITE Male	WHITE Female	TOTAL
N.W. Middle School	0	1	1	1	29	46	182	189	229	221	899
Smith High School	2	2	20	23	53	36	143	159	815	805	2058
Dudley High School	1	3	4	9	28	18	786	842	9	4	1704
W. Forsyth H.S.	6	5	73	75	82	73	600	596	64	49	1623
W. Stokes High Sc.	1	2	2	2	4	4	25	12	525	515	1092

Describe how the program provides opportunities and experiences for candidates to interact with diverse higher education and school faculty

The institution, unit, and the program are committed to achieving a diverse faculty and student body. The institution actively seeks to recruit and retain diverse faculty. See Figures 67 and 68.. All candidates have the opportunity to work with individuals who differ with regard to race, gender, ethnicity, age, ability, and experience at the institution and in P-12 settings. There is much student diversity in technology education classrooms across the region. See Figure 69.

It must also be noted that within the technology education community, the number of female teachers remains relatively small. NCA&T's Technology Education program has Dr. Sonya Draper, Dr. Elinor Blackwell, and Dr. Cynthia Gillispie-Johnson to serve as a role model for students. There is also an increasing number of female technology teachers in North Carolina at

the P-12 level.

Describe the diversity of the candidates in the program. Give specific numbers that reflect the ethnic, racial, and gender diversity.

The current class of graduate level students with majors in Technology Education and Trade & Industrial Education is fairly diverse.

Figure 71: Race and Gender in Technology Education Graduate Students, 2005-2006

Race	Female	Male
White	14	28
Black	6	9

Describe how the program provides opportunities and experiences for candidates to interact with diverse candidates/peers.

Candidates take their TECH courses with other majors in the Technology Department and therefore interact with diverse students in class activities, discussions, projects, field trips, and extracurricular activities. Candidates also take a number of their courses with other teacher education master's candidates in the Curriculum and Instruction department. In those classes, candidates interact with diverse individuals as they engage in class discussions and complete group projects.

Describe the diversity (including exceptionalities) of the P-12 students with whom candidates work in clinical experiences. Give specific numbers that reflect the ethnic, racial, gender, and socioeconomic diversity and exceptionalities.

While the master's level candidates intern in their own school settings, below is the race and gender in the schools of selected graduate students.

Figure 72: Demographic Data for Schools of Selected Graduate Students, 2005
Diversity of Student Populations at Cooperating Schools for Student Teaching

School	A.INDN Male	A.INDN Female	ASIAN Male	ASIAN Female	HISPAN Male	HISPAN Female	BLACK Male	BLACK Female	WHITE Male	WHITE Female	TOTAL
Ashboro HS	0	0	1	2	4	3	64	35	32	16	157
Kiser MS	2	0	10	9	23	23	257	265	175	176	940
Forsyth Career Center	1	1	12	20	122	134	103	93	393	403	1282
Dudley HS	1	3	4	9	28	18	786	842	9	4	1704
SE Stokes MS	1	0	0	0	1	6	40	29	239	223	539

Describe how the program ensures that candidates interact with diverse P-12 students in public school settings.

When it is possible to select field sites (as in the examples above for candidates not in full-time teaching positions), an emphasis is placed on identifying schools with diverse student bodies.

Additional information documenting diversity experiences for the program are provided in the supporting documentation folders in Exhibit Room.

Faculty Qualifications, Performance, and Development

Standard 5: Faculty Qualifications, Performance, and Development

Faculty are qualified and model best professional practices in scholarship, service, and teaching, including the assessment of their own effectiveness as related to candidate performance. They also collaborate with colleagues in the disciplines and schools. The performance of faculty teaching in the program is evaluated and the professional development of faculty teaching in the program is facilitated.

Standard 5A: Faculty Assignment

One appropriately specialized faculty member, full-time to the institution, is assigned major responsibility for teaching in and coordinating the specialty area. To ensure diversity, there must be a sufficient number of additional faculty, appropriately specialized, to deliver the level(s) offered; e.g., undergraduate, master's, doctorate. Each advanced program leading to the doctorate has at least three (3) full-time faculty who have earned the doctorate in the field of specialization for which the degree is offered. The use of adjunct faculty does not detract from the quality of the program.

List (in chart form) for the year of record the program faculty, their qualifications, and their teaching assignments. (Note: Program faculty refers to those individuals teaching required courses beyond general education.)

Figure 73: Program Faculty and Their Qualifications

Name Position	Degree(s) Area(s)	Teaching Assignments	Content Knowledge (CK), Content-Pedagogy (CP), Professional Education non-methods (PE), Methods	Status (Full-time, Part-time, Adjunct)
Vincent Childress Full-time tenure track	▪ Ph.D. Technology Education, Virginia Tech ▪ MS, Vocational Technical Education, Virginia Tech ▪ BS, Industrial Arts Education, Virginia Tech ▪ Standard Professional II license in Technology Education and Workforce Development Director	TECH 566 TECH 618 TECH 666 TECH 670 TECH 671 TECH 717 TECH 718 TECH 767 TECH 768 TECH 770	Methods PE Methods PE PE PE PE PE PE PE	Full-time
Sonya Draper Full-time adjunct	▪ Ph.D., Technology Education, Virginia Tech ▪ M.A., Adult Education, NC A&T SU ▪ B.S., Business Education, East Carolina	TECH 218 TECH 382 TECH 619 TECH 620 TECH 621 TECH 622	CK CK CP CP CP CP	Full-time
Dean Gilbert Full-time tenure track not dedicated to Technology Education	▪ Ed.D., Technology Education, Clemson University ▪ M.S., Higher Education, Appalachian State ▪ B.S., Industrial Arts, Appalachian State	TECH 660 TECH 669	PE PE	Full-time

Cynthia Gillispie-Johnson Full-time tenure track not dedicated to Technology Education	▪ Ph.D., Vocational Technical Education, Virginia Tech ▪ M.S., Business Education, UNC-Greensboro ▪ B.S., Business Education, NC A&T State University	TECH 618 TECH 626 TECH 663 TECH 669	PE PE PE PE	Full-time
Craig Rhodes Full-time tenure track	▪ Ph.D., Technology Education, University of Minnesota ▪ M.S., Technology Education, NC A&T SU ▪ B.E., Electronics Technology, NC A&T SU ▪ Standard Professional II license in Technology Education	TECH 219 GCS 263 TECH 619 TECH 620 TECH 621 TECH 622 TECH 661 TECH 662 TECH 762 TECH 764	CK CK CP CP CP CP PE <u>Methods</u> PE PE	Full-time
Elazer Barnette Part-time adjunct	• Ed.D., Technology Education, NC State • M.S., Industrial Arts Education, NC State • B.S., Industrial Arts Education, West Virginia State	TECH 717 TECH 718	PE PE	Part-time
Nancy Glenz Part-time adjunct	• Ph.D., Physical Education, Michigan State • M.S., Technology Education, NC A&T SU • B.S., Physical Education, Trenton State	TECH 663	PE	Part-time

Identify the individual responsible for coordinating the program. Describe the roles of this individual, including teaching responsibilities in the program.

Dr. Craig Rhodes is the Undergraduate Coordinator for the Technology Education and Trade and Industrial Education programs. He is responsible for advising and benchmarking all undergraduate students, maintaining the lab in 103 Price Hall, advising the TECA student club, facilitating the advisory committee, portfolio review, the undergraduate curriculum, and teaching technology courses.
He teaches the following courses:
TECH 219
GCS 263
TECH 619
TECH 620
TECH 621
TECH 622
TECH 661
TECH 662
TECH 762

TECH 764

Dr. Vincent Childress is the graduate coordinator for the Technology Education, Trade and Industrial Education, and Workforce Development Director licensure programs. He advises and benchmarks all MS majors, all MAT majors, all Lateral Entry majors (at the post bachelor's level), and all Licensure-Only majors (at the post bachelor's level). He is responsible for program evaluation overall, co-advising the TECA student club, reporting to the advisory committee, portfolio review, the graduate curriculum, and teaching technology courses.
He teaches the following courses:
TECH 566
TECH 618
TECH 670
TECH 671
TECH 717
TECH 718
TECH 767
TECH 768
TECH 770

Describe the instructional strategies, including technology, used by the faculty. How does the teaching reflect the conceptual framework and current best practices in the field?

Candidates at both the undergraduate and graduate levels are encouraged to become active members in their community of practice, within the university setting and beyond. Through collaboration on class assignments, participation in student organizations including the Technology Education Collegiate Association (TECA) and Epsilon Pi Tau (EPT, a technology honorary society), and field trips, students begin to develop the networking and professional development skills needed to become active members of their community of practice. Program faculty members serve as role models for the students by maintaining active engagement in their professional organizations and by working with state agencies including NCDPI and NC-TSA.

Instructional strategies mirror best practices in the field. Courses are structured around established objectives, and these parallel those found in the state blueprints for Tech Ed and T&I education at the middle and high school levels. Instructors use a "content-pedagogy" approach, in which they structure learning experiences so that candidates learn both the content and strategies for conveying and assessing content knowledge to others. Candidates take active roles in their program area courses, with regular opportunities to prepare and deliver lessons and to plan lessons based on the content being covered. Every attempt is made to: (a) link content directly to the state blueprints and to the national *Standards for Technological Literacy;* (b) assign work that will enable candidates to directly link *what* they are learning to *how* they will teach it; (c) encourage consistent reflection on the teaching and learning process through reflective papers and test items; and (d) instill in candidates the habits of mind that will lead to continual professional development throughout their teaching careers. For example in CUIN 102, Introduction to Teacher Education, the professor teaches students how to improve in mathematics and reading much in the same way that he or she expects candidates to help their

own students one day.
The following are examples of instructional strategies that reflect the conceptual framework and current best practices in the field.

- TECH 218 is set up in a modular format that allows candidates to experience modular instruction. This experience enables the candidates to work with various communication technology activities that they may encounter in the public school setting.
- In TECH 219 students developed the Black Inventor's Web Site. This really got students to thinking about ways to address diversity in the classroom. Now the site is used by other teachers to teach about diversity in technology education.
- In TECH 218 and 219 students learn problem solving, design, and engineering design through hands-on activities that mirror what should occur in their public school laboratories.
- In TECH 382, candidates learn about computer applications in a hands-on way. They also do group projects for cooperative learning. The computer applications include use of presentation software and spreadsheets for tracking grades. This course really focuses in on the Technology part of the conceptual framework.
- In TECH 619 - 622, candidates are involved in group projects that allow them to research current construction, manufacturing, communication, and transportation topics and then create reports and teaching lessons for secondary students related to these new technologies. These also emphasize hands-on design projects and engineering design. Students use instructional technology for presentations and they analyze the standard course of study related to the respective course. These courses really focus in on the content knowledge and content-pedagogy portion of the conceptual framework.
- In TECH 566, students are taught teaching methods and the professor encourages them to use a variety of methods by requiring a videotaped micro teaching lesson as a simple lecture, one as a demonstration of hands-on operations, and a media enhanced lesson that requires multimedia. The lessons that students develop must address DART and one of the lessons must be specifically focused on diversity and another must teach values in the context of the discipline. The professor requires students develop a teaching resources database for later use in the technology portfolio. The lessons also emphasize how to involve the parents and family in the education of students. This is accomplished by having candidates develop real teaching lesson plans and assessments.
- In TECH 662 students learn about "backward design," a means of planning instruction based how the student will be assessed.
- In SPED 350, TECH 618 and 626

Describe faculty scholarship (please see unabridged faculty vita).

Dr. Rhodes has taught workshops for the International Technology Education Association (ITEA) on the curriculum and lesson planning approach known as backward design. He has published several articles in journals. He is co-principal investigator (Co-PI) for the National Center for Engineering and Technology Education, a NSF funded Center for Learning and Teaching. This grant is worth $719,000 over five years. He has been principal investigator (PI) on a grant to

develop online courses worth $50,000+. He is PI on a study to determine engineering outcomes for students in grades 9 through 12. He is co-author on a yearbook chapter under development for the Council on Technology Teacher Education about engineering outcomes. He has made numerous presentations at the state, regional, and nationals levels.

Dr. Vincent Childress has numerous articles both refereed and non-refereed and has authored two yearbook chapters. He is PI at A&T for the National Center for Engineering and Technology Education, a NSF funded Center for Learning and Teaching. This grant is worth $719,000 over five years. He is Co-PI on a study to determine engineering outcomes for students in grades 9 through 12. He is co-author on a yearbook chapter under development for the Council on Technology Teacher Education about engineering outcomes. He has made numerous presentations at the state, regional, and nationals levels.

Describe Content Pedagogy and Professional Education faculty involvement and collaboration with and service to the public schools.

Dr. Rhodes was the team leader for the revision of the *Communication Systems* curriculum guide for NC DPI. He consistently volunteers to judge NC TSA events. He serves on the board of directors for NC TSA. He has helped to provide 200 hours of professional development on engineering to licensed and lateral entry teachers.

Dr. Childress was the team leader for the revision of the *Fundamentals of Technology* curriculum guide for NC DPI, and he is currently working on the team that is revising all of the NC DPI Technology Education curricula for the coming latter half of the decade. He consistently volunteers to judge NC TSA events. He has served on the board of directors for NC TSA. He has helped to provide 200 hours of professional development on engineering to licensed and lateral entry teachers. He volunteers biannually to teach about technology education at Irving Park Elementary School, which has included the Black Inventors project. He has been on the visiting team for High Schools that Work, and he was on the NC DPI visiting team for licensure program approval for Appalachian State University's Technology Education and Trade and Industry programs.

NCA&T faculty members maintain close working relationships with their colleagues at the other two technology education programs in the state (NCSU and ASU). Both professors are members of the North Carolina Council on Technology Teacher Education.

Describe Content Pedagogy and Professional Education faculty service to the profession.

Dr. Rhodes has served as President of the NC Technology Education Association and the NC Council on Technology Teacher Education. He has been the Vice President for Technology for the NC Association of Career and Technical Education. He serves on the board of directors for the NC Technology Student Association.

Dr. Childress has served as President of the NC Technology Education Association and the NC Council on Technology Teacher Education. He has been the Vice President for Technology for the NC Association of Career and Technical Education. He was President of the Technology

Education for Children Council, and he has served as VP for Programs and VP for Communication for that council. He is currently a committee chair for the Council on Technology Teacher Education. He serves on the board of directors for the International Technology Education Association. He has served on the Editorial Review Board for *The Technology Teacher* and is currently on the Editorial Review Board for the *Journal of Technology Education.*

Copies of faculty vitae and research publications are provided in the supporting documentation folders in Exhibit Room.

Describe the faculty evaluation process

The faculty evaluation process involves several components. The University and the Department of Graphic Communication Systems and Technological Studies (GCSTS) have written policies, criteria, and procedures for these evaluation processes.

Faculty effectiveness in instruction is assessed through student evaluations and peer evaluations. Student evaluations are required in all courses taught, using a questionnaire approved by the University faculty. A standardized procedure is followed using students to administrator surveys and a form that includes spaces for written comments. These evaluations are submitted to the department secretary or are completed online and are processed by the University. Results are distributed to the department chairperson and then to the faculty. This information is used for both summative and formative evaluation purposes.

University criteria for faculty promotion and tenure are included in the Faculty Handbook and in a document developed and approved by GCSTS faculty. The GCSTS promotion and tenure guidelines are more detailed and rigorous than those mandated by the University. When a faculty member goes up for tenure or promotion, he or she prepares an extensive portfolio that documents teaching, research, and service activities. This portfolio is evaluated first by the Department Retention, Tenure, and Promotion Committee, then by the department chairperson, then the School of Technology Committee, then the Dean of the School of Technology, then the University committee, then the Provost, then the Chancellor, then the Board of Trustees, and final approval is given at the Board of Governors level. The department's promotion and tenure guidelines are posted in the evidence box. There is also a post-tenure review process to which tenured faculty must submit every five years. Peer review of faculty is mandated annually for all faculty. This review is accomplished using classroom observations and a form.

Faculty members are also reviewed annually through the chairperson conference which occurs at the end of the academic year, generally as a follow-up to submission of the annual faculty activity report. The evaluation is based on the criteria agreed upon by the School of Technology and is rated on a form called the FE 100. See the evidence box for these documents. The conference is generally based on the faculty member's annual report, student course evaluations, peer reviews, the FE 100, and any other relevant information submitted. The faculty annual report includes a detailed listing of teaching, scholarly, and service accomplishments for the

year. During the conference, the department chairperson and the faculty member discuss professional goals for the coming year. The annual report/review process provides a basis for faculty salary and merit pay decisions.

Describe how faculty members assess their own effectiveness as related to candidate performance.

In addition to the several evaluation activities described above, faculty assess their own performance in more routine ways. For example, student performance on tests or assignments gives real-time feedback on the effectiveness of instruction, and assignments and instruction can be adjusted accordingly. The annual reporting process provides an important opportunity for reflection on professional accomplishments and goals, and the annual conference helps to affirm the importance of this type of self-assessment. And insofar as the faculty are instrumental in the running of the program, the feedback from the program evaluation process described in another section provides measures of success and the need for change and improvement.

Describe how faculty evaluations inform teaching, scholarship, and service.

Probably most importantly, the promotion and tenure process establishes benchmarks for performance in these three categories of faculty activity, and thus provides a guide for professional life throughout the academic career. Additionally, feedback comes in the form of requests to serve on faculty committees or review boards, which in many cases recognize the contributions made by the faculty member. The student evaluation process and the peer review process developed by the University and the School of Technology also provide opportunity for meaningful suggestions without the threat of summative backlash. This emphasizes the overarching desire among department faculty to continually improve teaching practice and effectiveness.

Sample faculty evaluation and promotion and tenure materials are provided in the supporting documentation folders.

Describe the professional development opportunities provided for faculty.

Department faculty members engage in a wide range of professional development activities, that include on-campus workshops and conferences, enrolling in courses, participation in professional conferences, reading professional journals, and so on. Through the Academy of Teaching and Learning, a wide variety of professional and personal development opportunities are made available. Faculty activities during the past year have included:

- Participating in Blackboard workshops.
- NCATE workshops.
- Attending conferences including the International Technology Education Association annual conference, the National Association of Industrial Technology Conference, the Mississippi Valley Technology Teacher Education Conference, the NCDPI Career and Technical Education Summer Conference, American Society for Engineering

Education, and more.

- Attending Instructional Technology workshops on the use of TECH Comm, and other software applications.
- See the evidence box for the Licensure renewal package for an accounting of professional development. See also the curriculum vita.

Describe practices used to select, orient, communicate with, and evaluate adjunct faculty to ensure program quality.

All part-time faculty meet the appointment criteria for the University (refer to Faculty Handbook). All part-time faculty teaching in the GCSTS Department meet SACS academic requirements, which require the master's degree in a related field. Orientation and communication with part-time faculty occurs primarily through the department chairperson and through the program coordinator who facilitated their selection. In addition, the department chairperson holds conferences with new adjunct faculty to address individual needs/questions. Peer reviews and classroom observations are conducted during every semester of part-time employment by the coordinator of the respective program area. In addition, student evaluations are monitored for all adjunct faculty members. The Department has several adjunct faculty members who have taught in the department for several years, thus bringing important experience and continuity to their teaching. The adjunct faculty members who contribute to the program are included in program meetings.

Program Governance and Resources

Standard 6: Program Governance and Resources

The program has the leadership, budget, personnel, facilities, and resources including information technology resources, for the preparation of candidates to meet professional, state, and institutional standards.

Describe where the program is administratively housed and its relationship to the unit. Describe how this organizational structure provides for the leadership for and oversight of the program.

The Bachelor of Science degree program in Technology Education, and its concentrations, are located in the Department of Graphic Communication Systems and Technological Studies (GCSTS), which is housed in the School of Technology. The concentrations in the B.S. in Technology Education are two of six undergraduate majors in the department, and the concentrations in the M.S. in Technology Education are three of six graduate degree concentration programs. The Technology Education programs draw upon course work in the other degree programs for achieving the required technical competencies. In addition to their core curriculum course work, students take professional education courses in the Departments of Curriculum and Instruction. Students in these degree programs are also required, by Board of Governors mandate, to complete an 18-hour "second academic concentration" (SAC) in any of about 10 different areas. This SAC does not lead to additional licensure or endorsements. For greatest flexibility, students are allowed to select any of the available SACs; however, most select the SAC that complements the major requirements, Interdisciplinary Technology.

The GCSTS department chairperson, with assistance from the faculty, has general responsibility for guiding the department toward the unit's defined curricular and organizational goals, and for creating a setting in which professional development and maximum student learning can take place. Shared governance is evident in the committee structures, and faculty members as a rule have significant input in decisions that affect the department as a whole, as well as their specific program areas. The Department and the Technology Education programs send summary data to the unit and comply with the unit's requests and rules. There is a good relationship between the Technology Education programs and the unit.

Within this organizational setting, the Technology Education program coordinators provide leadership and oversight for the Technology Education program by maintaining a current curriculum focus, advising and teaching students in the Technology Education programs, identifying appropriate teaching sites for the student teaching experience through contacts with area teachers and directors, supervising the student teaching experience, maintaining the program laboratory, advising candidates in the masters program, and supervising the Products of Teaching portfolio for graduate candidates, and recruitment.

Describe the adequacy of the number of faculty to support the program.

Because of its size, the Technology Education program has only two tenure-track faculty members whose primary focus is on the technology education programs. One of these faculty, Dr. Craig Rhodes, has primary administrative responsibility for the undergraduate program, and both of the faculty provide support roles for the GCSTS department in other ways (Childress as

graduate program coordinator, and both Rhodes and Childress and the adjunct professor, Dr. Sonya Draper, are involved in teaching service courses that benefit all programs). A third faculty member is a full-time adjunct professor, Dr. Sonya Draper. With her and faculty members from other program areas providing content knowledge instruction in courses that serve Technology Education as well as other students, the number of faculty members is sufficient to adequately support the program.

Describe the adequacy of the non-faculty personnel that support the program. This should include graduate assistants.

The GCSTS Department has one full-time administrative assistant who provides support services, primarily in the area of budgets and scheduling, but she also helps in all sorts of paperwork. The main office staff also includes part-time student workers. Additionally, the School of Technology has a full-time tech support specialist who helps to maintain computer hardware and software as well as presentation equipment throughout the building. These services are adequate for support of the program.

Describe the facilities in which the program is housed and their adequacy. The response should include office and meeting space.

The Technology Education program is housed in Price and Smith Halls, which is centrally located on the main campus. The building consists of two parts: the older, original structure, built during the 1960s (Price Hall), and a newer structure built in the 1990s (Smith Hall). Lecture and laboratory spaces are fully utilized and are adequate. The classroom contains a presentation area, seating for 20 students, a resource library, a storage room, a sink, a medium size computer lab area with up-to-date computers and a scanner, and a small materials processing area with work tables and tools and equipment. An adjacent resource room contains a small conference area.

All full-time faculty in the department have private offices with phones and networked computers and printers. There is a conference room that seats about 20 people, which is used for a variety of meetings; a large classroom that seats 100; and three additional, general lecture rooms, all of which are equipped with multimedia presentation tools.

Describe the instructional resources that support the program and their adequacy. This should include library resources and curricular materials.

Instructional resources that support the program are very adequate. The dedicated resource library in the technology education classroom contains textbooks, professional journals like *The Technology Teacher* as well as a number of curriculum materials. Additionally, the Curriculum Resources Center in the library contains textbooks and curriculum materials for all education program areas. The library is a well-supported facility. Through extensive databases, permanent collections, and interlibrary loan services, there is little in the way of instructional resources that one might want that is not available to faculty and students. Dr. Childress recently inspected the Curriculum Resource Center and was pleased with its contents.

The Department is provided with an annual library allocation that is used to purchase desired

materials for the library. In general, program faculty have found that any resources that are requested, whether specific books or video resources, have already been purchased.

The Ferdinand Douglass Bluford Library is named for the fifth President of the institution. The four level building contains 153,428 square feet.The NC A&T library resources accessible to graduate students exceed 600,000 volumes. The current holdings include more than 390,000 bound volumes, 2,000 serial subscriptions, and, as a selected depository in North Carolina for United State government documents, the library contains a collection of over 211,800 official government publications. In addition, the library contains a superior collection in videotapes, microfilms and other audiovisuals. Individual research groups can purchase additional reference books and subscribe to professional journals through their external funding, and personal subscriptions. North Carolina A&T migrated to the INNOPAC system in August 1994. The library uses many of components of this integrated on-line library system including a public access catalog, an acquisitions module, a serials module, a circulation module, and a cataloging module. The on-line public access catalog consists of two versions: the original text-based interface and web-browser interface. Patrons are able to search the catalog by author, title, subject, journal title, and keyword. The catalog provides the user with the location, call number, and status of each item. Patrons may also determine if an item is on order through searching the catalog. In addition, patrons can view the check-in record of a serial title to determine if a particular issue has been received. Remote access to the catalog is available from both on and off campus through telnet login or through the World Wide Web.

The North Carolina A&T State University Library, i.e. F. D. Bluford, is part of the Central North Carolina Library Consortium that also includes Winston-Salem State University and the North Carolina School of the Arts. The shared system allows users to easily search the catalogs of three institutions. The library provides access to many electronic databases through the Internet and CD-ROM, including the ACM Digital library, and IEEE/IEE Electronic Library. Many of the electronic databases may be searched from any location on or off campus.

Many magazine and journal articles are available through our electronic databases and may be viewed online, printed, or downloaded to a disk. In addition to full text articles, the library provides access to many electronic books through netLibrary.

Describe the technology resources that support the program and their adequacy.

The university maintains a solid network support system (down time is very rare) and continually upgrades its servers and software delivered over those servers. For the most part, IT delivery is a transparent and seamless process.

Price and Smith Halls are now transitioning to wireless Internet access. The Department houses four computer labs (including one Mac and three PC labs), as well as a larger School computer lab. The one in the Technology Education laboratory has 10 old computers and 10 new computers and a new printer scanner which is networked. All computers are networked, including a networked printing system. There are a number of scanners in the building, and most lecture rooms have multimedia projection equipment.

A range of general and specific software is made available on all computers in the building, including specialized CAD software, statistical software, office software, web development software, imaging software, and much more.

The availability of hardware and software support, combined with responsive tech support technicians, make for very adequate technology resources to support the program.

Describe the adequacy of the fiscal resources that support the program.

The program has always received computers from the CADD program. These computers are considered obsolete for the CADD program due to its software requirements, but they have been adequate for the Technology Education program. During this most recent cycle, however, the CADD program did not have to get rid of its current computers. The last batch of computers which that program gave to the Technology Education program are now becoming obsolete. Therefore, the Department just purchased 10 computers for the Technology Education lab at a cost of $10,000. Just at the last NC DPI team visit, the Department provided $20,000 to the Technology Education program for the purchase of a robot, CNC mill, and materials handling equipment for use in content-pedagogy courses. For supplies, the department has often not been able to allocate funding. However, last year, the Department was able to provide $500 in supplies funding. Additionally, the program coordinator was able to use some grant funding to purchase a printer/scanner for the lab. Also the lab has been supplied with left over supplies from grants, and these supplies have been very important in running the lab.

Information documenting the organizational structure and instructional resources that support the program are provided in supporting documentation folders in Exhibit Room.

Standard 6A: Working Conditions

Faculty members have sufficient time for teaching, service, and research as appropriate to the mission of the institution.

Describe institutional and program policies and practices related to faculty loads, including student teaching supervision.

The full-time teaching load for A&T faculty is designated as a 12 s.h. maximum teaching assignment per semester in addition to related student advising, scholarship, and service expectations. The reporting mode for faculty work load is the Delaware cost study which was adopted by the UNC-General Administration in 2000-2001. Policies regarding the workload for the University faculty can be found in the Faculty Handbook.

In Technology Education, supervision of student teachers has generally not counted as part of the teaching load, although the Faculty Handbook does make provisions for how that work might be counted in load.

The Office of Extension has provided some additional funding to faculty members who have developed and taught distance education courses. The University allowed overloads with overload pay in the past, but just this year it ended that practice in order to free faculty members to conduct research and proposal writing. This seems reasonable considering that A&T was just rated as an R1 institution, and it must generate external funding at the R1 level.

Summer school teaching is optional, but a faculty member can elect to teach up to two courses during the summer terms, earning an additional salary based on his or her rank and the number of credit hours taught.

The following is taken directly from the faculty handbook.

> In determining what the teaching load should be for each faculty member, the department chairperson should consider not only the number of credit hours taught but also such additional factors as whether the courses taught are graduate-level, whether the courses taught involve more than the usual number of contact hours, whether the faculty member is directing a graduate thesis, whether the faculty member is engaged in research, and whether the faculty member has extensive committee responsibilities. Normal teaching loads are as follows:
>
> A. Undergraduate program – 12 credit hours per semester.
> B. Graduate program – 9 credit hours per semester.
> C. Departmental chairpersons – 6 credit hours per semester.
> D. School/college deans – 3 credit hours per semester.
>
> All assignments are made by the department chairperson and approved by the school/college.

Provide a chart summarizing faculty teaching, advisement, and committee loads by semester for the year of record and the preceding year. The chart should include the same faculty included in the chart for Standards 5 and 5A.

Figure 74: Tech Ed Faculty Teaching, Advisement, and Committee Loads 2004-2006

	2004-2005					2005-2006				
	Teaching		Advising		Committees	Teaching		Advising		Committees
	F	Sp	F	Sp		F	Sp	F	Sp	
Vincent Childress	12*	12*	37	59	18	12*	12*	51	57	18
Sonya Draper	-	-	-		-	12	12	36		6
Dean Gilbert	12	12	30		4	12	12	30		4
Craig Rhodes	12	12	15		10	12	9	15		10
Elazer Barnette	3	-	NA		NA	3	6	NA		NA
Nancy Glenz	6	6	NA		NA	3	3	NA		NA

* Dr. Childress' nine-hour load is due to a 10% cost sharing requirement on a grant. It amounts to a 25% buyout. The 10-12 hours was an overload for him.

Advising worksheets and information documenting faculty loads for the program are provided in folders in the Exhibit Room.

References that Support the Conceptual Framework

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