

**DRAFT**

**Carl D. Perkins Vocational & Applied  
Technology Education Act of 1990**

**Program Year 1991-92**

**North Carolina Vocational and Technical Education**

# **PERFORMANCE REPORT**

**N. C. Department of Public Instruction  
Bob Etheridge, Superintendent**

**N. C. Department of Community Colleges  
Robert Scott, President**



"It is the intent of the General Assembly that vocational education be an integral part of the educational process." The State Board of Education and the State Board of Community Colleges shall administer, through local boards, a comprehensive program of vocational education which shall be available to all students who desire it without regard to race, color, national origin, sex or disabling condition.



**Vocational Education Performance Report  
Program Year 1991-1992**

**EXECUTIVE SUMMARY**

The recipients of funds under the Carl Perkins Vocational and Applied Technology Education Act of 1990 are required to report on vocational educational programs on an annual basis. The report covering the July, 1991 to July, 1992 program year was completed and submitted to the US Department of Education in December, 1992. The following are highlights of the report:

- Progress was reported on the development and implementation of the Performance Measures and Standards mandated by the Perkins Act. The core document explaining the measures and standards which was adopted by the NC State Board of Community Colleges was included.
- Funds under the Basic Grant were distributed to 50 eligible community colleges. Funds were used for programs and projects in upgrading curriculum, equipment purchase and retrofit, inservice staff training, guidance counseling recruitment and training, remedial services for students, tech-prep program development, supplemental services for special populations students, additional staff to coordinate services for special populations student services, vocational student placement, and program administration improvement. A total of 158 curriculum programs with combined enrollment of 111,081 benefitted from these funds.
- 47 community colleges received funds to provide services to a total of 14,026 single parents, displaced homemakers, and single pregnant women students. An additional 397 students benefitted from sex equity grants designed to train men and women in the nontraditional occupations. Another 1223 participants took advantage of career exploration workshops held primarily for community women.
- Four System-wide Curriculum Improvement Projects were funded. These included Electrical Installation and Maintenance, Industrial Maintenance, Transportation Services (Auto Body Repair, Automotive Service, and Diesel Vehicle Maintenance), and Child Development.
- Three Community-based Organization grants were awarded. These included the Transitional Entrepreneurship and Apprenticeship in Technical Industries (TrEAT), Vocational Explorations for Native Americans, and Model for Improving Vocational, Choice, Education, and Training Project.







Bob R. Etheridge  
State Superintendent  
Department of Public Instruction

Vocational and technical education is intended by the General Assembly of North Carolina to "be an integral part of the educational process." This is significant to understanding the performance of vocational and technical education in this state. Just as we espouse a comprehensive approach to vocational and technical education through a standardized course of study within secondary education, so do we promote a comprehensive approach to secondary vocational and technical education that complements the work of postsecondary vocational and technical education.

To these ends, the North Carolina Vocational and Technical Education Performance Report is presented to demonstrate not only how the performance of vocational and technical education meets the standards set forth in the federal Carl D. Perkins Vocational and Applied Technology Act of 1990, but also to show it complements and contributes to the whole educational process for the youth of our state. We encourage you to read the document carefully.



Robert W. Scott  
State President  
Department of Community Colleges

The North Carolina community college system was created to give adult citizens opportunities to obtain the technical, vocational and basic academic education they need to be full participants in the economic and social life of the state. From its beginnings as a system of industrial education centers and junior colleges, it has focused on that primary mission. Today, over 754,500 individuals are enrolled in all programs, over 454,503 in curriculum or continuing education programs which provide specific preparation for an occupation. Institutions provide assessment, counseling and support services to increase student success. College faculty and administrators work closely with business leaders to ensure that programs are teaching students what they need to know to become valuable employees. The system's record in vocational education has made it one of the state's major economic development assets.





**NORTH CAROLINA  
ANNUAL PERFORMANCE REPORT  
FOR THE VOCATIONAL AND TECHNICAL EDUCATION  
STATE-ADMINISTERED PROGRAM UNDER THE  
CARL D. PERKINS VOCATIONAL AND TECHNICAL  
EDUCATION ACT OF 1990  
P. L. 101-392**

**PROGRAM YEAR 1991-92**

**NORTH CAROLINA DEPARTMENT OF PUBLIC INSTRUCTION  
BOB ETHERIDGE, STATE SUPERINTENDENT  
RALEIGH, NORTH CAROLINA**

**NORTH CAROLINA DEPARTMENT OF COMMUNITY COLLEGES  
ROBERT SCOTT, STATE PRESIDENT  
RALEIGH, NORTH CAROLINA**





## TABLE OF CONTENTS

Introduction .....	1
Certification .....	3

### SECONDARY

Executive Summary .....	5
Performance Measures and Standards .....	8
Single Parents, Displaced Homemakers and Single Pregnant Women .....	10
Sex Equity .....	12
Special Populations	
Disabled .....	14
LEP .....	15
Disadvantaged .....	16
State Leadership and Professional Development	
New, Expanded and Discontinued Courses .....	17
Professional Development .....	18
Curriculum Development .....	21
Equipment .....	22
Community Based Organizations .....	24
Consumer and Homemaking Education .....	26
Tech Prep .....	30
Integrating Academic and Vocational/Technical Education Programs .....	33
Career Guidance and Counseling .....	35

### Appendices

Appendix 1	Enrollment Table - On Disk	
Appendix 2	State Planning and Coordinating Committee .....	39
Appendix 3	Exemplary Programs	
	a. Single Parent, Displaced Homemakers and Single Pregnant Women .....	41
	b. Sex Equity .....	42
	c. Community Based Organizations .....	43
	d. Consumer and Homemaking Education .....	44
	e. Tech Prep .....	58
	f. Integrating Academic & Vocational Education .....	60
Appendix 4	VoCATS Curriculum Development Plan .....	62
Appendix 5	Tech Prep Grant Summary .....	66
Appendix 6	Student Completer Data .....	76
Appendix 7	1992 Numbers Report .....	83





## INTRODUCTION

This Performance Report presents the services and activities provided to the youth and adults in secondary and postsecondary vocational and technical education in North Carolina from July 1, 1991 - June 30, 1992. The report is more than a compliance document for the U. S. Department of Education; it represents the efforts at all levels to improve the quality of education and training for participants in vocational and technical education.

As directed by North Carolina General Statute 115C-158, the FY1992 federal grant of \$28,675,135 was shared two-thirds by secondary and one-third by postsecondary. The contents of this report reflect this two-thirds/one-third split and the appropriate clientele served at each level. Data are provided to reflect: services to special populations; student assessment of the value of vocational and technical education; business/industry participation; and professional development activities.

I congratulate all parties concerned not only in the high level of performance indicated in this report, but also in the sincere desire to coordinate efforts to provide maximum results for the clients served by vocational and technical education in North Carolina.

June S. Atkinson, Director  
Division of Vocational and Technical Education Services





## CERTIFICATION

The State Board of Education, sole state agency, has the authority under Public School Law 115-153, to approve and submit the PY 91-92 Performance report for Vocational and Technical Education Services. This report has been prepared as authorized by 34 CFR 400. The report covers the twelve month program year July 1 to June 30.

**North Carolina State Board of Education**  
(Official Name of State Board)

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Date

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Chairman, N. C. State Board of Education

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Date

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State Superintendent of Public Instruction



## **EXECUTIVE SUMMARY**

### **SECONDARY SERVICES AND ACTIVITIES**

Vocational and Technical Education in North Carolina is organized in grades 6 through 12 in the public school system. The program begins with exploratory courses and leads to specialized classroom instruction in grades 11 and 12.

The mission of vocational and technical education is to empower students for effective participation in a global economy as world class workers and citizens. It fulfills this mission by:

- Preparing students for further vocational and technical education.
- Preparing students for initial employment.
- Assisting students in making educational and occupational decisions.
- Applying and reinforcing related learnings from other disciplines.
- Preparing students to make informed consumer decisions and applying practical life skills.
- Assisting members of special populations to succeed in vocational and technical education programs.
- Providing career guidance to assist students in making informed career decisions.

North Carolina Department of Public Instruction supports 130 local education agencies (LEAs), serving 475 comprehensive secondary schools and six career centers. Vocational and technical education is comprised of 122 courses in eight program areas. Sixty-four percent of the students enrolled in grades 7-12 participated in at least one vocational course during the 1991-92 school year.

Of the 38,352 vocational and technical education completers (duplicated count), 61% were employed full or part time (53% of these were employed in a field closely or directly related to their vocational program); 60% were continuing their education; 5% were in military service; and 3% were classified as homemakers. Six percent of the vocational and technical education completers indicated they were not employed and seeking full time employment. The statewide youth unemployment rate was 18.9%. Some completers were employed while continuing their education.



Special populations enrollment in vocational and technical education programs, grades 9-12, increased from 92,546 in 1990-91 to 108,498 in 1991-92.

	Limited English Proficient		Disadvantaged		Disabled	
	90-91	91-92	90-91	91-92	90-91	91-92
Agriculture Education	23	21	5,976	7,104	2,478	2,785
Business Education	245	372	22,921	27,560	2,604	2,892
Consumer Home Ed.	102	137	16,823	19,690	4,065	4,483
Health Occup. Ed.	17	6	2,140	2,741	288	302
Technical Education	47	65	4,711	5,225	1,843	1,664
Marketing Education	13	13	4,718	5,329	572	686
Occup. Home Ec.	49	50	2,186	2,730	480	540
Career Exploration	46	44	1,615	1,893	516	1,084
Trade & Industry Ed.	132	101	13,579	16,156	4,357	4,825
Total	674	809	74,669	88,428	17,203	19,261

\*Duplicated Count

During the 1991-92 school year, 29 sex equity grants were awarded to address special equity issues. These funds provided programs and activities for more than 8,642 youth in grades 9-12.

Seven single parent, displaced homemakers and single pregnant women grants were awarded. These funds provided programs and services to 622 students, an increase of 345 persons served from 1990-91.

Community Based Organization grants (CBOs) enabled 222 special needs youths the opportunity to receive pre-employment and/or job training preparation. The number of youth served almost doubled from the previous year.

Consumer and Homemaking resources were used predominately for grants to local school systems. Of the \$821,538 available for grants, 43.95 percent (19 grants) was spent in economically depressed areas. Of the 13 grants available to non-depressed areas, six were directly related to underserved populations (teen parents and disabled).

Enrollment in Tech Prep increased from 3,918 in 1990-91 to over 10,000 in 1991-92. Sixty-seven grants were awarded of which 23 were for planning and 18 for implementation. These funds provided resources to 67 LEAs and 37 community colleges.

Career guidance and counseling provided support services for students in program planning, career guidance and counseling, job placement and postsecondary education. Emphasis was placed on counseling students for Tech Prep programs, getting parents involved in the career-decision making process and assisting students in developing four-year personalized educational plans.

The following report highlights accomplishments in providing programs, services and activities in vocational and technical education under Titles I, II, and III of the Carl D. Perkins Vocational Education and Applied Technology Act of 1990.

## PERFORMANCE MEASURES AND STANDARDS

### Progress

By June 30, 1992, substantial progress had been made in developing the performance standards and measures and in setting up the mechanisms needed to attain the standards. Steps completed in establishing the performance based system included:

1. Statewide assessment, as mandated by Perkins, to determine the degree to which the ten criteria in Section 116 of Perkins were being met. This assessment was structured to not only cover the mandated criteria but to also provide considerable information to state and local planners on what was needed in order to attain, document the attainments and meet the requirements of the performance-based system.
2. Feedback to LEAs and statewide results from over 200 assessment items reflecting the ten mandated criteria. Information was used for LEAs to compare their status with the rest of the state and to provide statewide data indicating what had to be done in order to operate the performance-based system.
3. Inservice training for vocational directors and state staff on the mandated requirements. Principles, policies and procedures were developed and operationalized into a plan with timelines.
4. Establishment of the Vocational Education Information System's Quality Management Team and the Vocational Competency Tracking System's Quality Management Team. The Vocational Education Information System's Quality Management Team worked on the standards related to enrollment, completion, and follow-up. The Vocational Competency Tracking System's Quality Management Team worked on the standards for competency attainment and the mechanisms needed to teach and document the attainment of those standards.
5. Implementation of one proposed standard by all LEAs. Data related to proposed standards, other than those dealing with competencies, have been provided to LEAs through the Vocational Education Information System. The Vocational Competency Achievement Tracking System is being developed for determining competency attainment.

## **Coordination**

To improve coordination with JTPA, JOBS, etc., the State Planning and Coordination Committee was utilized (See Appendix 2). The involved agencies presented their standards and related activities for review and consideration during quarterly meetings. The agencies met to consider alternative, consistent ways of measuring and setting standards related to basic and advanced academic skills. However, because of the variation in purposes and authority structures at the state, sub-state and local levels, commonalities could not be found in these measurement methodologies.

## **Committee of Practitioners**

Inservice training was provided to the Committee of Practitioners about the changes of Perkins II, and the pros and cons of various measurement methods. Their viewpoints were collected and analyzed.

## **Standards Developed**

As of June 30, 1992, the standards had been developed for approval by the State Board, and all the LEAs had implemented one of the chosen standards. This standard was already on the state accreditation system. None of the others have been implemented.

## **State Assistance**

The state provided statewide inservice on the possibilities under Perkins II, the alternative available, and on the mechanisms for implementing these possibilities. These mechanisms included the technology steps needed to attain the standards, and the recommended strategies in total quality management teamwork to make improvements. Statewide tryouts are scheduled to make sure that the standards operationally define vocational/technical education, and to make sure the mechanisms developed are workable.



# **SINGLE PARENTS, DISPLACED HOMEMAKERS AND SINGLE PREGNANT WOMEN**

## **Services Provided**

LEAs and community based organizations were provided the opportunity to apply for grant funds through the request for proposal process to address the needs of single parents, displaced homemakers, and single pregnant women to continue their education, develop marketable skills, and make vocational training more accessible and successful. Seven LEAs were funded to address the needs of single parents, displaced homemakers, and pregnant women. These seven programs served a total of 622 students at the secondary level.

Assessment. An assessment of abilities, interests, and special needs of participants provided coordinators an opportunity to plan and implement special activities and services to meet the participants' needs.

Counseling/Guidance Services. All participants received supportive services through guidance and counseling. Services that were provided included emotional support, encouragement, self-esteem and self-confidence building, and crisis intervention. In addition to individualized counseling, coordinators offered workshops, seminars and group sessions to include decision making skills, parenting skills, budgeting, time management, nutrition, medical needs, educational and career goal setting, coping, assertive training and employability skills. Speakers, audio visual materials and field trips enhanced these services.

Child Care and Transportation Services. Financial resources were provided for child care and transportation services to allow single parents and displaced homemakers to remain in school and acquire marketable skills.

Outreach/Referral Services. Referral services to and contacts with other community agencies were regular and on-going. Most of the programs were funded with direct collaboration for implementation between the LEA and a specific community based organization. Advisory committees included key individuals from appropriate community human service agencies.

Tutorial Services. Tutorial and remediation services were provided as needed to promote academic progress. Mentors were used. Home visits were made to assist confined students in keeping up with their school work.

Employability Skills. In addition to regular vocational training, participants received additional instruction in life skills and employability skills to assist them in obtaining employment.

Supplies and Materials. As needed and appropriate, supplies and materials were provided to participants to enhance their educational and career success and parenting skills.

### **Effective Delivery Methods**

Each LEA used various service delivery methods to enhance the effectiveness of the programs in their school system.

- 1) Some LEAs used the single parent funds mainly to support the salary of an individual who provided direct counseling, guidance, referral and other supportive services.
- 2) The case management approach was used effectively. Each participant was assessed, a profile developed, and plans and services developed and implemented according to the individual needs.
- 3) Some programs incorporated a special incentive component for extra motivation and student accomplishment. Participants earned extra opportunities through compliance with an agreed upon goal such as reduction of absenteeism.
- 4) Some programs included a male support group for the fathers of the participants' children.

### **Services Most Needed**

The services that seem most needed were:

- 1) Counseling and guidance support
- 2) Financial resources for child care, transportation, and materials
- 3) Outreach and referral services
- 4) Life skills training

An exemplary program is described in Appendix 3.

## **SEX EQUITY**

The goals of the sex equity programs are to provide programs, services, and activities to eliminate sex bias and stereotyping in vocational and technical education and to provide programs, services, and activities for girls and women age 14 through 25 to support themselves and their families.

LEAs were given an opportunity to apply for grants through the requests for proposals process. The scope and design of each program varied according to local needs.

During the 1991-92 school year, 29 sex equity grants were awarded to LEAs to address equity issues. More than 8,642 students were served in grades six through twelve for a total cost of \$530,049.

### **Services Provided**

Twenty-six of the funded programs provided summer institutes where students participated in two or more of the following areas: assessment, guidance and counseling, outreach activities and a variety of hands-on technology exploratory activities in such areas as electronics, drafting, lasers, hydraulics, and auto technology. Computerized software programs were used extensively. The activities were diverse, ranging from canoe construction to non-traditional speakers, tours to aerospace sites, aircraft flight control centers, and shadowing.

ROPES, a course providing personal challenges, cooperation, and building of self esteem and self-confidence was used extensively to help meet the goals of individual programs.

During the regular school year, services provided included workshops, seminars, guidance and counseling, decision making skills, time and money management, educational and career planning, employability skills, assertive training, and tutorial assistance. Career day activities planned for all students included presenters representing non-traditional occupations.

The costs of child care and transportation services, as needed, were provided for eligible participants to enhance school attendance and achievement.

Local follow-up surveys of program participants revealed an increase in non-traditional training and employment, a decrease in dropouts statistics, and a significant attitudinal change in gender role stereotyping by students and adults.



## **Preparatory and Supportive Services**

Advisory committees were instrumental in providing services to include publicity, speakers, equipment, tour sites, career day presenters, and program recommendations.

Program products developed included brochures, curriculum guides, career and educational plans, career packets, marketing designs, posters, and video cassettes.

Grant resources were used to purchase supplies and materials for exploring technology, entrepreneurship simulations, construction projects, videos, books, and software for recruiting, exploratory activities, and training. Publications and audio visuals developed were shared with other local educational agencies.

Inservice staff development activities for vocational, academic and counseling staffs were conducted to increase awareness of gender bias and provide strategies to eliminate gender bias.

Equity teams from 30 local educational agencies participated in a statewide three-day Equity Update Conference held for vocational and academic teachers, counselors and administrators.

Excerpts from the report and a video, "Shortchanging Girls, Shortchanging America," prepared by the American Association of University Women, were shared with three educational groups (Business Education, Trade and Industrial Education and Industry Education Coordinators).

Technical assistance included local contacts, telephone calls, on-site monitoring visits, correspondences, reviews of progress and final reports, and presentations at conferences and workshops. Equity materials were distributed to all vocational administrators.

These activities and services have contributed to improving programs through increased awareness of equity issues in vocational education and employing strategies to eliminate barriers that prevent equity.

An exemplary program is described in Appendix 3.



## **SPECIAL POPULATIONS - DISABLED**

### **Achievements**

Access to vocational and technical education programs for disabled students increased in the 1991-92 school year by 4%. Disabled students were enrolled in the full range of vocational programs offered in the state.

Recruitment activities were provided to assist disabled students to enter vocational and technical education programs. Information needed to choose an appropriate course of study was offered in large groups, small groups and in individual sessions. This process provided the individual with disabilities an opportunity to participate and obtain assistance when needed or requested. Special Population Coordinators, Industry-Education Coordinators, guidance counselors and other support personnel provided opportunities for disabled students to tour the vocational programs, attend assemblies and receive printed information.

Coordination between vocational and technical education and special education has improved along with the access rate of disabled students in the program. Vocational personnel have increased their attendance at vocational planning meetings for disabled students. As a result of state-wide inservice, vocational teachers and support personnel have improved their skills in developing the vocational component to the IEP. As their skills improved, so did the teaching environment for these students.

Support personnel were available to assess the special needs of disabled students in relation to their completion of a vocational and technical education program. Generally, the students participating in career planning activities received an interest inventory, a learning style assessment, and an aptitude test. After the assessment was completed, the support personnel provided career counseling. Based on the assessment, the students expressed choice, interest, and input from the parents, the most appropriate vocational and technical education program was recommended. Transition counseling and instructional services were incorporated in the vocational competencies. Vocational teachers and support personnel, special education teachers and vocational rehabilitation counselors worked cooperatively to ensure that disabled students acquired the competencies necessary to attain and retain employment.

### **Supplemental Services**

Supplemental services were the major factors which fostered the success of special populations students in the regular vocational and technical education program. Vocational teachers participated in the vocational planning meetings for disabled students. Individualized education programs were based on the annual goals and short term objectives that lead to job skills compatible with the student's interests and abilities. Supplemental services needed for the student's success were included. Disabled students not enrolled in special education received an accommodation plan and services to meet their individualized needs. An emphasis was placed on all disabled students and their needs.

## **SPECIAL POPULATIONS - LEP**

### **Achievements**

Access by LEP students to vocational and technical education programs increased during the 1991-92 school year by 19%. The integration of academic and vocational skills and support services were the major factors contributing to the success of LEP students enrolled in vocational and technical education. Academic and vocational teachers used the team approach to ensure that LEP students understood the math and English concepts relating to vocational education. They worked cooperatively to integrate relevant job-specific activities.

The most common support services included the modification of instructional strategies, extension of time for assignments, interpreters from the school and community, and peer tutors. One local system enlightened teachers by offering foreign language classes which provided them with common phrases, ways to greet students, strategies for developing rapport, and an introduction to the cultural differences of the LEP students.

### **Outstanding Services Provided**

Montgomery County Schools had the largest percentage of Spanish-speaking LEP students in the state. Over the past two years this population has increased by 183%. Most of the students moved to the area as migrants and their families chose to remain in the county. An English as a Second Language teacher was instrumental in helping vocational teachers and support personnel translate materials. Recruitment materials were available in Spanish and the vocational assessment materials were translated into Spanish. A collaborative effort between the JTPA counselor and vocational teachers improved the students' understanding of instruction and attainment of basic skills. In vocational classes, the teachers and student helpers assisted the LEP students in interpreting the information needed to be successful in the classroom.



## **SPECIAL POPULATIONS - DISADVANTAGED**

### **Impact of Supplemental Services**

Over 10,000 disadvantaged students completed vocational and technical education programs in the 1991-1992 school year. Ninety-four percent of them were "satisfied" or "very satisfied" with their vocational education experience. Seventy-eight percent rated the usefulness of their vocational experience on the job as "above average." Seventy-three percent of these respondents participated in vocational student organizations.

Based on the responses, the vocational and technical education program was a major factor in reducing the dropout rate. Forty-eight percent of the disadvantaged completers indicated that vocational education was the reason they remained in school. The participants responded that vocational personnel most influenced their involvement in work and in education.

After the completion of their programs, 58 percent were placed in additional training or education. Eleven percent entered education with business and industry, 41 percent furthered their education at colleges or trade schools and six percent of the completers entered the military.

Fifty-nine percent of the students classified as disadvantaged completers were employed. Of that percentage, 34 percent were employed fulltime, 19 percent part time, and six percent were in the military. The average hourly wage was \$5.23. Ninety-six percent of these completers were employed in North Carolina and 83 percent of them worked within 20 miles of the school they attended.

### **Achievements**

The disadvantaged students received an assessment of their interests, abilities, learning styles and other special needs before entering vocational and technical education programs. As a result, special populations coordinators and vocational teachers were able to jointly develop a prescription of services for individual academically disadvantaged students. The support personnel and vocational teachers provided services in the classroom or in the career resource center. The needs of economically disadvantaged students were assessed as well. Fee waivers for vocational classes were available for economically disadvantaged students. Many vocational teachers created ways to assist the students in financing vocational student organization obligations. Special populations coordinators sought the necessary financial assistance from in-school and out-of-school programs.

## STATE LEADERSHIP AND PROFESSIONAL DEVELOPMENT

### New, Expanded and Discontinued Courses

The following information reflects the state's secondary vocational programs as to those new, discontinued, and expanded. The information was obtained from the local vocational and technical education plans from each LEA.

Program Area	New Courses	Discontinued Courses	Expanded Courses
Agriculture Education	68	36	60
Business Education	168	100	68
Health Occupations	44	8	0
Home Economics consumer occupational	104 40	44 8	56 12
Technology Education	36	36	4
Marketing Education	40	12	8
Principles of Tech.	60	4	0
Trade & Industry	204	84	92
Employability Skills	32	4	0



## Professional Development

The Division of Vocational and Technical Education Services Management Plan included specific goals and objectives for the training of vocational personnel including teachers, counselors, teacher educators and state and local administrators. Priority was given to curriculum integration of academic and vocational education, technical updates including all aspects of the industry, Vocational Competency Achievement Tracking System (VoCATS), Tech Prep, applied curriculum, and special populations.

Workshop title and attendance at personnel development workshops sponsored by the Division of Vocational and Technical Education included the following:

	<u>Attendance*</u>	<u>Total</u>
Curriculum Integration		
Distance by Learning Broadcasts (6 sessions, 1 1/2 hours each)	400	
Statewide Curriculum Integration of Academic and Vocational Education	1,800	
Applied Communications	<u>100</u>	2,300
VoCATS -- Instructional Management System	664	664
Tech Prep	1,380	1,380
<u>Agriculture Education</u>		
Forestry	18	
Plant Identification	20	
Initial Pesticide Licensing	25	
Pesticide Renewal	14	
Forestry	17	
Landscape Design	10	
Shop Equipment Maintenance	12	
Swine Management	15	
MIG/TIG Welding	23	
Oxy-Acetylene Welding	20	
Fall Technical Updates	240	
Spring Technical Updates	260	

	<u>Attendance*</u>	<u>Total</u>
<u>Agriculture Education (Continued)</u>		
Summer Workshop	272	
Beginning Teacher Workshop	10	
Agricultural Marketing	10	
Agriculture Leadership Training	<u>11</u>	
		977
<u>Business Education</u>		
Desktop Publishing & Spreadsheet Software	49	
DOS Management	33	
Telecommunications	16	
Business Mgmt/Entrepreneurship	6	
New Business Teachers	27	
Business Leadership Training	68	
Summer Vocational Workshop	<u>411</u>	
		610
<u>Career Exploration</u>		
CECNC Advisor Workshop	12	
Certification Classes	90	
Regional Career Exploration Curriculum and Instructional Training	650	
Summer Workshop	<u>339</u>	
		1,091
<u>Gender Equity</u>		
Gender Equity -- Team Approach	95	
Non-Traditional Career Choices	<u>25</u>	
		120
<u>Health Occupations Education</u>		
NC-HOSA Management Team	20	
New Teacher Internship	10	
Summer Workshop	<u>150</u>	
		180
<u>Home Economics Education</u>		
Food Science	50	
Commercial Foods for Home Economics		
Cooperative Education	14	
VoCATS Test-Item Editing Workshop	23	
FHA/HERO Cluster Meeting	95	
Leadership Development for Competitive Events	55	

	<u>Attendance*</u>	<u>Total</u>
<u>Home Economics Education (Continued)</u>		
Fall Train the Trainer Workshop- Curriculum Implementation	70	
Summer Workshop	563	
Train the Trainer Workshop for Teacher Educators	<u>30</u>	900
 <u>Industry Education Coordination</u>		
New IEC Workshop	45	
Summer Workshop	<u>85</u>	130
 <u>Marketing Education</u>		
Teacher Educator Info Exchange	10	
Beginning Teacher Workshop	18	
Marketing Regional Curriculum Updates	708	
Marketing Educator Update/Partnership Dev	6	
Marketing Leadership Training	21	
Summer Workshop	<u>226</u>	989
 <u>Special Populations</u>		
CBO Technical Assistance Workshops	35	
New Teacher Workshop	55	
Certification Workshop	117	
Regional Technical Updates	<u>212</u>	419
 <u>Teacher Educators</u>		
Tech Prep	35	
Spring Leadership Institute - Assisting Special Populations	<u>20</u>	55
 <u>Technology Education</u>		
Winter Technical Update Workshop	152	
TSA Management Workshop	80	
Principles of Technology Workshops	56	
Summer Workshop	<u>100</u>	388

	<u>Attendance*</u>	<u>Total</u>
<u>Trade &amp; Industrial Education</u>		
VoCATS Software Training	150	
New Teacher Workshop	35	
Pagemaker Workshop for Graphics Teachers	20	
Leadership Chairperson/Regional Adv Workshop	16	
VoCATS Training at Summer Workshop		
Fall & Spring Leadership	260	
Air Conditioning/Recovery Workshop		
for Automotive Teachers	75	
DOS, Hard Drive Disk Management & Computer Assisted		
Learning for Electronics Teachers	20	
Chrysler AAA Troubleshooting Contest	75	
GM Summer Workshop	50	
Ford Summer Workshop	16	
Fall & Spring Cosmetology Workshops	40	
Summer Workshop	<u>440</u>	
		1,197
<u>Vocational Directors</u>		
Tech Prep (Fall)	150	
VoCATS and Performance Standards (Spring)	150	
Summer Workshop - Curriculum Changes and		
Special Populations	<u>150</u>	
		<u>450</u>
		11,850

\*represents a duplicated count

## Curriculum Development

During FY1992 the **Programs of Study and Support Services Guide** for Vocational and Technical Education was revised to reflect changing needs of the workplace. The document was prepared to assist local school systems in planning effective and comprehensive vocational and technical education programs. It contains information about planning, required resources, instructional guidelines, and program area offerings. It was prepared with input from over 300 business/industry representatives, 150 local school administrators, and 2,000 teachers. The document contains information for 108 courses that can be offered in Vocational and Technical Education.

Over 37,000 test items were developed as work continued on the **Vocational Competency Achievement Tracking System (VoCATS)** - a system for planning, implementing and evaluating instruction. The information provided by VoCATS about the current level of student performance in vocational and technical education programs is required as a "baseline" for setting performance goals.



Throughout the year, course blueprints were completed and/or refined. Blueprints outline the scope of the curriculum for a given course. They list the units of instruction, core competencies in each unit, specific objectives for each competency, number of hours or class periods to be devoted to each, type of outcome behavior and related skill area. Blueprints are intended to be used by teachers in planning the course of work, for preparing daily lesson plans and in constructing instructionally-valid tests.

During 1991-92 school year, approximately 30 curriculum packages were developed and disseminated. The VoCATS curriculum package for each vocational and technical education course/program included the following materials:

- .A course blueprint, which lists the competencies and objectives and indicates the relative importance of each. Blueprints were developed by teams of teachers with input from business and industry representatives.
- .A computer-managed Competency/Test-Item Bank developed in North Carolina and tied specifically to the competencies and objectives from the blueprint.
- .A curriculum guide, also keyed to the blueprint, that provides detailed information on units of instruction, including resources and instructional and evaluation strategies. The guide includes suggestions on integrating related basic skills and higher order thinking skills and for working with special populations.

VoCATS products already are available for many of the courses and programs in the N.C. Program of Studies. Efforts are continuing to develop new materials as needed and to continuously update existing materials to keep them relevant as vocational and technical education empowers young people in North Carolina for effective participation in a global economy as world class workers and citizens. Additional work is also taking place to further refine the system itself, making it more usable and useful for local educators.

Appendix 4 lists curriculum development priorities.

## **Equipment**

The 1991 General Assembly ratified House Bill 754 which directed the State Board of Education to develop equipment standards for secondary vocational and technical education and to determine the extent to which LEAs were meeting minimum standards. The Act also required the State Board of Education to develop a plan to assist local school systems in meeting these standards and in keeping with the availability of State, local, and federal funds.



Vocational and Technical Education equipment standards, developed in 1989 and updated in 1992, were used in determining equipment needs by LEAs. A survey was mailed to all 132 local school systems and 90 of the systems responded. Based on the 90 responding, calculations were made using statistical projections to determine what the amounts of money needed for all LEAs to reach minimum standards.

Equipment Needs:

Agricultural Education	\$ 5,559,444
Business Education	43,383,912
Career Exploration Education	6,070,048
Health Occupations Education	1,779,798
Home Economics Education	8,858,652
Marketing Education	1,069,453
Technology Education	13,655,705
Trade & Industrial Education	18,591,430
Industry Education Coordinators	834,428
Special Populations	<u>1,280,400</u>
TOTAL	\$101,083,270

## **COMMUNITY BASED ORGANIZATIONS**

### **Number Served**

During the 1991-92 school year, 101 males and 121 females were provided services from grant funds.

### **Areas Served**

Three of the six participating CBOs had recipients from designated rural areas; three were from urban areas.

### **Programs, Services and Activities**

Contracts were awarded to the following LEAs: Davidson County, Greensboro City, Monroe City, Rocky Mount City, Wake County and Wilson County.

The program in Davidson County served 12 at-risk students and provided assistance to improve academic performance and classroom behavior. This program also aided the successful completion of a cooperatively planned vocational field assignment, which included a variety of on-the-job training activities located at local businesses. The school system was supported by the CBO, Youth and Family Counseling Service in Lexington.

The vocational transition support program in Monroe City Schools served 25 seniors. This program assisted students in determining their occupational preferences and in developing their postsecondary educational goals. The program also offered pre-vocational training opportunities, job placement counseling, and assistance with pre-admission procedures required by the community college system. The Community Action in Monroe was the CBO which worked with the school system.

The Rocky Mount City Schools provided a vocational support program for 22 students by providing counseling, assessment and classroom, both academic and vocational, instruction. The CBO, Rocky Mount Opportunities Industrialization Center, and the school system worked together to develop an "adopt-a-student" model to facilitate on-the-job training and subsequent job placement.

The Wake County program and the CBO, North Carolina Augmentative Communication Association, provided vocational support for ten physically disabled students. Assessments of the students' potential for employability and computer needs were completed. Also computer skills, problem solving, and critical thinking skills were taught.

The Wilson County program provided 30 at-risk youth with vocational counseling and vocational assessment services. In addition to academic and vocational classroom instruction, the program also coordinated resources to help students return to school to continue vocational training. The Opportunities Industrialization Center of Wilson was the CBO involved with this program.

The program in the Greensboro City Schools which was supported by the Lutheran Family Services of the Carolinas, is described in Appendix 3.

These six programs worked successfully with their respective CBOs to help disabled, economically and academically disadvantaged students, aged 16-21, achieve success. The various activities offered to students were:

- outreach programs
- transitional services
- pre-vocational education preparation and basic skill development in cooperation with business concerns
- special prevocational preparation programs targeted to inner-city youth, non-English speaking youth and youth of urban and rural areas having a density of poverty
- student assessments
- guidance and counseling
- dropout prevention and promotion of re-entry to school



## **CONSUMER AND HOMEMAKING EDUCATION**

### **Achievements in programs and support services in depressed areas**

Using the data from the Vocational Education Information System (VEIS), enrollment remained constant in 1991-92. However, the enrollment did represent an increase in the percentage of students taking Consumer Home Economics from 14 to 14.2 percent of students in school.

Consumer and Homemaking set-aside resources were used predominately for grants to local school systems. Of the \$821,538 available for grants, 43.95 percent was spent in economically depressed areas. This represented 19 of the 32 grants.

Of the students served, 39 percent were disadvantaged and 9 percent were disabled. This 48 percent special populations compares with 39.6 percent special populations in the schools requiring remedial or special programs. This 39.6 percent has increased over the past five years, with this trend expected to continue. Consumer Home Economics is serving a representative sample of the special populations students in the schools in North Carolina.

The grant recipients focused on the purposes identified in the legislation. The nineteen grants described in this section were all conducted for residents of economically depressed areas. Nine of the grants focused on traditionally underserved populations - one on TMH students, six on teenage parents, and two on economically disadvantaged. Eleven of the grants focused on improving, expanding, and updating programs in the areas of basic skills, self esteem, cooperative learning, parenting education, family nutrition and wellness, food science, home and family life, and improving technology in the program. Two of the grants focused on addressing the local, state, and national priority of correlating family skills and work skills.

All grants were for the instructional areas listed in the legislation. Most grants covered more than one instructional areas. Managing individual and family resources, strengthening parenting skills, preventing teen pregnancy, and assisting members of at-risk populations were the areas receiving the most attention.

Implementation strategies used most often were community outreach programs, application of academic skills, curriculum development, upgrading of equipment, and integrating FHA/HERO into the program.



A two page summary of all grants is available in the state Home Economics Education office. Three exemplary programs are summarized in the appendices. They are:

Martin	PROJECT REACH (Raising Esteem & Altering Attitudes in Consumer Home Economics)
Nash	A Model Program for Teen Living
New Hanover	The Correlation Between Family Skills and Work Skills: A Curricular Research Study

### **Achievements in programs and support services in non-depressed areas**

Of the 32 grants supported in 1991-92, 13 were in non-depressed areas. However, six of the thirteen were directly related to underserved populations. Five grants targeted teen parents and one grant targeted the disabled. Four grants focused on technology and one grant was focused on math skills. Two grants developed three curriculum guides which targeted most of the instruction areas listed in the instructional areas in the legislation.

Implementation strategies used most often were teacher education, application of academics, and curriculum development.

A two page summary of all grants is available in the State Home Economics Education office. Three exemplary programs are summarized in the appendices. They are:

Guilford County	Development of a community resource journal for preventing teen pregnancy
Orange County	Preparing vocational teachers to serve learners with special needs
Wake County	Developing a model for adapting existing Consumer Home Economics Education curriculums to the North Carolina Vocational Competency Achievement Tracking System's Revised Blueprint

## **Achievements in State Leadership and State Administration**

The State Staff directed the development and completion of a five year Program of Studies, eight course blueprints and test item banks, 27 workshops, and 32 grants to the schools for \$821,538. Modifications to the Program of Studies were reviewed and approved for 30 school systems, cooperative education reports were reviewed for 26 schools serving 306 students, FHA/HERO budget and membership data were monitored, and one teacher education program was assessed and approved to continue.

At the local level 31 school systems and 43 local school visits were made for consultative services. In each of the eight regions the staff met twice with a representative from each school system on a Regional Leadership Council involving 508 teachers and 42 administrators. Also in each of the eight regions, one FHA/HERO Leadership Training Workshop for 3,195 students and 403 advisers and one competitive events session involving 1,372 students and 373 teacher advisers was held.

The most comprehensive inservice offered was the Home Economics Education Summer Workshop for 539 teachers. The workshop included sessions titled Food Science in the Food Industry, Manufactured Housing, Resources for Pregnant Teen, Exploring Life Skills: New Middle School Course, and Understanding and Strengthening Families. There was a showcase on the grants from the previous year. Teachers evaluated this conference as outstanding.

The most comprehensive inservice offered to students was the FHA/HERO State Leadership Conference for 1,284 participants and 250 teacher advisers. Students participated in competitive events, leadership workshops, project workshops, and recognition programs. The student organization received \$60,000 in educational scholarships and involved 167 business and industry leaders in the organization. North Carolina has 12,597 members. It is the third largest vocational student organization in North Carolina and the sixth largest FHA/HERO student organization in the nation.

## **Benefits**

The Program of Studies for school systems to use in establishing courses locally for the next five years 1993-1998 was developed this year. The new Program of Studies reflects changes in course content, course management, course names, prerequisites, scope and sequence. In addition, one new course in Food Science was added.

A course blueprint and test item bank were written or completed for four Consumer and four Occupational courses. These were distributed to all school systems along with a statewide pretest for each course. Schools have VoCATS to assist them in managing instruction.

Three new Consumer Home Economics Education guides: Foods and Nutrition, Interior Design and Housing, and Independent Living, were developed by grants. There was extensive networking of teachers and resource assistance to complete the guides.

The North Carolina FHA/HERO Competitive Events Handbook was revised. The guides, blueprints, test item banks, and handbook are in alignment. There were statewide in-service activities to support the new Program of Studies for Food Science and Commercial Foods teachers in cooperative education programs. On the regional or local level there were grants on math integration, assisting disabled students, cooperative learning, raising self esteem, work and family, and food science that supported new directions.

### **Exemplary programs developed**

The six exemplary programs referred to previously are described in Appendix 3. They are as follows:

<u>Area</u>	<u>County</u>	<u>Purpose</u>
Depressed	Martin	Self esteem for at-risk youth
Depressed	Nash	Technology - Teen Living Model Program
Depressed	New Hanover	Correlation - work and family
Non-depressed	Guilford	Resource journal for preventing teen pregnancy
Non-depressed	Orange	Teacher inservice on disabled learners
Non-depressed	Wake	Curriculum coordination with VoCATS



## **TECH PREP**

### **Impact of Services**

Funds under Title III, Part E were made available to LEAs on a competitive grant basis for planning or implementing Tech Prep programs. Eligible consortia submitted a request for proposal which included:

- An overview of the need for the proposed program describing population to be served, area to be served and economic status
- A description of the program design including
  - articulation efforts
  - course of study
  - curriculum development efforts
  - in-service training for teachers and counselors
  - services to special populations
  - preparatory services
  - collaborative efforts between and among secondary and postsecondary vocational/technical education
  - academic education
  - student services
  - collaboration with business and industry
- A three-year development plan

Twenty-three planning proposals and 18 implementation proposals were approved for funding during the 1991-92 school year. These grant funds provided resources to 67 LEAs and 37 community colleges. (See Appendix 5) Of the 67 LEAs funded, 11 were in counties designated as urban and 56 were in rural counties.

LEAs allotted a substantial amount of time planning quality Tech Prep programs. In consortia receiving planning grants, the process began with numerous orientation/information meetings to inform students, instructors, administrators, parents and business/industry of the benefits of Tech Prep. Advisory and/or steering committees were formed to plan and coordinate the overall efforts. Implementation grant recipients continued orientation/information efforts by expanding community and school involvement.

### **Planning**

Curriculum articulation and alignment played a major role in the planning stages. Vocational instructors from the high schools met with their counterparts at the community colleges to compare competencies, address gaps, eliminate overlaps and determine advanced credit/placement. Core academic and vocational teachers met within the



secondary school to articulate and align curriculum, compare competencies, timeframes, etc. To continue the alignment process, secondary academic and vocational teachers met with community college instructors, thereby attaining both horizontal and vertical curriculum alignment.

From these planning sessions, core career clusters emerged: Business and Marketing, Engineering Technology, Environmental and Life Sciences, Health and Human Resources and Industrial Technology. Each career cluster provided a suggested curriculum (including postsecondary) which will best prepare students for additional education and career success. During the planning and implementation of Tech Prep, LEAs significantly modified curriculum by adding more rigorous courses and deleting basic or general courses. Counselors, Industry Education Coordinators (IEC) and Special Populations Coordinators within the LEAs have worked with students in developing four-year education plans for each student. (Approximately 60% of all students have a plan.)

### **Special Populations**

In order to meet the needs of special populations students, in-service training for instructors, counselors and supportive services personnel was provided within the LEAs. Statewide efforts included technical assistance and special workshops to help local systems provide the necessary supportive services.

Counselors and special populations coordinators have also provided assistance and resources to teachers to help meet special needs. Individual Education Plans (IEPs) identify the specific competencies special populations students will focus on throughout the year. With the help of VoCATS, instructors were able to detect possible achievement deficiencies, intervene when special help is needed and track student progress in mastering identified competencies.

### **Professional Activities and Services**

Many "firsts" were derived from Tech Prep professional activities. These included: academic and vocational teachers meeting together and discussing curriculum, realizing the many overlaps and coordinating teaching efforts; secondary and postsecondary instructors articulating curriculum and determining advanced placement/credit in order to avoid duplication; counselors, administrators and instructors working together to improve services and instruction to students; and business/industry being involved in curriculum decisions.

Over 2,300 business/industry people were actively involved in the education process by serving in advisory roles to ensure that students were provided the essential academic and vocational-technical competencies for future jobs. School and business personnel worked together to develop curriculum that meet industry needs (i.e. technical math, technical writing, higher order thinking skills, computer-assisted learning, etc).

Approximately 560 guidance counselors were actively involved in in-service activities. LEAs provided special training for counselors, stressing stronger career planning, aptitude assessment and developing four-year career plans for all students.

### **Preparatory Services**

Aptitude assessments were administered to students and career plans were developed which mapped a focused path through high school and beyond. Guidance services were expanded to include more parent and students involvement in the registration process to ensure students would be prepared for further education in their career area. Early intervention measures were implemented to assist students to access, progress, and succeed in vocational and technical education programs.

Appendix 3 describes Tech Prep exemplary programs.

# INTEGRATING ACADEMIC AND VOCATIONAL/TECHNICAL EDUCATION PROGRAMS

## Activities

Efforts to promote curriculum integration of academic and vocational education have focused on extensive staff development for academic and vocational education teachers. At least three models have been promoted through in-service training.

- a. Coordination
- b. Reinforcement
- c. Thematic Approach

Three statewide workshops about integrating academic and vocational education were held for 1,800 teachers and administrators. The purpose of these workshops was to provide a forum for exchanging ideas about curriculum integration.

Six distance by learning satellite broadcasts were delivered to all school systems. Topics for the broadcasts included:

- Why integrate
- Commonalities in education
- Commonalities between math and vocational education
- Commonalities between science and vocational education
- Commonalities between social studies and vocational education
- Planning for implementation

LEAs have begun activities that promote team teaching of an academic and vocational teacher to include:

Science and Health Occupations (Swain County)  
Science and Home Economics (Greene County)  
Science and Technology Education (Hoke & Avery County)  
English and Vocational Program Areas (Rowan County)  
Science and Agriculture (Hoke County)  
English and Business (Chapel Hill)  
Social Studies, Marketing & Business (Mecklenburg)  
Math and Technology Education (Greene County)

At least two LEAs have begun academic or school-within-a-school approach:

Finance, Health, and Human Services (Mecklenburg)  
Science, Math, Technology, and Business (Greensboro)



## **Providing Assistance to Special Populations**

The Department of Public Instruction sponsored two statewide Integrating Academic and Vocational Education Workshops in 1991-92. The purpose of the workshops was to provide teachers, counselors, and administrators a forum for exploring the integration of academic and vocational education. The specific objectives provided the participants with an opportunity to: 1) Examine the rationale for integrating academic and vocational education; 2) Identify strategies to help teachers, counselors, and administrators achieve integration; 3) Explore the administrator's role in establishing a climate for integration; and 4) Examine school settings where integration has proven effective.

In addition to the above workshops, the Division of Vocational and Technical Education Services sponsored presentations in spring and summer workshops on "The Role of the Special Populations Coordinator in Serving Members of Special Populations Enrolled in Tech Prep." The workshops focused on the preparations and other special services needed by special populations to have access and succeed in a Tech Prep curricular.

Local school systems used a variety of strategies to assist special populations students enter and succeed in Tech Prep programs. For instance, in Moore County Schools a vocational education department/teacher was the leader in developing a handbook to assist teachers in the business related courses and the Trades and Industrial area in improving the academic competencies of special populations students. The purpose of the booklet, "Strategies for Improving Competency Test Scores", was to assist the students in improving test scores while teaching vocational skills. The integration effort improved the competency test scores of special populations students.

### **Impact**

Surveys of the 38,352 students who completed vocational and technical education programs in 1991-92 have been used by local and state personnel to evaluate the effectiveness of programs and to highlight areas where improvement is needed.

Students were asked to rate their vocational program on usefulness in preparation for work and further education on a scale from very poor to very good. 79% stated their preparation for work was average to good. 81% stated their preparation for further education was good to very good. When asked if current education status was closely or directly related to their high school vocational and technical education programs, 60% said yes. Overall, 94% stated they were satisfied to very satisfied with their vocational education experience in high school. Appendices 6 and 7 contain additional student data.

Exemplary programs are described in Appendix 3.



## **CAREER GUIDANCE AND COUNSELING**

In 1991-92 three statewide inservice activities were held for approximately 275 Industry/Education Coordinators (IECs), both new and experienced. Regional programs of work were developed as well as individual ones. Priorities of the Division of Vocational and Technical Education Services were provided as a guide for program emphasis. IECs advised, counseled, and provided support services for students in the areas of program planning, career guidance and counseling, job placement and postsecondary education.

### **Methods and Procedures**

A four-day section of the annual Vocational Education Summer Workshop was devoted to Industry/Education Coordination. Participants were given information on the employment outlook for high school seniors, counseling students for Tech Prep programs, opportunities in the community college system, establishing effective career centers, using enrollment and follow-up data for counseling, enabling students to develop career development plans, getting parents involved in the career-decision making process, the role of career guidance in meeting performance standards, and integrating career development activities into regular classroom instruction.

### **Descriptions of Programs/Services**

Realizing that youth interested in pursuing careers, regardless of their postsecondary aspirations, have received little assistance, Secondary Education Plans for Career Preparation was developed. This booklet contains model four-year educational plans for approximately 42 occupational clusters. These model plans were developed with extensive input from representatives of business/industry, community colleges, guidance and counseling, vocational and academic education. The plans give students sound educational options; serve as a guidance tool; reflect future employment needs; reflect rigorous academic and vocational courses; provide a tool to develop planning and meaningful integration strategies for teachers and counselors; and provide a means for parents, students and teachers to understand the connection between high school and employment advancement.

Over 10,000 copies of the Secondary Education Plans for Career Preparation were distributed to local school systems for counselors, teachers, administrators and parents to use as they assist students in career/educational planning.

IECs coordinated the development of appropriate four-year personalized educational plans for students enrolled in vocational and technical education. The process included a high school orientation, interest survey, aptitude tests and counseling. The plans list by grade the courses needed by the students to prepare them for expressed career objectives. Student progress was monitored and revisions made to the plans as needed.

An internship/shadowing program enabled students to experience a job setting and acquire relative information in order to more clearly define their career interest and educational plans.

Seniors in vocational and technical education courses were provided informational packets which contained career/job and postsecondary training information.

Career Days and Job Opportunities Conventions provided students with career information and opportunities to interview with employers for job placement. Computerized career information systems were used extensively in career guidance and counseling programs.

IECs were involved in developing and facilitating the use of labor market information, curriculum guides for parents and students, and program brochures for public information.

IECs became involved, to a degree, in establishing business/educational partnerships. These partnerships involved businesses in educational efforts by providing services, support, equipment, and money for various projects.

IEC programs and services were evaluated at the LEA level. A state-approved performance appraisal instrument was used for evaluative purposes.

The IEC consultant has worked cooperatively with the State Occupational Information Coordinating Committee (SOICC) to facilitate the use of occupational information materials and promote career development activities. The Division of Vocational and Technical Education Services provided leadership for field-testing the National Career Development Guidelines in one project site.

## **APPENDICES**

Appendix 1 Enrollment Table - On Disk

Appendix 2 State Planning and Coordinating Committee

Appendix 3 Exemplary Programs

- a. Single Parent, Displaced Homemakers and Single Pregnant Women
- b. Sex Equity
- c. Community Based Organizations
- d. Consumer and Homemaking Education
- e. Tech Prep
- f. Integrating Academic & Vocational Education

Appendix 4 VoCATS Curriculum Development Plan

Appendix 5 Tech Prep Grant Summary

Appendix 6 Student Completer Data

Appendix 7 1992 Numbers Report





## STATE VOCATIONAL EDUCATION PLANNING AND COORDINATING COMMITTEE

<u>Member</u>	<u>Address</u>	<u>Department</u>	<u>Representing</u>	<u>Bus. Phone</u>
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### **Exemplary Single Parents, Displaced Homemakers and Single Pregnant Women Program**

One school system partially funded a teacher/coordinator to work at the high school to provide special counseling support and instruction to single parents and pregnant women. Home visits were made not only to take homework, but also to assess needs and to develop a special relationship with the participants and their families. Seminars were provided monthly on a rotating class basis about relevant topics. Guest speakers, visuals, and tours were used. Special group sessions were planned for participants in accordance with their grade levels and special assistance was provided for child care, transportation, and crisis intervention such as housing. An active male support group was also formed. An advisory committee included carefully selected members of community agencies and was utilized in planning, coordinating and evaluating the program. A special incentive program was developed and proved to be effective in reducing absenteeism.

The success of this program was attributed, to a great extent, to a dedicated, creative, and concerned staff.

### **Exemplary Sex Equity Program**

Even though the 29 funded programs were similar, each offered something special. One exemplary program was staffed with well prepared, interested, and enthusiastic instructors. Lesson plans, including hands-on activities, tours and speakers were planned and disseminated to each participant. A strong guidance component provided activities in goal setting, teaming, career planning, critical thinking, self image, and problem solving. Students participated in the R.O.P.E.S. challenge course. Shared tours included universities, Bio-Technology Center, Research Triangle Park, National Institute of Environmental Health, adventure program, and planetarium. A special speakers' bureau and individualized shadowing experiences, and tutorial enrichment services were provided for participants throughout the school year. A special computer software program, Plato, was individualized for each participant to use both during the summer and the regular school year.



### **Exemplary Community Based Organization Program**

The Greensboro Public Schools and the Lutheran Family Services of the Carolinas (participating CBO) worked closely to provide the limited English proficiency (LEP) high school population with special attention so as to succeed in vocational and academic classes, and work experience.

The program, entitled "Language/Cultural Networking" served 65 LEP students of Montagnard, Vietnamese, Cambodian, Hispanic, African, Palestinian, Kuwaiti, and Russian backgrounds. The program's cultural resource person provided necessary bilingualism, bicultural sensitivity and knowledge.

The program provided remedial vocational instruction in the students' native language to facilitate mastery of vocational concepts, vocabulary and classroom objectives, and to develop skills needed to function in a multicultural society. The program provided vocational teachers with support services enabling them to develop the confidence to work with LEP students and to prepare students for entry level job skills.

This program also supported multicultural teaching teams made up of teachers, the program director and cultural resource person. These teams modeled the friendship, respect, and cooperation that can exist among persons who do not share the same race or culture. This program successfully focused on the many languages and cultures of enrolled students and directed these factors so as to enrich and expand the lives of both students and faculty.



## Exemplary Consumer Home Economics Programs

### MARTIN COUNTY

#### Description

The focus of PROJECT REACH (Raising Esteem and Altering Attitudes in Consumer Home Economics) is to modify the Teen Living curriculum to motivate at-risk students to excel, focusing on self-esteem building, goal-setting, decision-making and problem-solving.

#### Objectives

1. Provide one month of extended employment for the PROJECT REACH instructor.
2. Modify instructional units in Teen Living to include hands-on, practical learner activities, resources appropriate to a variety of academic levels, interest areas and learning styles.
3. Expand and improve Teen Living curriculum to implement high impact intervention strategies in the areas of self-esteem, goal setting, decision-making and problem-solving.
4. Update equipment and resources in Consumer Home Economics lab to enhance student interest in learning, facilitate cooperative learning techniques and adapt to individual learning styles.
5. Create an Advisory Council for PROJECT REACH.

#### Implementation Strategies

1. Cooperative learning techniques
2. 4-Mat learning styles techniques
3. Self-esteem building strategies
4. Computer-assisted instruction

#### Achievements

Teaching strategies were modified using the implementation strategies listed above and positive behavioral changes and academic successes were noted. A six-week unit from a Self-Esteem course of instruction was taught and lasting positive behavioral change was the result. Computer-assisted instruction provided students with high interest hands-on opportunity to apply basic skills. Modified teaching units in Teen Living have been compiled and work is progressing to improve each as resources are identified. The written units of instruction include curriculum alignment guides for unit competency goals and objectives and resources to teach in a variety of learning styles. Specific modifications for special learners will be outlined as students are identified in the course for the upcoming academic year. A parent component was implemented with the assistance of guidance counselor, Ontra Reddick. The Self-Esteem unit was initiated with a cookout involving Teen Living students and their parents. It was planned and prepared

by the students. The instructor and Mrs. Reddick shared information about the grant and its objectives with the parents and students, and Mrs. Reddick initiated a series of parent workshops which were held weekly in conjunction with the Self-Esteem unit. Plans are in progress for expansion of this concept in the coming school year.

An Advisory Council was implemented and the two half-day scheduled meetings were very well attended. Accomplishments for this year included a basic understanding of the grant, its objectives, and the role of the council. Members were very interested and a network of interdependent resources and services for students has begun with the willingness of these members to accept an active role in the future.

Several Teen Living students achieved successes in Future Homemakers of America. Two students (one of which is academically disadvantaged) won first place regional and state awards and a national gold medal in an FHA/HERO STAR event in Chicago in July, 1992. Two other students completed two modules of Power of One projects for individual recognition in FHA/HERO.

#### Individuals Benefiting From Grant

Twenty-six Teen Living students benefited directly from this grant this school year. Of those students, nine (35%) were economically disadvantaged, eight (31%) were academically disadvantaged, one (4%) was learning disabled and one (4%) was other health impaired.

All students taught by this instructor received benefits of improved instruction resulting from extensive staff development training.

Approximately forty-five members of Williamston High School faculty and staff received a five-hour Cooperative Learning Workshop experience. Positive feedback was received and techniques were implemented throughout the school.

Curriculum alignment guides will be given to Martin County Home Economics Teachers teaching Teen Living and other teachers requesting the information. Ann annotated resources directory will be distributed to home economics teachers in the state at the Summer Vocational Workshop.

#### Products Resulting From Grant

1. Modified curriculum units of instruction in Teen Living
2. Three computers with printers and a data projection screen for classroom use.
3. Annotated resource directory
4. Software, games, and videotapes described in directory, including the Unlocking Your Potential videotape series
5. Self-Esteem and Personal and Social Responsibility curriculum. Recommendations have been made to implement school-wide as deemed appropriate in the coming academic year and plans are proceeding accordingly.



### Organizations or Companies Involved

Community outreach and organizational support are included in goals for Phase II of PROJECT REACH.

### Evaluation

Staff development experiences received have been invaluable. The computers have been a big boost to student interest and have extended learning opportunities a great deal. Software and other teaching resources offer great promise for varying future teaching strategies. There is much potential for continuing and expanding the goals and objectives for which the groundwork was laid in this year.

Time constraints imposed by identifying and ordering materials and equipment and scheduling appropriate staff development experiences hindered full implementation of the strategies developed. However, plans are progressing for their full use in the coming academic year.

## NASH COUNTY

The intent of the project entitled "A Model Program for Teen Living", was to completely redirect the curriculum of the Home Economics program at Southern Nash Junior High School to reflect the competencies and objectives of the revised course blueprint for Teen Living, while using an individualized approach designed to meet the diverse needs of the special populations enrolled in the program. The ultimate goal of the project was to create a totally new image for the Teen Living program which would result in increased enrollment.

The objectives were:

1. To develop plans for an improved, expanded, and updated program in Teen Living.
2. To visit existing model Teen Living programs.
3. To purchase equipment that will update the Home Economics department.
4. To develop curriculum materials to meet the diverse needs of the students in Teen Living.
5. To purchase software to aid in remediation and individualized instruction.
6. To plan innovative, individualized instruction to meet the needs of the students.

Once the facility was remodeled, so that various activity centers could be set up, strategies for classroom management and instruction were developed. In order to facilitate cooperative learning, all classes were subdivided into six groups. With the aid of an instructional scheduling board, each group rotated through a variety of activities aligned with the competencies in each unit. The scheduling board was used to indicate the objectives for the day, the rotation schedule for the week, and the individual group activities. The use of small groups allowed for flexible planning, along with the utilization of the six computer stations and six portable sewing machines.

The success of this project can be measured by the increased enrollment in the program. Last year only 40 students registered for the course. For the 1992-93 school year, 203 students chose Teen Living as their first or second elective choice. Members of special populations make up 35% of the enrollment.

Community involvement added to the success of this project. Individuals and organizations involved include: Danny Perry Cabinetmaking, Northern Nash Senior High School Electrical Trades Classes, Spring Hope Enterprise, Stanhope Manufacturing, Rossville Velours, Southern Nash Junior Cafeteria, Ben Casey Photography, and Nash County Schools.

According to Mr. Rick McMahon, Principal of Southern Nash Junior High School, the single best indicator of the program's success lies in the increased enrollment. For the last three years, Southern Junior has been in jeopardy of losing the program due to declining enrollment. Today he is proud to say that "in terms of electives, Teen Living is selling itself at Southern Nash Junior High School."

## NEW HANOVER COUNTY

### A. Brief Description

The project identifies skills needed to be an effective member of a contemporary family using the DACUM process. These family skills were compared with those of the SCANS Commission to decide which family skills are also necessary for work. In addition, the VoCATS Course Blueprint for Teen Living (7115) was been compared to both family skills and work skills to determine which are taught in Teen Living. Suggestions are made for course content to strengthen the relationship between work and the family skills.

### B. Objectives

1. Identify specific skills needed to function effectively in contemporary family settings.
2. Identify skills employers want in their employees.
3. Compare skills, knowledge, attitudes and behaviors needed by families with those most wanted by employers.
4. Analyze competencies and objectives in the Consumer Home Economics Education Blueprint for Teen Living to identify family skills being taught in that course.
5. Analyze competencies and objectives in the Consumer Home Economics Education Blueprint for Teen Living and identify work skills being taught.
6. Identify possible curricular implications (to include additions/adaptations/deletions in the Blueprint for Teen Living) which would more clearly focus on the relationship between work and family.

### C. Implementation Strategies

The DACUM (Develop A Curriculum) Process, was used to conduct a survey with twelve individuals who were considered effective family members and represented diversity among lifestyles. A DACUM facilitator trained in the art of communicating with individuals to identify their perceived ideas asked, "What knowledge and skills are needed to be an effective contemporary family member?" After two days of intense panel interviewing the specific skills which effective contemporary families need to possess had been identified, ranked, and compiled on a DACUM Chart. See Appendix A.

No attempt was made to establish the relative importance of skills wanted by employers. The report of SCANS was used as published.

An advisory committee which included representatives of community agencies, businesses and industries, school administrators, and a researcher was selected. They compared skills wanted by employers (SCANS) to those needed to be effective family members (DACUM) to determine which family skills are also employable skills.



Teams of Teen Living teachers compared the DACUM listing of family skills to the competencies and objectives in the VoCATS Course Blueprint for Teen Living to determine the extent to which family skills as perceived by the DACUM panel were included. See Table 2. They also compared work skills as recommended by the SCANS Commission to the VoCATS Course Blueprint for Teen Living to determine the extent to which these work skills were included. See Table 3.

Recommendations have been made to strengthen the Teen Living Blueprint based on this study.

#### D. Achievements and Services

The findings of this study will aid in the development of curricula which will "Empower individuals and families to manage the challenges of living and working in a diverse global society."

#### E. Number of Individuals

All students enrolled in Teen Living across the state can benefit from this study. This includes the 42.9% of those who according to VEIS data live in economically depressed areas and areas with high rates of unemployment.

#### F. Resulting Products

1. A DACUM Chart that lists the skills needed to be an effective family member.
2. A reproduction of the work skills as defined by the SCANS Commission for Education 2000.
3. A report which contains a comparison between family skills (DACUM results) and SCANS work skills (Table 1), a comparison of the Teen Living Blueprint and the family skills (DACUM results) (Table 2), A comparison of the Teen Living Blueprint with the SCANS work skills (Table 3), and recommendations for additions/deletions/adaptations to the Teen Living Blueprint.

#### G. Organizations Involved

Family Service; Federal Paper; New Hanover County Schools, Assistant Superintendent, Vocational Director, Vocational Supervisor, Secretarial Staff, Job Placement/Dropout Prevention Counselor; Headstart; New Hanover County Department of Social Services; Domestic Violence Center; Cape Industries; New Hanover Health Council, Inc.; Child Advocacy Commission; New Hanover County Health Department; General Electric Company; Forest Hills High School, Marshville; East Junior High School, Morganton; Glen Alpine Junior High, Glen Alpine; E. A. Laney High School, Wilmington; John T. Hoggard High School, Wilmington; Piedmont High School, Monroe; East Carolina University.



## **GUILFORD COUNTY**

### **A. Brief Description**

As part of an effort to provide information and educational materials on teen pregnancy, Home Economics Teachers, students and parents from six North Carolina school systems were asked to identify specific areas of need which they perceived as being important to the further development of knowledge on teen pregnancy.

The areas of concern were used to determine the content of the journal. The resource journal includes current publications, posters, books, pamphlets and videos.

The areas of concern were also used as a basis for conducting a Teen Pregnancy and Prevention Workshop for Home Economics Teachers. This workshop was utilized to evaluate the resource journal.

### **B. Objectives**

1. To address priorities and emerging concerns on teen pregnancy at the local, state and national levels
2. To identify specific educational needs of students, parents and teachers on preventing teen pregnancy
3. To determine the resources available in community agencies and organizations on preventing teen pregnancy
4. To utilize fundings from the need surveys and agencies to develop a Teen Pregnancy Community Resource Journal
5. To solicit teachers response to the Teen Pregnancy Resource Journal
6. To disseminate the Teen Pregnancy Journal to Home Economics Teachers in Region V and Vocational Directors

### **C. Implementation Strategies**

Identify teen pregnancy informational needs and concerns as perceived by Home Economics Teachers, parents and students. Three questionnaires were designed to obtain information from parents, teachers and students. The results of the survey revealed some interesting findings. The parents and Home Economics Teachers identified basically some of the same needs and concerns; while the students identified needs were somewhat different.

Contact community agencies and organizations. Many of the community agencies and organizations have excellent resource materials on teen pregnancy that they would share with Home Economics Teachers.

Conduct a workshop. A Teen Pregnancy and Prevention Workshop was conducted. Many community agencies and organizations were used in the workshop. An evaluation of the workshop was conducted. It was received very well by the Home Economics Teachers in attendance and was said to have been quite beneficial. On the evaluation it was rated superior.

#### D. Achievement and Service

Through the Teen Pregnancy Workshop and Journal the teachers were able to return to their communities and share information gained with students and others.

#### E. Number of Individuals Benefiting from Grant

The grant provided an opportunity for approximately 60 teachers to be exposed to information that would be valuable when teaching students a unit relating to teen pregnancy.

#### F. Products Resulting from the Grant

A resource journal on Teen Pregnancy was developed. Also a video was produced from the workshop which provides information about agencies and organizations that assist teachers with materials, resource personnel, etc. for classes.

#### G. Organizations and Companies

This following organization and/or companies made valuable contributions to the Teen Pregnancy and Prevention Project:

1. Greensboro Public Schools
2. Alamance County Coalition and Adolescent Pregnancy
3. Family Planning
4. Catholic Social Services
5. Family Life Council
6. North Carolina AIDS Control Branch
7. Gillespie Health Center
8. North Carolina Coalition on Adolescent Pregnancy

#### H. Evaluation

The resource journal was well received by Home Economics Teachers. It was suggested by many that the journal should be made available to every Home Economics Department in the State. We were able to only supply one journal to each vocational director, one to each teacher participating in the workshop and teachers that enrolled in the class on Teen Pregnancy Resources at the summer conference.

## ORANGE COUNTY

### A. Project Summary

This project was designed (1) to conduct inservice education for middle and secondary home economics teachers in the areas of diagnoses, causes, intervention and remediation, instructional techniques, and behavior management techniques for learning disabled (LD), educable mentally handicapped (EMH), and behaviorally emotionally handicapped (BEH) learners; and (2) to develop two resource supplements designed for the "special needs" population in two consumer and homemaking courses; Teen Living and Foods and Nutrition.

### B. Objectives and Purposes

The instructional areas for this project were: 1) assisting individuals with handicaps, and 2) assisting members of at-risk populations (LD, EMH, BEH). The purpose of the project were: 1) to encourage participation of traditionally underserved populations, specifically the LD, EMH, and BEH learners; and 2) to improve, expand, and update programs with emphasis on the traditionally underserved.

### C. Implementation Strategies

Objective 1 - The strategy used to achieve objective 1 was the inservice education of teachers preparing them to better serve learners with special needs. The inservice consisted of four phases:

1. assessment interviews with all participants to identify specific needs, problems, and concerns.
2. two full days of formal training
3. pre and posttest and evaluation of the training
4. follow-up activities in the classrooms of the teachers.

Objective 2 - The strategy used to achieve objective 2 was the development of supplemental instruction materials through the use of curriculum guides and course blueprints.

### D. Achievements/Services

The outcomes of the project provided a more appropriate setting for learners with special needs by preparing the teachers to work more effectively with these populations, thus extending the opportunity for special services to be offered in various school systems. Increasing the accessibility of appropriate vocational education programs for learners with special needs increased the quality and number of "marketable skills" needed by these students in the work force.



There was a statistically significant difference in the scores of the pre and posttest. The teachers displayed an increase in the quantity and quality of the skills necessary to teach special needs students in the regular classroom setting. There was also a significant difference (positive) in the teachers attitude toward mainstreaming and in their ability to teach LD, EMH, and BEH students. The teachers maintained a high level of sensitivity toward this student population. CEUs (1.3), AHEA PDUs (11.5), and certificates were granted for participation.

Two resource supplements were developed which targeted the academically handicapped learner most commonly found in the regular classroom; LD, EMH, & BEH. The supplements also includes a brief summary of these three handicapping conditions. The activities were designed for the entire course and were competency based according to the course blue print. One page was devoted to each competency that included an introduction to the concept(s), specific instructional strategies and techniques, and activities to enrich learning.

#### E. Number of Individuals Served

Thirty-nine (39) teachers, 1 student teacher, and 1 vocational director were served through the inservice training. Thirty-two of the teachers and 1 student teacher represented school systems with a negative advantagement index. Traditionally underserved minority groups represented at least one-third of the student population in each school system. Eighty percent of the school systems represented areas with high rates of unemployment.

Two resource supplements were developed and printed to serve all of the middle and secondary home economics teachers (approximately 980) in North Carolina. Thus all of the middle and secondary students enrolled in or who will enroll in Teen Living and/or Foods and Nutrition will be served, as well as students of teachers who integrate these activities into other home economics classes.

#### F. Product Resulting from Grant

1. Video tapes of the inservice (distributed to each participating school system),
2. Resource supplements for 2 consumer & homemaking classes; Teen Living & Foods and Nutrition,
3. Black and white pictures of one inservie training session,
4. Forty-one confident and prepared teachers, student teacher, and Vocational Director.

#### G. Organization/Companies Involved

1. North Carolina Central University
2. School systems: Orange County Schools, Reidsville City Schools, Chapel Hill City Schools, Durham City Schools, Harnett County Schools



#### H. General Evaluation

The participants scored the first 2-day inservice rating of 4.9 out of a possible 5.0. The second inservice was rated 4.87 by the participants. Teachers were especially pleased with the opportunity to share their specific concerns and problems prior to the inservice. None of the teachers had participated in follow-up activities similar to these prior to this inservice. It was the consensus of the group that the follow-up allowed for much needed guidance in practicing the skills presented during the training.

The advisory committee for the project was composed of experts in the areas of Learning Disabled, Educable Mentally Handicapped, and Behaviorally Emotionally Handicapped Children and Youth. The advisory committee also served as workshop presenters and evaluated the resource supplements as "very good".

Recommendations would be to continue training teachers to serve this student population. Attempts should be made to place student teachers with individuals with training and skills in effectively serving learners with special educational needs.

## WAKE COUNTY

### A. Description of Project

Project Title: Developing a Model for Adapting Existing Consumer Home Economics Education Curriculums to the North Carolina Vocational Competency Achievement Tracking System's (VoCATS) Revised Blueprints". The project involved the development of two curriculum guides that correlated with the course blueprints for Foods and Nutrition and Interior Design and Housing. Activities within the guides were to address priorities and emerging concerns at the local, state and national level as they related to managing resources, consumer choices, aged population and accommodating the needs of the handicapped and the traditionally underserved populations. Improved nutrition, conserving limited resources and understanding the impact of technology were additional focuses. The project incorporated matrixes that identify objectives and their employment of strategies to strengthen basic skills and all aspects of the industry.

### B. Objectives

1. Correlate existing curriculums in Foods and Nutrition, and Interior Design and Housing with the newly revised blueprints and test-item banks in the North Carolina-Vocational Competency Achievement Tracking System.
2. Identify a representative group of Consumer Homemaking Education knowledgeable individuals (Consumer Home Economics teachers, Vocational Directors, Teacher Educators and Vocational Education personnel at the state level) to serve in an advisory capacity to the project.
3. Improve, expand, and update teaching/learning activities (strategies), and instructional resources in the areas of Foods and Nutrition, and Housing and Interior Design to address priorities and emerging concerns at the local, state, and national levels as they relate to: managing individual and family resources; making consumer choices; accommodating needs of the aged population; accommodating needs of the handicap and other traditionally underserved populations; improving individual, child and family nutrition and wellness (Foods and Nutrition Curriculum); conserving limited resources, and; understanding the impact of new technology.
4. Field test the revised curriculums for validation of their usability and effectiveness in addressing identified priorities and concerns.
5. Finalize the drafts of the adapted curriculum guides and work through state staff to disseminate these guides to home economics teachers in the state.
6. Structure and conduct formal training sessions on coordinating the adapted curriculum guides, blueprints and test-item banks for planning and implementing competency-based instructional programs at the middle and high school levels.
7. Work with the advisory committee to evaluate the project and prepare a final report according to RFP guidelines.

### C. Effective and/or Unique Implementation Strategies

This project began two and one half months later than originally planned. The delay did not affect the completion of the project nor its quality. Strategies used that contributed to the successful completion were the following:

1. Much of the research and groundwork for the curriculum was performed by the director. When the Advisory Committee met, the entire focus was on the examination, evaluation and recommendations for changes.
2. In addition to scheduled advisory committee meetings, on-site-visitations by the director was a cost effective way of obtaining valuable information from Advisory Members.
3. Advisory members continually received updated copies of the curriculum as it was being developed for their review. This allowed them to field test the curriculum in its developmental stage. Through their evaluation and input, they were also able to recommend resources items.

### D. Achievements and Services

Students enrolled in Foods and Nutrition or Interior Design and Housing in grades 9-12 will have access to a curriculum designed for their use. Strategies in the curricula were written on various learning levels to provide equitable opportunities for learning. Activities for the development of citizenship and leadership are integrated throughout the curriculum.

### E. Individuals Benefiting

Consumer Home Economics teachers throughout North Carolina who teach Foods and Nutrition or Interior Design and Housing will benefit from this grant. The economically depressed areas will find that much research went into the selection of resources that are either free or low in cost to meet their instructional needs. Strategies were designed to strengthen basic skills and personal skills in students. These skills will strengthen workplace skills. Career opportunities for each unit of instruction were provided.

### F. Products from the Grant

Consumer Home Economics teachers will have two curriculum guides for their instruction of either Foods and Nutrition or Interior Design and Housing. These guides are completely aligned with the course blueprints and the VoCATS test item bank.



#### G. Organizations Involved

A. C. Reynolds High School, Albemarle Senior High School, Eastern High School, E. T. Beddingfield High School, Hoke County High School, Ledford Senior High School, New Hanover High School, Northeastern High School, Mountain Heritage High School, Campbell University, East Carolina University, Barrier-Free Environments, NC Dairy and Food Nutrition Council, NC Manufactured Housing Institute, Olympic High School, Pender High School, Pisgah High School, Providence High School, Seventy-First High School, South Johnston High School, Wake County Public Schools, Warren County Public Schools, West Columbus High School, Meredith College, North Carolina Central University, Mars Hill College, NC Poultry Federation, NC Department of Public Instruction

#### H. General Evaluation

Through the collaborative efforts of the director, State Home Economics Staff and the Advisory Committee, this project was completed and is representative of the objectives outlined for the grant. Ideally, this type of curriculum writing would be more valid as a two year project; the first year for research, the second for field testing and evaluation. Due to the length of the project, the field testing and evaluation was handled through the Advisory Committee and their co-workers by using drafts of the curriculum as it was being developed.



## **Exemplary Tech Prep Programs**

### **Marketing**

Realizing the importance of "selling" Tech Prep, Carteret County School System devised a strong marketing plan to include internal and external strategies. The Information/Promotion Committee began with a presentation on the Tech Prep concept to the Board of Education. The next step was a presentation to the faculties of the secondary schools and the community college. The community-parents, business/industry, civic and professional groups were informed of the Tech Prep concept through meetings and appearances on local radio and TV stations. Promotional efforts were then shifted to developing ads, banners, brochures and videos. These were used extensively in the news media and throughout the schools prior to registration.

As a result of strong marketing efforts, 476 students were enrolled in Tech Prep. The Board of Education budgeted \$97,000.00 for equipment with a promise to continue this level for three years or until state equipment standards are met.

### **Business/Industry Involvement**

Craven County Schools provided an opportunity for educators to visit a variety of business/industry agency sites and meet with the personnel to share needs. Business/industry explained their needs for trained employees and the two "sides" discussed ways to meet the educational and training needs of future employees. The visitation experience resulted in attitude changes for both business/industry and educators. Educators now understand the problems employers face in finding competent employees and business understands the education needs and problems. Many partnerships between schools/programs and business/industry were established as a result of this experience. New programs in electronics, principles of technology and new apprenticeship efforts were established.

### **Curriculum Alignment**

Through Tech Prep, Catawba County School system and Catawba County Community Colleges have a common focus and a common goal. Involving instructors and business/industry representatives, the system began by identifying communication, math and science competencies necessary for career success. Using this list, work began on articulating K-14 competencies.

Phase One brought together all vocational teachers (9-12), community college counterparts and business/industry representatives. This group compared vocational course competencies between high school and the community college, determined and addressed overlaps/gaps, determined criteria for advanced placement/credit and identified staff development, instructional materials and equipment needed to teach all competencies.

Phase Two involved all high school English, math and science teachers, community college counterparts, selected community college vocational instructors and business/industry representatives. Subgroups were identified by the five Tech Prep clusters. These groups identified core competencies needed to be successful in beginning math, science, and English courses at the community college, identified core competencies needed in math, English and science to be successful in entry-level employment and identified academic courses needed by high school students in the Tech Prep clusters.

Phase Three included all middle school language arts, math, science and special studies teachers and selected high school counterparts. These instructors identified core competencies need in beginning English, math, science and social studies courses at the high school level; determined how deficiencies would be addressed and identified staff development, instructional materials and equipment needed to teach competencies.

Phase Four involved all elementary teachers and entry-level middle school language arts, math, science and social studies teachers. They determined core competencies needed for middle school entry-level success in language arts, math, science and social studies; addressed deficiencies; identified the grade level that communication, math and science competencies would be introduced and/or reinforced; and identified staff development, instructional materials and equipment needed to teach the competencies.

Realizing that they have just begun, a perpetual phase has been added to provide continuous assessment of the competencies and skills needed for success.

## **Integrating Academic and Vocational Education Exemplary Programs**

### **Southern Regional Education Board Consortium**

Four LEAs - Greene, Hoke, Mecklenburg, and Swain counties - implemented the third year of a restructuring schools project, in conjunction with 15 other states and 38 sites. This effort is designed to: (a) raise expectations of what students can achieve; (b) integrate academic and vocational education; (c) change teaching strategies to include applied learnings in academic courses and reinforcement of academic skills in vocational courses. Extensive staff development, alignment of curriculum, offering of applied academic courses, and increased expectations of student achievement have taken place at each school. The schools are continuing their work to meet the consortium objectives.





# Vocational and Technical Education Curriculum Development Priorities, 1991-1993

1992-93

No.	Course Name	Items developed for C/TIB*	Tests/Items per test		Curriculum Guides	Blueprints #	No. of Business/Industry Representatives Involved
			Pretest	Posttest			
6145	Workplace Readiness	1131	1x100	1x100	1	1	10
6158	Exploring Career Decisions	980	1x100	1x100	1	1	10
6200	Principles of Business	789	2x100	2x100	1	2	10
6208	Exploring Business and Marketing	600	1x100	1x100	1	1	10
6215	Business Law	700	1x100	1x100	1	1	10
6225	Business Management	350	2x100	2x100	1	2	10
6235	Small Business/Entrepreneurship	715	2x100	2x100	1	2	10
6245	Banking/Finance	260	1x100	1x100	1	1	10
6311	Computerized Accounting I	1116	1x100	1x100	1	1	10
6312	Computerized Accounting II	1430	1x100	1x100	1	1	10
6331	Financial Management I	590	1x100	1x100	1	1	10
6332	Financial Management II	1060	1x100	1x100	1	1	10
6400	Business Computer Technology	330	2x100	2x100	1	2	10
6411	Computer Applications I	806	2x100	2x100	1	2	10
6412	Computer Applications II	841	1x100	1x100	1	1	10
6511	Keyboarding	552	2x100	2x100	1	2	10
6512	Advanced Keyboarding/Document Processing	383	1x100	1x100	1	1	10
6521	Shorthand	350	1x100	1x100	1	1	10
6531	Office Technology and Procedures I	1261	2x100	2x100	1	2	10
6532	Office Technology and Procedures II	1187	1x100	1x100	1	1	10
6535	Business Communications	420	1x100	1x100	1	1	10
6600	Principles of Business	789	1x100	1x100	1	2	10
6615	Small Business/Entrepreneurship	715	2x100	2x100	1	2	20
6621	Marketing	472	1x100	1x100	1	1	10
6622	Marketing Management	707	1x100	1x100	1	1	10
6625	Business Management	350	2x100	2x100	1	2	10
6626	Strategic Marketing	700	1x100	1x100	1	1	20
6636	Fashion Merchandising	573	1x100	1x100	1	1	12
6645	Hospitality/Tourism Marketing	500	1x100	1x100	1	1	15
6655	Advertising/Sales Promotion	600	1x100	1x100	1	1	12
6810	Introduction to Agriscience	1000	1x100	1x100	1		10
6811	Agricultural Production and Management I	1500	1x100	1x100	1	1	10

\*Competency/Test Item Bank

\*Blueprint - outlines the scope of the curriculum for a course/program; details core competencies and specific objectives

No.	Course Name	Items developed for C/TIB	1992-1993		Curriculum Guides	Blueprints	No. of Business/Industry Representatives Involved
			Pretest	Posttest			
6812	Agricultural Production and Management II	1600	1x100	1x100	1	1	10
6828	Exploring Biotechnology	450	1x100	1x100	1	1	10
6831	Agricultural Engineering Technology I and II	800/800	4x100	4x100	4	4	10
6841	Horticulture I	600	1x100	1x100	1	1	10
6842	Horticulture II	860	1x100	1x100	1	1	10
6851	Natural Resources Management I	800	2x100	2x100	2	2	10
6852	Natural Resources Management II	800	2x100	2x100	2	2	10
6861	Natural Resources Management I	500	1x100	1x100	1	1	10
6862	Ag Cooperative Training I	500	1x100	1x100	1	1	10
7015	Ag cooperative Training II	933	1x100	1x100	1	1	10
7018	Teen Living	1081	1x100	1x100	1	1	10
7025	Exploring Life Skills	827	1x100	1x100	1	1	10
7035	Independent Living	908	1x100	1x100	1	1	10
7045	Clothing Design	688	1x100	1x100	1	1	10
7055	Foods and Nutrition	900	1x100	1x100	1	1	10
7065	Interior Design and Housing	1000	1x100	1x100	1	1	10
7075	Parenting and Child Development	900	1x100	1x100	1	1	10
7111/12	Food Science	1937	1x100	1x100	1	1	10
7121	Child Care I and II	1167	1x100	1x100	1	1	10
7122	Food Production and Management I	892	1x100	1x100	1	1	10
7131	Food Production and Management II	1200	1x100	1x100	1	1	10
7132	Apparel and Interiors I	1200	1x100	1x100	1	1	10
7141	Apparel and Interiors II						
	Home Ec Cooperative Education I	Use Home Economics C/TIBs as appropriate					
7142	Home Ec Cooperative Education II	Use Home Economics C/TIBs as appropriate			1	1	10
7200	Biomedical Technology	Portfolio assessment			1	1	10
7210	Health Team Relations	500	1x1-00	1x100	1	1	18
7211	Allied Health Sciences I	1852	1x100	1x100	1	1	18
7212	Allied Health Sciences II	851	1x100	1x100	1	1	18
7221	Medical Sciences I	1800	1x100	1x100	1	1	18
7222	Medical Sciences II	850	1x100	1x100	1	1	10
7400	Introduction to Trade and Industrial Education	Use T&I blueprints and C/TIBs as appropriate					
7511/12	Automotive Service Technology I and II	1276	1x100	1x100	2	1	10

No.	Course Name	Items developed for C/TIB	1992-1993		Curriculum Guides	Blueprints	No. of Business/Industry Representatives Involved
			Pretest	Posttest			
7521/22	Auto Body Repair I and II	800			5	1	10
7611/12	Textiles I and II	536	1x100	1x100	1	1	10
7621/22	Furniture/Cabinetmaking I and II	1000			1	1	10
7631/32	Electronics I and II	1146	1x100	1x100	2	1	10
7641/42	Metals Manufacturing I and II	801	1x100	1x100	3	1	10
7651/52	Industrial Maintenance I and II	1000	1x100	1x100	1	1	10
7661/62	Welding I and II	710	1x100	1x100	5	1	10
7711/12	Masonry I and II	779	1x100	1x100	2	1	10
7721/22	Carpentry I and II	1019	1x100	1x100	3	1	10
7731/32	Air Conditioning and Refrigeration I and II	1000	1x100	1x100	4	1	10
7741/42	Electrical Trades I and II	1399	1x100	1x100	3	1	10
7811/12	Cosmetology I and II	1130	1x100	1x100	2	1	10
7821/22	Industrial Cooperative Training I and II	893	1x100	1x100	1	1	10
7911/12	Graphics Communications I and II	1000	1x100	1x100	2	1	10
7921/22	Technical Drafting I and II	767	3x50	3x50	3	1	10
8011	Principles of Technology I	454	1x100	1x100	1	1	10
8012	Principles of Technology II	484	1x100	1x100	1	1	10
8108	Exploring Technology Systems	1103	1x100	1x100	1	1	10
8110	Fundamentals of Technology	460	1x100	1x100	1	1	10
8115	Technology Studies	465	1x100	1x100	1	1	10
8121	Communication Systems	461	1x100	1x100	1	1	10
8122	Advanced Communication Systems	435	1x100	1x100	1	1	10
8131	Manufacturing Systems	431	1x100	1x100	1	1	10
8132	Advanced Manufacturing Systems	430	1x100	1x100	1	1	10
8141	Structural Systems	433	1x100	1x100	1	1	10
8142	Advanced Structural Systems	470	1x100	1x100	1	1	10
8151	Transportation Systems	469	1x100	1x100	1	1	10
8152	Advanced Transportation Systems	455	1x100	1x100	1	1	10

\*Competency/Test Item Bank

\*Blueprint - outlines the scope of the curriculum for a course/program; details core competencies and specific objectives





## LEA TECH PREP GRANT RECIPIENTS

LEA	1990-91 PLANNING	1991-92		1992-93		1993-94		1994-95	
		P	I	P	I	P	I	P	I
Alamance County									
Burlington City									
Alexander County									
Alleghany County									
Anson County			50,000						
Ashe County									
Avery County			150,000						
Beaufort County									
Washington City									
Bertie County									
Bladen County									
Brunswick County									
Buncombe County	25,000								
Asheville City									
Burke County									
Cabarrus County	25,000		50,000						
Kannapolis City									
Caldwell County	* 25,000		50,000						
Camden County		[75,000]							
Carteret County	25,000		50,000						
Caswell County		[50,000]							

\* Celebration North Carolina Funds  
 [ ] represents consortium member

## LEA TECH PREP GRANT RECIPIENTS

LEA	1990-91 PLANNING	1991-92		1992-93		1993-94		1994-95	
		P	I	P	I	P	I	P	I
Catawba County	* 25,000		50,000						
Hickory City									
Newton-Conover City									
Chatham County									
Cherokee County		75,000							
Edenton-Chowan		[75,000]							
Clay County		[75,000]							
Cleveland County			[150,000]						
Kings Mountain City			150,000						
Shelby City			[150,000]						
Columbus County									
Whiteville City									
New Bern-Craven	25,000		50,000						
Cumberland County		25,000							
Currituck County		75,000							
Dare County		[75,000]							
Davidson County			149,975						
Lexington City	25,000		[149,975]						
Thomasville City			[149,975]						
Davie County	25,000		[149,975]						
Duplin County			50,000						

\*Celebration North Carolina Funds  
 [ ] represents consortium member

## LEA TECH PREP GRANT RECIPIENTS

LEA	1990-91 PLANNING	1991-92		1992-93		1993-94		1994-95	
		P	I	P	I	P	I	P	I
Durham County		25,000							
Durham City									
Edgecombe County									
Tarboro City									
Winston-Salem/Forsyth		25,000							
Franklin County									
Franklinton City									
Gaston County									
Gates County		[75,000]							
Graham County		[75,000]							
Granville County									
Greene County									
Guilford County									
Greensboro City									
High Point City									
Halifax County		[75,000]							
Roanoke Rapids City		[75,000]							
Weldon City		75,000							
Harnett County		25,000							
Haywood County		25,000							
Henderson County		75,000							
Hendersonville City		[75,000]							

[ ] represents consortium member

## LEA TECH PREP GRANT RECIPIENTS

LEA	1990-91 PLANNING	1991-92		1992-93		1993-94		1994-95	
		P	I	P	I	P	I	P	I
Hertford County		25,000							
Hoke County									
Hyde County									
Iredell/Statesville									
Mooreville City									
Jackson County			100,000						
Johnston County									
Jones County									
Lee County			50,000						
Lenoir County									
Kinston City									
Lincoln County									
Macon County		25,000							
Madison County									
Martin County									
McDowell County	25,000		50,000						
Charlotte-Mecklenburg		25,000							
Mitchell County									
Montgomery County									
Moore County									
Nash County		25,000							
Rocky Mount City			50,000						

[ ] represent consortium member



## LEA TECH PREP GRANT RECIPIENTS

LEA	1990-91 PLANNING	1991-92		1992-93		1993-94		1994-95	
		P	I	P	I	P	I	P	I
New Hanover County			93,625						
Northampton County		[75,000]							
Onslow County		25,000							
Orange County									
Chapel Hill-Carrboro City									
Pamlico County									
Elizabeth City/Pasquotank		[75,000]							
Pender County			[ 93,625]						
Perquimans County		[75,000]							
Person County		50,000							
Pitt County	25,000								
Polk County		25,000							
Randolph County		25,000							
Asheboro City									
Richmond County			50,000						
Robeson County	25,000		50,000						
Rockingham County		75,000							
Eden City		[75,000]							
Western Rockingham City		[75,000]							
Reidsville City	25,000		50,000						
Rowan-Salisbury									
Rutherford County			50,000						

[ ] represents consortium member

## LEA TECH PREP GRANT RECIPIENTS

LEA	1990-91 PLANNING	1991-92		1992-93		1993-94		1994-95	
		P	I	P	I	P	I	P	I
Sampson County		[49,902]							
Clinton City		49,902							
Scotland County									
Stanly County									
Albemarle City									
Stokes County									
Surry County									
Elkin City									
Mount Airy City									
Swain County			[100,000]						
Transylvania County		[75,000]							
Tyrrell County		20,600							
Union County									
Monroe City									
Vance County									
Wake County		25,000							
Warren County	25,000								
Washington County									
Watauga County		25,000							
Wayne County									
Goldsboro City									

[ ] represents consortium member

\* Celebration North Carolina Funds  
[ ] represents consortium member

## COMMUNITY COLLEGE TECH PREP GRANT RECIPIENTS \*

COMMUNITY COLLEGE	1990-91 PLANNING	1991-92		1992-93		1993-94		1994-95	
		P	I	P	I	P	I	P	I
Alamance									
Anson			50,000						
Asheville-Buncombe	25,000								
Beaufort		20,600							
Bladen									
Blue Ridge		75,000							
Brunswick									
Caldwell	* 25,000	25,000	50,000						
Cape Fear			93,625						
Carteret	25,000		50,000						
Catawba Valley	* 25,000		50,000						
Central Carolina		25,000	50,000						
Central Piedmont		25,000							
Cleveland			150,000						
Coastal Carolina		25,000							
College of the Albemarle		75,000							
Craven	25,000		50,000						
Davidson	25,000		149,975						
Durham		25,000							
Edgecombe			50,000						
Fayetteville		25,000							

\* Dollar amounts shown are duplicates of LEA amounts

\* Celebration North Carolina Funds



## COMMUNITY COLLEGE TECH PREP GRANT RECIPIENTS \*

COMMUNITY COLLEGE	1990-91 PLANNING	1991-92		1992-93		1993-94		1994-95	
		P	I	P	I	P	I	P	I
Forsyth		25,000							
Gaston									
Guilford									
Halifax		75,000							
Haywood		25,000							
Isothermal		25,000	50,000						
James Sprunt			50,000						
Johnston									
Lenoir									
Martin									
Mayland			150,000						
McDowell	25,000		50,000						
Mitchell									
Montgomery									
Nash		25,000	50,000						
Pamlico									
Piedmont		50,000							
Pitt	25,000								
Randolph		25,000							
Richmond			50,000						
Roanoke-Chowan		25,000							

\* Dollar amounts shown are duplicates of LEA amounts

+ Dollar amounts shown are duplicates of LEA amounts  
\* Celebration North Carolina Funds

1992 FOLLOW-UP

(ITEM K1) VOCATIONAL PROGRAMS' USEFULNESS IN PREPARATION FOR WORK AND FOR FURTHER EDUCATION		USEFULNESS IN PREP- ARATION FOR WORK:		USEFULNESS IN PREPARATION FOR EDUCATION (ITEM K2)		Total Responses		*Average Rating Scale of 1 - 5		*Above Average		*Average Rating Scale of 1 - 5		Total Responses	
1990-91 Completers Duplicated Count															
All Regular Occupationally Oriented Programs		81%		4.20		14401		4.26		84%		4.26		12282	
Agriculture Education		83%		4.23		1686		4.21		83%		4.21		1252	
Business & Office		80%		4.17		3720		4.31		85%		4.31		3805	
Health Occupations Education		79%		4.17		901		4.56		92%		4.56		1009	
Marketing Education		84%		4.29		1398		4.20		83%		4.20		1116	
Occupational Home Ec Education		80%		4.17		654		4.21		83%		4.21		487	
Principles of Tech Education		71%		4.05		46		4.25		77%		4.25		50	
Trade & Industrial Education		81%		4.19		5996		4.17		81%		4.17		4563	

#Special Non-Occupationally Oriented Programs	86%	4.31	336	78%	4.09	244
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All Regular Non-Occupationally Oriented Programs	73%	4.01	7197	76%	4.05	6486
Consumer Home Economics	73%	4.02	6347	75%	4.04	5686
Technology Education	71%	3.97	850	79%	4.10	800

\*Rating Scale: 5=Very Good 4=Good 3=Average 2=Poor 1=Very Poor

#Special separate programs and cooperative education programs for disadvantaged and handicapped students.

(ITEM I) WORK AND EDUCATION RELATEDNESS TO VOCATIONAL PROGRAMS IN HIGH SCHOOL  1990-91 Completers <u>Duplicated Count</u>	WORK				EDUCATION (ITEM J)										
	Employed Full-Time	Employed Part-Time	Military Service	Homemaker	Comm College/ Technical Inst	Trade or Business School	Private Junior College	University	Military Training						
All Regular Occupationally Oriented Programs	61%	49%	53%	29%	58%	75%	71%	72%	67%	43%					
Agriculture Education	68%	56%	60%	0%	68%	74%	69%	71%	66%	52%					
Business & Office	55%	46%	32%	10%	59%	74%	72%	77%	64%	29%					
Health Occupations Education	47%	38%	64%	67%	61%	89%	90%	90%	87%	50%					
Marketing Education	67%	74%	40%	20%	64%	71%	71%	53%	60%	29%					
Occupational Home Ec Education	53%	47%	29%	71%	52%	66%	42%	100%	76%	0%					
Principles of Tech Education	64%	46%	67%	0%	100%	67%	0%	100%	84%	0%					
Trade & Industrial Education	62%	45%	58%	20%	54%	74%	70%	58%	65%	45%					

	63%	68%	67%	64%	50%
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#Special Non-Occupationally Oriented Programs	67%	67%	75%	33%	
--	-----	-----	-----	-----	--

	43%	60%	64%	38%	46%	25%
	42%	59%	64%	40%	44%	19%
	49%	65%	67%	17%	56%	50%

All Regular Non-Occupationally Oriented Programs	51%	42%	39%	58%	
Consumer Home Economics	51%	43%	35%	59%	
Technology Education	51%	32%	50%	0%	

=====

#Spe l separate programs and cooperative education pr ms for disadvantaged and handicapped students .

=====



## 1992 FOLLOW-UP

(ITEM E) SATISFACTION/MAIN REASON FOR STAYING IN SCHOOL	SATISFACTION WITH VOCATIONAL EXPERIENCES:				SATISFACTION WITH OTHER EXPERIENCES:				(ITEM F) * % Very Satisfied or Satisfied				MAIN REASON STAYED:				(ITEM C)	
	* % Very Satisfied or Satisfied	Average Rating on a Scale of 1 - 5	Total Responses		* % Very Satisfied or Satisfied	Average Rating on a Scale of 1 - 5	Total Responses		* % Very Satisfied or Satisfied	Average Rating on a Scale of 1 - 5	Total Responses		* % Yes	Total Responses			% Yes	Total Responses
1990-91 Completers Duplicated Count																		
All Regular Occupationally Oriented Programs	95%	4.47	18649		82%	3.96	18501		82%	3.96	18501		46%	16856			46%	16856
Agriculture Education	96%	4.51	2042		79%	3.90	2023		79%	3.90	2023		60%	1836			60%	1836
Business & Office	95%	4.45	5249		86%	4.05	5215		86%	4.05	5215		37%	4888			37%	4888
Health Occupations Education	97%	4.62	1291		83%	4.04	1281		83%	4.04	1281		39%	1183			39%	1183
Marketing Education	95%	4.43	1718		83%	3.97	1705		83%	3.97	1705		46%	1567			46%	1567
Occupational Home Ec Education	96%	4.50	885		85%	4.02	873		85%	4.02	873		51%	788			51%	788
Principles of Tech Education	97%	4.48	64		86%	3.93	63		86%	3.93	63		43%	53			43%	53
Trade & Industrial Education	95%	4.45	7400		79%	3.89	7341		79%	3.89	7341		51%	6541			51%	6541

#Special Non-Occupationally Oriented Programs	SATISFACTION WITH VOCATIONAL EXPERIENCES:				SATISFACTION WITH OTHER EXPERIENCES:				(ITEM F) * % Very Satisfied or Satisfied				MAIN REASON STAYED:				(ITEM C)	
	* % Very Satisfied or Satisfied	Average Rating on a Scale of 1 - 5	Total Responses		* % Very Satisfied or Satisfied	Average Rating on a Scale of 1 - 5	Total Responses		* % Very Satisfied or Satisfied	Average Rating on a Scale of 1 - 5	Total Responses		* % Yes	Total Responses			% Yes	Total Responses
#Special Non-Occupationally Oriented Programs	92%	4.32	435		81%	3.97	428		81%	3.97	428		53%	358			53%	358

All Regular Non-Occupationally Oriented Programs	SATISFACTION WITH VOCATIONAL EXPERIENCES:				SATISFACTION WITH OTHER EXPERIENCES:				(ITEM F) * % Very Satisfied or Satisfied				MAIN REASON STAYED:				(ITEM C)	
	* % Very Satisfied or Satisfied	Average Rating on a Scale of 1 - 5	Total Responses		* % Very Satisfied or Satisfied	Average Rating on a Scale of 1 - 5	Total Responses		* % Very Satisfied or Satisfied	Average Rating on a Scale of 1 - 5	Total Responses		* % Yes	Total Responses			% Yes	Total Responses
All Regular Non-Occupationally Oriented Programs	93%	4.35	9958		82%	3.97	9887		82%	3.97	9887		38%	9016			38%	9016
Consumer Home Economics	93%	4.35	8742		82%	3.97	8678		82%	3.97	8678		38%	7955			38%	7955
Technology Education	94%	4.40	1216		80%	3.92	1209		80%	3.92	1209		35%	1061			35%	1061

\*Rating Scale: 5=Very Satisfied 4=Satisfied 3=Neutral 2=Disappointed 1=Very Disappointed

#Special separate programs and cooperative education programs for disadvantaged and handicapped students.

## 1992 FOLLOW-UP

(ITEM D) REASON FOR ENROLLMENT IN VOCATIONAL PROGRAM	TOTAL RESPONSES					
	Related to Career	No Space in Program	Program Wanted Not Offered	Parent/Friend Recommended	Assigned By School	Daily Living Skills
1990-91 Completers Duplicated Count						
All Regular Occupationally Oriented Programs	70%	1%	2%	14%	2%	11%
Agriculture Education	61%	1%	2%	15%	2%	13%
Business & Office	74%	1%	2%	11%	2%	10%
Health Occupations Education	91%	0%	1%	4%	1%	3%
Marketing Education	64%	1%	2%	18%	2%	13%
Occupational Home Ec Education	61%	0%	2%	15%	2%	20%
Principles of Tech Education	76%	0%	2%	10%	0%	13%
Trade & Industrial Education	68%	1%	2%	16%	3%	10%
=====						
#Special Non-Occupationally Oriented Programs	40%	2%	2%	13%	16%	28%
=====						
All Regular Non-Occupationally Oriented Programs	46%	1%	2%	18%	4%	28%
Consumer Home Economics	44%	1%	2%	17%	4%	31%
Technology Education	60%	1%	3%	23%	3%	10%
=====						
#Special separate programs and cooperative education programs for disadvantaged and handicapped students.						

1992 FOLLOW-UP

(ITEM L1) WHO HELPED MOST WITH INVOLVEMENT IN WORK AND EDUCATION	WORK:						(ITEM L2) EDUCATION:						TOTAL RESPONSES
	Total Responses	Vocational Education	IEC/Job Placement	Counselor	Other Teacher or School Personnel	Other	Vocational Education	IEC/Job Placement	Counselor	Other Teacher or School Personnel	Other		
Completers													
Duplicated Count													
All Regular Occupationally Oriented Programs	12532	44%	6%	3%	2%	45%	50%	7%	11%	5%	28%	10183	
Agriculture Education	1540	50%	5%	2%	2%	40%	54%	7%	9%	3%	27%	1011	
Business & Office	3068	37%	5%	3%	3%	52%	44%	6%	13%	7%	30%	3293	
Health Occupations Education	709	45%	3%	2%	2%	48%	73%	3%	5%	3%	16%	907	
Marketing Education	1222	50%	6%	3%	3%	39%	44%	7%	12%	6%	31%	908	
Occupational Home Ec Education	542	43%	6%	5%	3%	43%	45%	9%	14%	6%	26%	361	
Principles of Tech Education	32	34%	9%	6%	3%	47%	60%	4%	8%	6%	21%	48	
Trade & Industrial Education	5419	44%	6%	3%	2%	44%	49%	8%	10%	5%	28%	3655	

#Special Non-Occupationally Oriented Programs	301	49%	14%	5%	4%	28%
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	46%	19%	8%	9%	18%	194
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All Regular Non-Occupationally Oriented Programs	6071	30%	7%	6%	4%	54%
Consumer Home Economics	5317	29%	7%	6%	4%	54%
Technology Education	754	32%	5%	5%	3%	55%

	34%	7%	15%	8%	37%	5229
	33%	6%	15%	8%	37%	4535
	39%	10%	13%	7%	32%	694

#Special separate programs and cooperative education programs for disadvantaged and handicapped students.



(ITEM B) KNOWLEDGE/SKILLS "WISH" LIST RELATED TO WORK	% RESPONDENTS:											
	All Regular Occupation- ally Oriented Programs	Agricultural Education	Business and Office Education	Health Occupations Education	Marketing Education	Occupational Home Economics	Principles of Technology	Trade and Industrial Education	Special Occupationally Oriented Programs#	All Regular Non-Occupationally Oriented Programs	Consumer Home Economics	Technology Education
1990-91 Completers Duplicated Count												
Respondents wish they had learned more in high school about:												
Math Skills	33%	34%	27%	36%	35%	33%	37%	36%	31%	33%	33%	34%
Reading/Vocabulary	24%	23%	25%	28%	23%	23%	22%	23%	29%	23%	22%	24%
Spelling Skills	10%	10%	10%	10%	10%	11%	4%	11%	16%	10%	10%	10%
Manual Skills	16%	20%	11%	9%	16%	15%	10%	20%	23%	14%	13%	17%
Knowledge about Job Requirements	14%	13%	16%	12%	14%	18%	18%	13%	12%	18%	19%	16%
General Knowledge about A Wide Range of Jobs	23%	23%	27%	20%	26%	26%	31%	20%	19%	26%	26%	21%
Problem Solving Skills	22%	19%	25%	26%	24%	21%	20%	21%	24%	22%	22%	21%
Getting Along with Others	7%	7%	7%	7%	8%	11%	2%	7%	7%	8%	8%	7%
Ability to Look for A Job	12%	11%	16%	11%	11%	19%	16%	10%	13%	17%	17%	13%
Interviewing Skills	12%	12%	15%	12%	9%	16%	18%	10%	9%	15%	15%	11%



1992 FOLLOW-UP

(ITEM M2) DISTANCE FROM SCHOOL TO JOB	Total Responses	Employed in North Carolina	Employed Outside North Carolina	0 - 20 Miles	21 - 40 Miles	41 - 100 Miles	100 + Miles
All Regular Occupationally Oriented Programs	8862	97%	3%	84%	10%	2%	3%
Agriculture Education	1047	98%	2%	82%	12%	3%	3%
Business & Office	2137	97%	3%	86%	8%	2%	3%
Health Occupations Education	551	98%	2%	88%	8%	2%	2%
Marketing Education	918	97%	3%	87%	8%	2%	3%
Occupational Home Ec Education	406	98%	2%	84%	11%	1%	2%
Principles of Tech Education	20	100%	0%	80%	10%	10%	0%
Trade & Industrial Education	3783	97%	3%	83%	11%	2%	3%

#Special Non-Occupationally Oriented Programs	163	98%	2%	88%	4%	1%	4%
--	-----	-----	----	-----	----	----	----

All Regular Non-Occupationally Oriented Programs	3821	97%	3%	84%	9%	2%	3%
Consumer Home Economics	3408	97%	3%	85%	9%	2%	3%
Technology Education	413	95%	5%	78%	11%	5%	5%

## 1992 NUMBERS REPORT

Enrollment Grades 6-8 1991-92

Some students are enrolled in more than one vocational program.

	<u>Number</u>	<u>Male</u>	<u>Female</u>
Career Exploration	104,279	55,708	48,571
Consumer Home Economics	9,225	3,623	5,602
Business & Office	13,127	6,648	6,479
Technology Education	10,525	7,641	2,884
Trade and Industrial	58	23	35
Agriculture	<u>537</u>	<u>364</u>	<u>173</u>
Total	137,751	74,007	63,744

Enrollment Grades 9-12 See Enrollment TablesStudent Participation in Vocational Education 1990-91\*

Total students in Grades 7-12	473,993
Total students in Grades 7-12 in vocational courses	305,406
Percent of students taking at least one vocational course	64%

(Students are counted only once)

\*North Carolina Public Schools Statistical Profile 1991

Vocational Student Organizations 1991-92

	<u>No. Chapters</u>	<u>Members</u>
FFA	242	13,268
Future Homemakers of America-- Home Economics Related Organizations	354	12,597
Future Business Leaders of America	308	14,608
Vocational Industrial Clubs of America	470	9,800
DECA	235	9,516
Career Exploration Clubs of N.C.	179	7,500
Health Occupations Students of America	149	6,259
North Carolina Technology Student Association	49	987
Total	<u>1,986</u>	<u>74,535</u>

Cooperative Work Experience 1990-91

<u>No. Students</u>	<u>Hours</u>	<u>Wages</u>
<u>Regular School Year</u>		
16,633	11,249,098	50,458,115
Average Wage Per Hour \$4.30		
<u>Previous Summer</u>		
7,266	1,922,504	8,897,559
Average Wage Per Hour \$4.63		

Completer\*\*Data 1991 Graduates

Total Completers	38,352
Percent Employed full-time or part-time+	61%
Percent continuing education full-time or part-time+	60%
Percent in Military	5%
Percent in Homemaking	3%

+Some students are included in both categories

Comparisons:

Percent of vocational education completers not employed, seeking full-time work	6%
Percent of all youth 16-19 statewide not employed, seeking full-time work	18.9%

\*\*Completer courses are those in a program sequence that have at least one prerequisite that provides job skills training.

Professional Staff 1991-92

Directors of Vocational Education	156
Vocational Teachers	6225
Industry-Education Coordinators	<u>170</u>
Total	6551

Fiscal Expenditures 1990-91\*

## Expenditures in Vocational Education

State	\$180,191,891	90%
Federal	17,336,834	9%
Local	<u>2,089,411</u>	<u>1%</u>
Total	\$199,618,136	100%

Expenditure per student in vocational courses	\$482
Expenditure per student in all school programs	\$3,825
Expenditure for all school programs	\$4,362,829,317

Percent of Vocational Education expenditures to all school programs	5%
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\*North Carolina Public Schools Statistical Profile 1991



**North Carolina Department of Community Colleges**

**Vocational Education Performance Report  
Program Year 1991-1992**

"It is the intent of the General Assembly that vocational education be an integral part of the educational process." The State Board of Community Colleges shall administer, through local boards, a comprehensive program of vocational education which shall be available to all students who desire it without regard to race, color, national origin, sex or handicap.

## Postsecondary Vocational Education

### Table of Contents

	<u>Page</u>
Introduction .....	95
I. Performance Standards and Core Measures (Title I, Part B, Section 115 and 116; Title 5, Part B, Section 512) .....	97
II. Postsecondary/Adult Occupational Programs, Services and Activities (Title II, Part C, Section 231-232) .....	98
Upgrading Curriculum .....	99
Equipment .....	100
Inservice Training .....	101
Guidance Counseling .....	101
Remedial Services .....	102
Tech-Prep .....	102
Supplemental Services .....	102
Special Populations Coordinator .....	103
Placement .....	103
Administrative .....	103
III. Single Parents, Displaced Homemakers, and Single Pregnant Women (Title II, Part B, Section 221) .....	104
Description of Services .....	104
Special Delivery Methods .....	105
IV. Sex Equity Programs (Title II, Part B, Section 222) .....	106
Preparatory Services for Girls and Women .....	107
V. Criminal Offenders (Title II, Part B, Section 118) .....	107
Achievements, services, or programs .....	108

VI.	Special Populations (Title I, Part B, Section 118) . . . . .	110
	Disabled . . . . .	111
	Limited English Proficiency (LEP) . . . . .	112
	Disadvantaged . . . . .	113
VII.	State Leadership and Professional Development (Title II, Part A, Section 201) . . . . .	114
	Curriculum Improvement Projects . . . . .	114
	Electrical Installation and Maintenance . . . . .	115
	Industrial Maintenance . . . . .	117
	Transportation Programs . . . . .	118
	Child Development . . . . .	120
	Other Projects . . . . .	121
VIII.	Community-based Organizations (Title III, Part A, Sections 301 and 302) . . .	121
	Transitional Entrepreneurship and Apprenticeship in Technical Industries (TrEAT) . . . . .	121
	Vocational Explorations . . . . .	123
	Model for Improving Vocational, Choice, Education, and Training . . . . .	124
IX.	Consumer and Homemaking Education (Title III, Part B, Sections 311, 312, and 313) . . . . .	124
X.	Tech-Prep (Title III, Part E, Sections 341-347) . . . . .	125
XI.	Integrating Applied Academics into Vocational Education (Title I, Part B, Section 116; Title II, Part A, Section 201; Title II, Part C, Section 235, 240) .	125
XII.	Career Guidance and Counseling (Title II, Title III, Part C, Section 321- 323) . . . . .	126
	Appendix A . . . . .	127
	Performance Measures and Standards . . . . .	131
	Part I: The Measures . . . . .	131
	Part II: The Standards . . . . .	134
	Appendix B Enrollment Tables . . . . .	135
	Appendix C Member Community Colleges . . . . .	141



## List of Figures

<u>Figure</u>		<u>Page</u>
1	Student Sources and Current Enrollment 1991-1992 Program Year .....	96
2	Perkins II Basic Allocation - Postsecondary .....	99
3	Number of Community Colleges Expending Perkins II Funds in Each Category .....	100

## List of Tables

<u>Table</u>		<u>Page</u>
1	Criminal Offender Program Participants .....	108
2	Curriculum Improvement Projects .....	115
3	Community-based Organization Projects .....	122



## Introduction

The North Carolina Community College System (NCCCS) was founded by the North Carolina General Assembly in 1963. Presently there are 58 community colleges in the NCCCS which offer a host of programs to meet the needs of individuals, businesses and industries. These programs range from one quarter to two years in length. In addition, single courses are offered to update job skills and for personal enrichment.

The primary emphasis of every college is on job training, and most programs are in vocational and technical areas which prepare students for entry-level positions in skilled and technical occupations. Diplomas are awarded to graduates of vocational programs one year or more in length, and certificates are awarded to graduates of shorter programs. Two-year technical programs lead to an associate degree in applied science.

Programs are also available to help adults learn to read, write, or do basic mathematics, earn a high school diploma or its equivalent, strengthen academic abilities, and complete most of the courses needed for the first two years of a baccalaureate degree. Some courses and services are free, while for others the tuition is low. Financial aid officers assist students with loans, scholarships and work/study programs. Since colleges are within commuting distance of most of the state's population, there are no dormitories on any campus.

More than 700,000 individuals are taught each year in the North Carolina Community College System. This is nearly ten percent of the total population of the state. In addition to instruction delivered at the 58 community college campuses, many programs are offered at hundreds of off-campus sites. The students are mainly adults, but some are out-of-school youth beyond the age (16) of public school compulsory attendance. The diversification of its students is mirrored in the breadth of life experiences from which they come. Some students enter the System directly after high school graduation, while others may enter after having worked for a period after graduation. Many of its students enter the System to pursue additional specialized training after having already attained baccalaureate or even graduate degrees. Many of its students enter later in life after successful careers by taking advantage of the wide array of personal development programs offered on many of the campuses and outreach centers. Figure 1 depicts student sources for the North Carolina Community College System. It also presents the total program year 1991-1992 enrollment in technical,

Vocational Education Performance Report  
NC Department of Community Colleges  
1991-1992 Program Year

vocational, general education, and college transfer programs. This report presents information on the 111,081 students who were enrolled in technical and vocational education programs in accordance with the Carl D. Perkins Vocational and Applied Technology Educational Act of 1990 for that period.

## North Carolina Community Colleges Student Sources

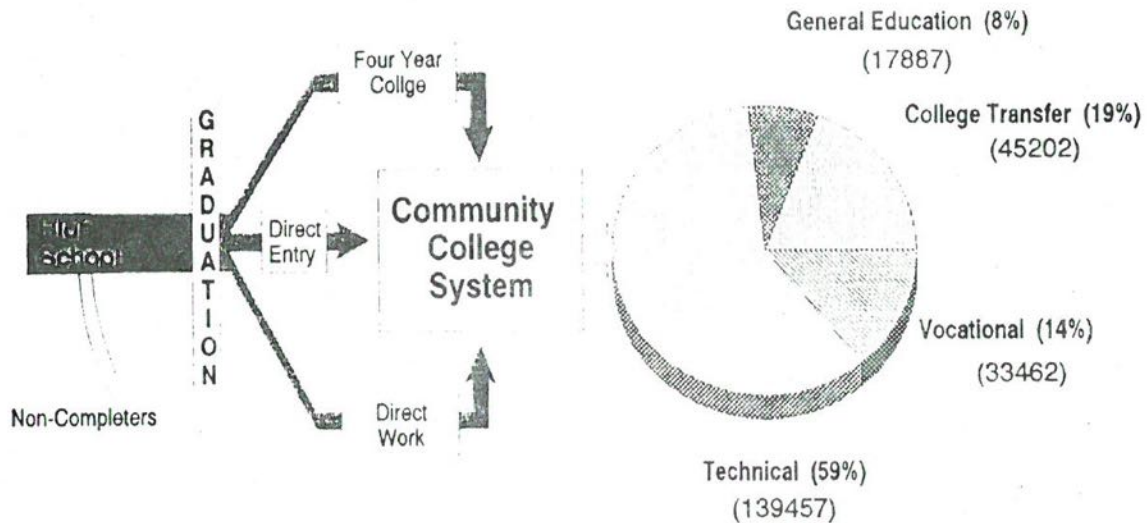


Figure 1  
Student Sources and Current Enrollment  
1991-1992 Program Year



## **Vocational Education Performance Report Program Year 1991-1992**

### **I. Performance Standards and Core Measures (Title I, Part B, Section 115 and 116; Title 5, Part B, Section 512).**

The rationale for the establishment of standards and measures for the 58 constituent colleges of the North Carolina Community College System (NCCCS) has been predicated upon the concept of continuing quality improvement. As such it has been the position of the North Carolina Department of Community Colleges (NCDCC) members to seek every opportunity to assess program delivery and its impact upon the students. The NCDCC has welcomed and embraced the requirements of the Carl Perkins Vocational and Applied Technology Education Act of 1990 (Perkins II), i.e., that recipients establish sufficient measures and performance standards to determine the degree of improvement in vocational education attributed to funds received under the Perkins II. These requirements have been considered simultaneously with reporting requirements imposed by the state's General Assembly, the Right to Know Act, system-wide Critical Success Factors, and so forth.

The Perkins II mandates that performance standards and measures be in place by September 25, 1992. Since this date follows the period covered by this report, no data from the developed measures have been gathered. However, considerable effort was expended during the reporting period to assure compliance with the requirements of the Perkins II.

A contractor was hired for an interim project designed to facilitate and coordinate the review and discussion of possible measures under the Perkins II. The contractor met with the state's Committee of Practitioners in February to develop and finalize a process whereby state and local community college personnel could fully participate in the development of measures which would not seriously over-burden staff who are already having difficulties responding to recent calls and mandates for additional information and accountability requests. To do this, the process was a collaborative effort. A NCDCC internal performance standards committee was established which included representatives from all divisions within the NCDCC. This group provided the sounding board for possible measures consistent with the Perkins II. Additionally, a subcommittee of the North Carolina Community Colleges Presidents' Association was formed and consulted to ensure that the developed measures and standards were both useful and practical in a time of limited resources.

A series of meetings were held across the state to gather feedback on the series of draft measures and standards as they were developed. Theses meetings included community college staff (planners, information processing, business managers, methods of administration representatives, and instructional deans.) Also, representatives from three colleges were selected to review the

final draft and discuss the actual data collection procedures. These representatives included planners, information system managers, and deans. This group provided input regarding the realistic viability and efficacy of the measures and standards. The final draft was presented to this group in April, and it was unanimously approved. The proposed measures were then presented to the Committee of Practitioners in May. The approved Core Standards and Measures document adopted in August by the North Carolina State Board of Community Colleges is included in Appendix A.

It was decided that the measures and standards would be implemented in the North Carolina community colleges by first gather longitudinal data on the adopted measures before establishing standards. Therefore, data will be collected during the 1992-1992 program year. That data will be analyzed to decide which, if any, measure of central tendency most appropriately reflects a standard for each measure. The developed standards will be reviewed biannually to determine if they continue to be appropriate or if they require adjustment.

## **II. Postsecondary/Adult Occupational Programs, Services and Activities (Title II, Part C, Section 231-232).**

Appendix B contains the enrollment tables for the program year 1991-1992 for the North Carolina Community College System institutions. Appendix C lists the member institutions of the system. All member institutions are two-year postsecondary community colleges offering over 280 technical and vocational curricula, a wide array of general educational programs, as well as college transfer programs offered by several member colleges. The NCCCS member institutions are committed to providing the most comprehensive educational programs for the citizens of North Carolina. Each college is uniquely chartered to best meet the educational and economic development needs of its local community. The NCDCC provides curriculum guidelines and a central infrastructure to assure that each program regardless of its delivery location meets system-wide standards.

During the 1991-1992 program year, funds under Title III, Part C, Section 235 were distributed to 50 eligible community colleges in North Carolina. These funds may be grouped roughly into ten service or program areas. These are presented in Figure 2 below. The percentages shown represent the approximate level of funding used in each category.

These categories do not represent a total listing of all services or programs provided. They were compiled to facilitate reporting. Brief examples of programs or services are offered for each category. Figure 3 presents the number of community colleges expending Perkins II funds in each category.

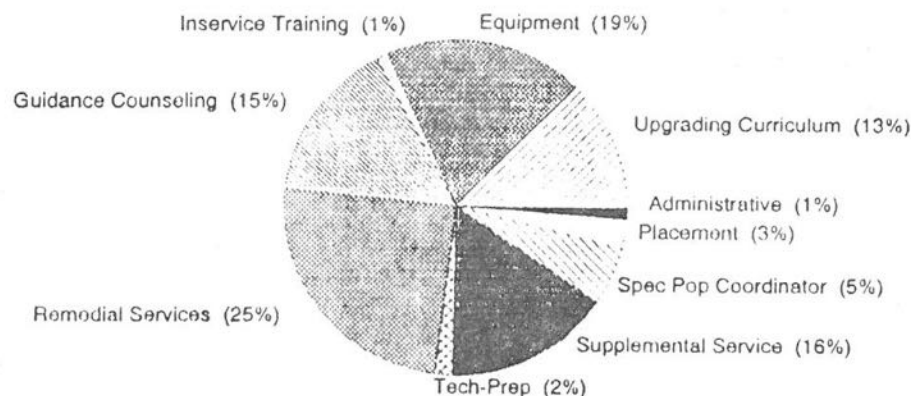


Figure 2  
Perkins II Basic Allocation - Postsecondary

**Upgrading Curriculum.** One of the charges the community colleges in North Carolina is to assure continued economic development. This is consistent with the intent of the Perkins II provisions to provide improved curriculum in vocational education. Several approaches to upgrading curriculum are pursued by the colleges.

One community college developed and implemented a Writing Center to assist in improving the writing skills of technical and vocational students. The center serves both regular and special populations students. A part-time instructor was employed, and special equipment was purchased. Students are able to use computers to originate, revise, edit and print their written work. A unique feature of this lab is the use of academic English faculty and students to provide tutoring on grammar, punctuation, mechanics, content, and organization of manuscripts.



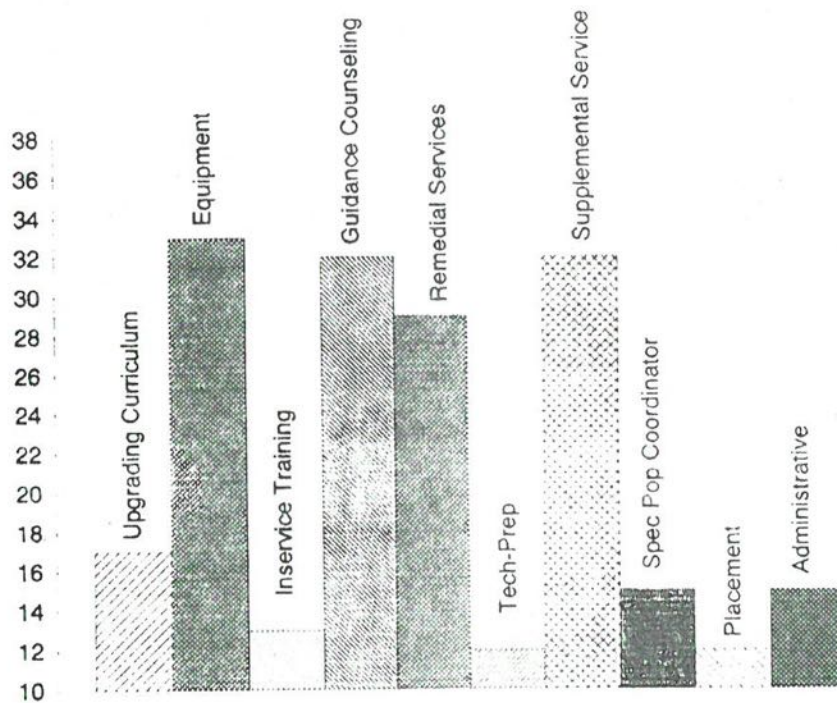


Figure 3  
 Number of Community Colleges Expending  
 Perkins II Funds in Each Category

Another approach used by several colleges to upgrade curricula has been to hire additional part-time faculty to reduce student-teacher ratios. Content areas for these programs included a wide-range of topics such as Equine Technology, Business Computer Programming, Cosmetology, Greenhouse and Grounds Maintenance, and several programs designed to increase the effectiveness of some colleges' on-going instructional programs for incarcerated students. In many instances these additional resources, unavailable without the Perkins II funds, provided intensive hands-on training for disadvantaged and disabled students who otherwise might not have been served.

**Equipment.** The North Carolina Community College system members realize the need to provide the most up-to-date training possible. In technical and vocational courses this often means offering students the opportunity to train on state-of-the-art equipment. Therefore, several community colleges used Perkins II funds to purchase equipment for classroom use. One college, after identifying a need to provide better laboratory classroom experiences for its medical assisting program purchased an electric bed and respiratory care equipment for



the program. The equipment has since provided increased service by doubling for use in the college's Geriatric Care Assisting program. Another college purchased a MIG welding unit, specialized band saw, radial arm saws, an overarm router, and a specially-equipped VCR and monitor to meet students' needs in their several welding and building trades courses.

Another widely applied use of equipment acquisitions has been the purchase of computing software and hardware. One college purchased a desktop publishing center to be used in its Administrative Office Technology program. Similarly, several colleges obtained specialized software programs to provide more intensive student tutorial services. These areas included writing skills, math skills, and English as a Second Language.

Several colleges purchased special software and hardware to increase their services for disadvantaged and disabled students as well. Examples of these included one college which purchased an IBM PC with a modified keyboard and terminal for the Career Guidance Center to better serve the visually impaired, learning disabled, and brain injured students. Another college purchased and deployed several software packages which provided special adaptive features for the disabled. These programs modified existing computer screen formats to provide larger text presentation and minimized the number of keystrokes required to execute commands.

**Inservice Training.** The community colleges in North Carolina realize that a second component required to assure that their students' receive the best education and training possible is to provide their faculty with an aggressive professional development program. To help meet this need, several colleges used Perkins II funds to offer faculty and staff opportunities for inservice training. Activities in this area include training at manufacturer's facilities for instructors. Examples include training received at three General Motors facilities to provide skills upgrade training in automotive sciences.

In addition to technical content training, several colleges provided opportunities for their support staff to receive skills upgrade training as well. These included one college which sent its counselor for special populations, Child Care/WINS Coordinator, and pre-technical instructors for services to special populations to intensive workshops at a senior university. Topics covered included career guidance, instructional methods, vocational assessment and evaluation, personal and family growth, and dysfunctional family counseling techniques.

**Guidance Counseling.** Thirty two community colleges expended Perkins II funds to provide increased guidance counseling services for their students. Most of these colleges chose to hire additional (either full- or part-time) staff to augment their existing programs. Many colleges funded counselors to work

specifically with a particular population segment such as educationally and economically disadvantaged or disabled students. One college hired part-time counselors who were located at satellite centers to make their services more accessible for economically disadvantaged students who were finding it difficult to attend the counselling facilities on campus.

**Remedial Services.** Twenty-nine community colleges used Perkins II funds to provide remedial services for students in eligible technical and vocational programs. Many of these colleges provided additional tutorial staff for specific skills laboratories. An example of these programs includes one college which used three employees to provide a viable developmental studies program. The college provides a reading program through the part-time, prorated services of one of its full-time reading faculty. Similarly, the college provides a developmental English program by prorating one of its full-time English instructors. The same is done for a developmental math program as well. The college feels that these programs are essential for the large population of educationally disadvantaged students in its community. These programs have contributed to a significant increase in student academic performance in technical and vocational programs at the college.

**Tech-Prep.** Twelve colleges have used Title II funds for Tech-Prep activities to date. In all instances, these funds have been used for release time or salary proration for administrators and faculty to consult with local education agencies (LEA) to develop or explore articulation possibilities. A further description of NCDCC Tech-Prep activities may be found later in this report under Section X.

**Supplemental Services.** Thirty-two community colleges provided increased supplemental services through the use of Perkins II funds. This category includes a broad array of services which many students, especially disabled and disadvantaged students, would find difficult to do without. Examples include providing notetakers, interpreters, signers for hearing impaired students, escorts for physically disabled, etc. One college provided a part-time testing assistant/admissions assistant to work with the disabled in the admissions process and to assist the counselor for special populations in enrolling students and arranging tutors, readers, interpreters, etc.

Several colleges also provided specialized supplemental services in the form of instructional and recruiting materials. One college created a special curriculum laboratory to centralize and extend tutoring and other supplementary services such as textbook taping and translating texts into braille or large print formats for visually impaired students. The laboratory also transcribes visual material into printed format for hearing-impaired students. Another college used a similar facility to prepare recruiting materials for disabled students in formats more accessible to them.

**Special Populations Coordinator.** Recognizing the need to provide opportunities for equitable participation of students with special needs, fifteen colleges chose to use Perkins II funds to staff a position as a Special Populations Coordinator. The function of this position is to assure that the needs of special population students are met and to ensure that the college at which they are enrolled remains sensitive to future needs. These are often part-time positions whose duties must be performed in addition to the person's other job responsibilities. In many instances, the person is in the counseling department. However, the position may be an administrative one, such as was the case at one college where the Special Populations Coordinator is a vice-president. It is this level of commitment which makes the North Carolina Community College System a leader in special population services among the nation's postsecondary schools.

**Placement.** The community colleges in North Carolina recognize that the key to a successful education for its technical and vocational students is their placement in jobs. To assure that this remains a focal point in its curricula, twelve colleges expended Perkins II funds in placement activities. Each college worked closely with industry and businesses in the community to determine their needs for training and retraining. These contacts include agencies such as local Chambers of Commerce and governmental agencies.

To assure a sensitive awareness of their students' needs, the colleges constantly review and revise curricula. In many cases, this review leads to the identification of a need for a new program. New and updated curricula are reviewed by a steering advisory committee composed of faculty, administrators, and relevant employers in the local communities. Based upon review of job availability data from the Employment Security Commission, programs are reviewed for their relevance. Additionally, the programs within the NCCCS are reviewed every five years. This program assessment process solicits opinions on the curriculum from faculty, current students, graduates, and selected employers.

The colleges provided public announcements and brochures to alert employers to the readiness of graduating students. A particularly useful approach to placement has been through the development of internships and direct work experiences. In these programs the faculty work closely with local employers to provide real-world, practical on the job experiences. The use of Perkins II funds greatly increased the opportunity for this to happen because instructional faculty are allowed release time to pursue such contacts.

**Administrative.** Fifteen colleges used a portion of Perkins II funds for administration of the program. These services were provided on a prorated basis by existing college personnel. It is interesting to note that even though it is allowable to allocate five percent of the total allocation to such activities, this



category received barely one percent state-wide. It is obvious that the administrative requirements remain the same whether a position is funded or not. Thus, it speaks well of the professionals in the community colleges in North Carolina that they have chosen to assume these duties in a largely unpaid manner rather than sacrifice other programs which provide services more directly to the students.

### **III. Single Parents, Displaced Homemakers, and Single Pregnant Women (Title II, Part B, Section 221).**

During the 1991-1992 program year this grant changed from a formula allocation system to a competitive proposal process. Requests for proposals were circulated for special projects in child care for about two-thirds of the single parent set-aside. The remainder of the funds were used to fund proposals for other direct student support services such as student transportation, tuition and instructional materials. Local coordinators were consulted before this system was arranged, and they requested these services. They contributed, as it later turned out, much of the special counseling support from resources other than the single parent fund. A total of 47 community colleges received funds during the 1991-1992 program year. A total of 14,026 students were served (see Enrollment Tables in Appendix B).

**Description of Services.** All of the participating colleges used the single parent funds for direct, material support of students. Services included child care, student transportation, tuition, and instructional materials required for class participation. In addition most colleges provided personnel to maintain a one-on-one contact with the student at least once each month. This contact frequently was bi-weekly or even weekly.

Services most needed by the single parent, displaced homemaker, and single pregnant women are tuition, books, transportation, and instructional materials required for class participation. Sixty-five percent of the target population report these items as necessities in order for them to attend school. Next on the list came child care, reported by 43% of the target population as necessary support for class attendance.

A large sampling (23 of 35 participating colleges) reported serving 1,075 students at a total cost of \$334,716 which covered tuition, instructional materials, and transportation. Average expenditures were \$14,552 across an average of 47 students per college, or \$309 per student for a three-quarter year. Colleges were able to serve 35% of the target population who expressed a need for these support services. Fall to spring retention was 78% of those who received assistance of this kind, compared to 50% for those who requested but were unable to receive help with these services.



Of particular note for the 1991-1992 program year is the number of local coordinators who made astonishing strides in delivering service to many students for relatively little money. For example, with \$15,000 or less, several colleges were able to serve 50-100 students during the year with tuition, books, student transportation, and instructional materials. They accomplished this in a variety of ways. Some colleges recycled textbooks from student to student over successive quarters, while others served students with single parent funds only long enough to permit a search for other sources of support.

Grants which supported only child care reported 645 children served at 32 colleges (two other colleges presented unusable data) at an average cost of \$1,677 per child. Assuming that child care is provided for 33 weeks (three academic quarters), the costs averaged \$50 per week per child.

Child care had an apparent impact on retention. Preliminary calculations reveal that dropouts increased to 18 percent for those students who were able to receive child care assistance from the grant. This compares favorably with a dropout rate of 37 percent for those who applied for but could not receive this supplemental support.

**Special Delivery Methods.** Since very little of the grant was used to cover salaries, many services provided by college personnel connected with these programs are above and beyond those financed by the single parent fund. Voluntary contributions in services are exemplified by one small college in the western part of the state. This college had students identify special issues of interest to them so that the staff can prioritize and build workshops around the students' concerns. Another college developed a mentoring program for its single parent population by training and pairing successful single parent students with new students, allowing the latter to make a smoother and less anxious transition to college life. Finally, it should be noted that some colleges have additionally enhanced the single grant program with the energy they put into finding alternative community resources for child care. Some local coordinators were so successful in their coordination efforts that they have been able to rechannel child care allocations in the grant to other support services instead.

One college is particularly attentive to the individual needs of its students. The institution tailored its single parent aid to each student in a way that makes especially efficient use of other resources such as JOBS, SEOG, Pell, Vocational Rehabilitation, Work Study, Social Security, Medicaid, Food Stamps, and others. The local coordinator is a member of the JOBS Task Force in her county, a member of the Board of Directors of the local Women's Resource Center, and a board member of a local nonprofit child care center and has thus put herself in a position to advocate for students' needs for community support services.

This program also assisted individuals with job seeking by notifying students of openings and assisting all of them with resumes, portfolios, and interview practice. The coordinator augments the program with frequent on-site plant tours throughout the year. Students also help one another by returning as alumni to present motivational programs on "making it" through school as a single parent with many responsibilities.

More routine, but equally important is the academic counseling and tutoring, as well as the personal and crisis intervention counseling available to all students. The counselor offers an "open door" policy and provides the only support system sometimes available to a student.

Retention rates for these colleges' single parent program reflect the special care: 75% for those receiving tuition, transportation, and instructional materials; 92% for those receiving child care assistance.

#### **IV. Sex Equity Programs (Title II, Part B, Section 222).**

During the 1991-1992 school year 397 students were served with sex equity grants designed to train men and women in nontraditional occupations. Another 1223 participants took advantage of career exploration workshops held primarily for community women. A total of 6,459 students were identified as men and women in 98 nontraditional programs (as defined in the Perkins II) within the NCCCS.

Fourteen colleges enrolled the 397 students in one- and two-year programs. The money invested by the sex equity program has broken barriers to their training by providing them with material support (such as child care, transportation, books, etc.), affective support (personal and group counseling, personal development seminars), and practical support (extensive personality and aptitude assessment, peer tutoring, job development and placement.) Since the Perkins II legislation enabled this direct support, nontraditional women have been much more likely to stay in school than they were prior to Perkins assistance. Furthermore, the program has made these women employable at a reasonable wage for the first time in their lives.

This array of services in the nontraditional programs cost \$227,639, or \$537 per student, for the year. This figure includes all administrative as well as student support costs. Retention rates of nontraditional women in the program average 81% from fall to spring (the figure includes those who complete a curriculum at some point during the year). Students uniformly attain a B average. During the fall and spring quarters of 1991-1992 the average GPA was 3.07 for full time students and 3.27 for part time students.

**Preparatory Services for Girls and Women.** North Carolina's community college women, for whom the 14-25 age limit has been waived, are on average 30 years old; however, the sex equity program still offers the preparatory and supportive as well as the educational programs noted above.

Almost all the nontraditional grants offer a battery of personal aptitude, and placement tests as part of the orientation to personal assessments in a group setting, a strategy which fosters the bonding of a support group. Colleges report that the assessment instruments reinforce positive images and give the women confidence in knowing they are going into an occupation for which they are suited.

Although the programs were broadly similar, each offered something unique to the others. One college, for example, offered (in conjunction with the occupational curriculum) personal development seminars intended to foster self-esteem and discovery through a rigorous team-building ropes course. Another program can boast of a vigorous and successful recruiting effort that reached all educational, social services, and industrial sectors of the county. Still another project coordinator excelled in assessing a prospective student's suitability for the program. The same coordinator placed 85% of her graduating students this year in nontraditional jobs.

One college served 1,223 participants (duplicated head count) in a series of workshops on occupational exploration. The year-long program included sessions on career planning, strategies for succeeding in college, decision making, and job seeking skills for both traditional and nontraditional occupations. Eleven workshops were held for the 1223 women at a cost of \$3,957.

All project coordinators work closely in a one-on-one relationship with their students to meet personal, academic, and financial needs. All project coordinators share their insights and strategies with one another. The outcome of these two features strengthens the quality of the total program.

#### **V. Criminal Offenders (Title II, Part B, Section 118).**

Six community colleges participated in new programs for criminal offenders during the 1991-1992 program year. A total of 2,714 corrections inmates participated in 39 occupation programs (including non-1991/92 funded) (See Enrollment Tables in Appendix B). The following colleges and correctional facilities participated:



Table 1

Criminal Offender Program Participants

<u>College</u>	<u>Correctional Facility</u>
Nash Community College P.O. Box 7488 Rocky Mount NC 27804	Franklin Correctional Center P.O. Box 155 Bunn NC 27508
Anson Community College P.O. Box 126 Polkton NC 28135	Brown Creek Institutional Center P.O. Box 410 Polkton NC 28145
Cape Fear Community College 411 Front Street Wilmington NC 28401	Pender Correctional Unit P.O. Box 1058 Burgaw NC 28425
Johnston Community College P.O. Box 2350 Smithfield NC 27577	Johnston Prison Unit Route 3, Box 213 Smithfield NC 27577
Montgomery Community College P.O. Box 787 Troy NC 27371	Southern Correctional Center P.O. Box 786 Troy NC 27371
Southeastern Community College P.O. Box 151 Whiteville NC 28472	Columbus County Correctional Center P.O. Box 8 Brunswick NC 28424

**Achievements, services, or programs.**

The correctional center curricula programs in North Carolina are designed to prepare individuals for skilled and semi-skilled employment opportunities upon release from incarceration. These programs offer occupational advancement significantly above the no-wage or minimum wage prospects this population might otherwise expect. Both academic and skill development programs are offered. The developmental academic studies provide remediation in basic skills.



The occupational skill curricula are primarily oriented to the development of manipulative skill competencies for use in specialized trades and professions. These programs consist of logical sequences of courses designed to prepare individuals for identifiable employment levels in specific occupational fields.

A course of study in business computer programming was offered by one college. The program was selected after a review of inmate needs and interests conducted by college and correction center staff. Instructors were hired, a suitable location determined, and equipment purchased.

The general inmate population was notified that the program would be offered, and those who expressed an interest in the program were interviewed by correction officials. From this group 31 inmates were tested using the Assessment and Placement Test for Community College Students. Test scores were assessed and college and center administrators selected 14 students who demonstrated the ability to benefit from the program. Correctional center administrators also considered length of sentences and expected release dates of inmates to ensure sufficient time for the inmate to complete the program. All 14 had received a high school diploma or its equivalency.

Thirteen of the 14 students (93%) successfully completed the program. Due to unforeseen circumstances, the 14th inmate was required to move to another site and had completed approximately 70% of the program before moving. Nine of the students received honor status with two earning a perfect 4.0 GPA. The lowest GPA was 2.83. This achievement and retention rate exceeded the 67% retention rate goal of the program.

Another college offered programs in Heating and Air Conditioning, Plumbing and Pipefitting, and Masonry. The college and correction center staff anticipated 125 inmates in these three programs. However, due to delays in a proposed expansion of the center's capacity, only 59 participants enrolled in the three certificate programs. Completion rates were 43% for the Masonry program (three of seven inmates), 46% for the Plumbing program (14 of 30 inmates), and 23% for the Heating and Air Conditioning program (five of 22 inmates). The overall completion rate was 37.3% for the 59 inmates in all three programs. College and correctional center staff attribute the lower-than-expected rates to the unanticipated early release of several inmates and the lack of peer support for some. Future programs will include a stronger attempt to encourage released participants to complete the program at a local college campus.

Another college offered a program in digital electronic repair. Using Perkins II funds, a classroom/lab was outfitted at the correction center. During the 1991-1992 program year two classes were conducted and completed. Twenty four students were enrolled in the first cycle and 21 in the second cycle. Twelve inmates (50%) completed the first cycle and nine inmates (43%) completed the

second cycle. Although these completion rates appear lower than hoped, several factors must be considered. During the first cycle, three students were transferred to other programs or units and, during the second cycle, seven students were transferred. In addition nine inmates (six and three respectively) were removed from the program by Department of Correction personnel for reasons varying from segregation to lack of attendance. These actions emphasize that completion appears directly related to inmate status and not to academic deficiency of the program. Of the 45 inmates enrolled, only four were considered academic failures based on non-completion of program because of grades or attendance. Thus, based on the number of inmates completing the curriculum and on grades received by inmates while enrolled, the program appears viable and successful in providing vocational training.

Another college presented a program in advanced TV servicing (electronic repair) and enrolled eight students in the Winter quarter. Prior to their enrollment a full-time instructor was hired who developed and completed the course syllabi. The inmates are continuing the program and will complete the required four quarters of instruction in November. The college's dedication to the program is demonstrated in that Perkins II funds were completely expended in May, but the college continued the program using other funding sources. These sources contribute to the continued FTE generation which will sustain the program in subsequent years.

Two colleges were awarded new grants for program development, but were unable to begin the programs during the 1991-1992 program year. Both were delayed due to new correctional facilities lagging behind projected construction completion dates. In both instances, the programs are fully developed and equipped, and both are awaiting facility completion. Programs to be offered are in business computer programming, industrial electricity, marine and diesel mechanics, and light construction. These programs will be operational in the fall of 1992. An additional 150 full-time and more than 75 part-time students will be served through these programs.

## **VI. Special Populations (Title I, Part B, Section 118).**

The 58 community colleges in North Carolina are committed to serving the vocational education needs of the adult special population of the state. It is the policy of the North Carolina Community College system not to discriminate on the basis of race, sex, age, national origin, religion or handicap with regard to its students, employees, or applicants for admission or employment. The primary emphasis of every college is on job training. Every opportunity is taken by all of the community colleges to increase special population participation and success in these programs.

The commitment to assuring the full and successful participation of special populations is strong at the state level. A permanent, full-time staff member serves as the Coordinator of Methods of Administration. This staff member serves on numerous committees which review system-wide policies and programs which target special population members. A minimum of 20% of the campuses are visited each year and their staff and procedures are rigorously screened to assure equitable special population treatment.

**Disabled.** During the 1991-1992 program year 4,236 disabled students were enrolled in 136 vocational and technical curriculum programs eligible for Perkins II funds. (See Enrollment Tables in Appendix B). To meet the needs of these students, particular attention was paid to coordinating other, compatible vocational services. Wherever possible, vocational rehabilitation programs were provided on community college campuses or are located nearby. This emphasis on coordination was accomplished in two steps -- identification and assessment.

The identification process included creating voluntary, non-prejudicial mechanisms for self-identification such as academic applications, course registration forms, counseling self-referrals, and other reporting forms. Other identification programs include testing, counseling, and faculty feedback. In addition, active participation and referrals by NC Vocational Rehabilitation Services, Division of Health Services, JTPA, and area secondary schools were encouraged. This program was especially productive and effective as evidenced by numerous cooperative agreements between local colleges and the NC Vocational Rehabilitation Services, local Departments of Social Services, community action agencies, and mental health clinics.

Assessment was accomplished by several methods which were used singly or in combination. One method often used is the administration of standardized assessment instruments such as the Meyers-Briggs Type Indicator. Also, as in the identification process, full use was made of personal interviews, observations by staff, and information passed from referring agencies. A recent addition has been made to these efforts through the use of computer software to diagnose students' learning problems. Additionally, where required to ensure appropriate participation, testing was conducted by licensed clinical psychologists.

Once a disabled student was identified and properly assessed, a wide array of supplemental services are provided by each colleges. These included such things as supplemental standardized counseling, placement tests in Braille, referral services available in the local community, specialized instructional equipment such as large print typewriters, "phonic ears" (hearing impaired telephone adapters), and individual tape recorders. Additional classroom support was provided through tutorial services, interpreters, notetakers, signers, readers, and typists. Special texts and other curricula related material were also available when needed. Other services included special programs such as sheltered



workshops or programs for the blind or hearing impaired. Physical access was assured through special parking and elevator access in multi-floor buildings. These, and the many other supplemental services, were provided on an "as needed" basis. These services allowed most disabled students to attend regular classes.

**Limited English Proficiency (LEP).** Eight hundred seventy six (876) students with limited English proficiency were served in 89 vocational/technical curriculum programs during the 1991-1992 program year (See Enrollment Tables in Appendix B).

North Carolina continues to attract many people from other countries. Each year the agricultural harvests attract many native Spanish-speaking immigrant farm workers. These workers tend to settle in the western and eastern regions of the state where agriculture-related jobs are readily available. Often these workers relocate to the larger urban areas to seek employment during off-peak farming seasons. This movement has placed a steadily increasing burden upon the community college system as it attempts to meet the language needs of these citizens.

Additionally, as reported in last year's Performance Report, a large number of Asian and Southeast Asian immigrants are attracted by the near home-like terrain of North Carolina. A large number of Hmong have settled in the western mountainous area for this reason. Also, as previously reported, contingents of Montagnards (Viet Nameese who were allies during the Viet Nam conflict) continue to seek settlement in areas such as Wake County.

Other resources also attract non-English speaking people to North Carolina. Recognizing the abundance and quality of higher education in North Carolina, many foreign students are attracted. Of these, many come with dependents and elect to stay for additional graduate work after initial degree completion. Another source of non-English speaking people is the dependents of military personnel stationed at the many North Carolina defense locations. All of these groups are served through the LEP programs at the community colleges.

Identification, outreach, and recruitment activities designed for those eligible for assistance under LEP programs include many different approaches. Many students are enrolled in English as a Second Language program to fulfill citizenship legalization requirements. However, a large number also attend vocational and technical curricula programs as indicated by the large number served (876). North Carolina community colleges apply a variety of recruitment and assistance techniques to assure full and successful participation by these students. Such techniques include easily available English as a Second Language classes, subject matter tutoring in native languages, translations of technical texts into native languages, and Guided Studies Centers which offer



individual or group tutoring and specialized classes for the distinct needs of LEP groups.

**Disadvantaged.** Community colleges in North Carolina have a large number of economically disadvantaged students. Information provided at registration provides a key identification element for the colleges to determine the type and extent of circumstances which contribute to classifying a student as disadvantaged. Other identification information is received through referral information from JTPA programs, community action agencies, and similar groups. Other students are identified by information supplied by financial aid offices within each college. Identification criteria include referral agency standards, Pell grant application guidelines, participation in JTPA programs, or a comparison of family income with the poverty guidelines established by the US Office of Management and Budget.

Likewise, many educationally disadvantaged students are enrolled in North Carolina's community colleges. One method used to identify students who may be educationally disadvantaged and, thus, at risk of academic failure is the administration of standardized instruments such as the Assessment and Placement Test for Community College Students, the Meyers-Briggs Type Indicator, and others. Also, full use is made of personal interviews, observations by staff, and information passed from referring agencies. As previously described, computerized diagnostic programs are available at several colleges to diagnose students' learning problems and enable staff and faculty to more effectively meet a student's needs.

The blending of identification and assessment plays a vital role in vocational education programs in the state's community colleges. This is especially true for the economically and educationally disadvantaged student. Colleges assess the student's interests, abilities, and special needs through preadmission conferences, career and academic guidance, personal counseling, financial assistance counseling, and academic testing. As mentioned earlier in this report, several testing instruments are also used. These include admissions placement tests, the Career Assessment Inventory, and the Meyers-Briggs Type Indicator. On the basis of student profile information gathered from these sources, students are often referred to service provider agencies which conduct more detailed assessment. An example of such a referral is when a student is sent to the Employment Security Commission for GATB testing or ASVAB assessment.

Once identified and assessed, disadvantaged students (both economically and educationally) are provided a wide array of supplemental counseling, tutoring, and special remedial instruction programs and services to increase their chances for success in vocational and technical curriculum programs. Each college staffs a learning resource center which is available to such students on an as-needed basis. Many colleges also aggressively promote the use of

developmental studies programs. These programs, and others like them, emphasize the NCCCS commitment to an open door environment and philosophy which enables students to increase whatever skills s/he may already possess, and to successfully progress to higher, more productive skills for employment.

Often the single largest impediment to successful academic performance for both the economically and educationally disadvantaged student has roots in fiscal limitations. To overcome this, community college financial aid offices strive to match needy students with the available sources such as scholarships, loans, and grants. The state of North Carolina annually makes over 1,000 grants from a scholarship fund. Additionally, many local business and civic organizations are encouraged to provide support by establishing scholarship funds. Whenever possible these local and state resources are augmented by federal sources such as Pell grants and JTPA programs.

## **VII. State Leadership and Professional Development (Title II, Part A, Section 201).**

**Curriculum Improvement Projects.** During the 1991-1992 program year, a major focus for the use of funds from Perkins II for state leadership and professional development was the undertaking of four curriculum improvement projects. The goal of a curriculum improvement project (CIP) is to create a process and environment through inservice training and professional peer guidance which leads to an updated instructional program or curriculum area. Programs or areas targeted for improvement are those that are strongly affected by episodic socio-technical or economic forces in the state. Programs which meet this criteria are identified via a system-wide request for proposal process in which all colleges can participate. These requests highlight what the circumstances are which require curriculum update, how the college will provide system-wide leadership to benefit all colleges offering the curriculum, and how the updated curriculum will be disseminated and implemented across the system. Strategies used by participating colleges include updating instructors' technical and professional knowledge, skills, and abilities, and updating the content of the associated curriculum and continuing education courses.

Four colleges received funds to implement curriculum improvement projects during the 1991-1992 program year. The funded CIP participants are listed in Table 2.

Table 2

Curriculum Improvement Projects  
 1991-1992 Program Year

<u>College</u>	<u>Curricula Program</u>
Mayland Community College P.O. Box 547 Spruce Pine NC 28777	Electrical Installation and Maintenance
Pitt Community College P.O. Drawer 7007 Greenville NC 27359	Industrial Maintenance
Central Piedmont Community College P.O. Box 35009 Charlotte NC 28235	Transportation Services: Automotive Body Repair Automotive Service Diesel Vehicle Maintenance
Wilkes Community College P.O. Box 120 Wilkesboro NC 28697	Child Development

Electrical Installation and Maintenance  
Mayland Community College

This college completed the second of a two-year project. Several goals were established for this year. The most prominent were to:

- Conduct state-wide inservice training workshops on
  - Instructional Skills Improvement
  - Program Logic Controllers
  - Electrical Installation and Maintenance curricula implementation
- Development of task and sub-task statements for job description "Industrial Electrician"



- Completion of a task analysis for "Industrial Electrician" for Georgia Pacific Corporation
- Establishment of state-wide Electrical Installation and Maintenance Instructor's Association
- Preparing the new curriculum manual for publication and dissemination

The project made the following progress toward these goals:

- The workshops were held as scheduled throughout the year. Due to greater-than-anticipated response for the Instructional Skills Improvement workshop, the NCDCC decided to repeat the workshop at several locations throughout the state.

A four day faculty inservice training workshop on Program Logic Controllers (PLC) was held in November and was hosted by Texas Instruments, Inc. at their Johnson City, TN facility. In addition to this excellent workshop, Texas Instruments agreed to allow NC community college instructors to attend any of their regularly scheduled PLC courses free of charge on a "space available" basis. This training has a value of \$300.00 per day. This is a direct illustration of the value-added benefit of federally funded programs such as this under Perkins II.

Evaluations of all workshops were excellent. Most were rated above 4.75 on a 5.0 scale. The demand to continue these workshops emphasizes the urgent need felt by faculty members to provide the most up-to-date training possible to their students.

- A DACUM was held in August, 1991 to develop a list of task performed by Industrial Electricians at Georgia Pacific Company. Although this was not a part of the original CIP proposal, it provided an invaluable opportunity to gain an extensive task pool. The resulting task analysis revealed over 150 job-specific tasks. The benefit of this effort is most readily seen by the fact that the previous curriculum for Industrial Electricians in the NC community colleges was predicated upon only 67 tasks. These tasks lists were validated and formed the basis of the new curriculum materials.
- A commercially-available, competency-based instructional materials package for Electrical Installation was purchased and evaluated. Initial evaluations are encouraging and will continue to examine the usefulness of this material for NC community college students.



- The efforts of this funded CIP revealed an increased need to provide more in-depth training in these areas. As a result, two approaches were developed. First, in accordance with the scope of this CIP, the current Electrical Installation and Maintenance was updated and renamed "Electrical Installation." This curriculum offers some additional technology beyond the previous content, while it eliminates some of the more antiquated or redundant tasks. To provide more detailed training, a second program is being developed by the NCDCC. This program will lead to the AAS degree, and will be made up of tasks that deal with industrial wiring, advanced controls, and programmable logic controllers. The curriculum will include all the newly developed materials resulting from this CIP.

Industrial Maintenance  
Pitt Community College

This curriculum is taught at 38 community colleges in North Carolina. Several project goals were identified for the first program year of this CIP. These included the following:

- Provide state-wide faculty inservice training
- Develop instructional materials and methods
- Create an increased interaction with business and industry for the industrial maintenance skills areas

The activities of this CIP have been many and varied. They began with the appointment of a state-wide Project Steering Committee. The committee met eight times at regular intervals during the year to review project activities. Additionally, contact personnel at each community college were identified and have participated in several meetings and project review activities.

To increase business and industry participation, a state-wide Industrial Advisory group was also appointed. This group included seven members from all regions of the state and businesses ranging from local businesses to national, multi-plant industry representatives. A joint meeting of the Project Steering Committee and the Advisory group was held in March.

Three curriculum writing teams were appointed for the purpose of revising the present Industrial Maintenance curriculum. The teams were divided regionally for convenience of meeting. Initial meetings were held in July, 1991. Subgroups

met throughout the year to compile task and competency statements. These statements were subsequently reviewed by the Advisory group.

Pitt Community College faculty have received 66 hours of specialized training in Vibration Analysis, Bearing Analysis, Computer Maintenance Management Systems, Program Logic Controllers, and Instructional Techniques. This core group of trained faculty is prepared to provide in-depth training to the other 37 participating community colleges through regional workshops. Efforts are also underway to develop two continuing education programs that parallel the new curriculum models.

Several Professional Development Workshops were held throughout this first year of the CIP. A total of 56 instructors from 26 community colleges received 38.5 hours of inservice training. These included the following:

- a Predictive Maintenance workshop using Vibration Analysis, Computer Alignment, and Shock Pulse Methods
- working session of Effective Use of Local Advisory Groups
- three regional Hydraulic Systems Components workshops
- a Basic Program Logic Controller (PLC) workshop

#### Transportation Programs Central Piedmont Community College

In North Carolina, 52 community colleges offer courses of instruction in the Transportation Programs area. This first year of the curriculum improvement project focused on two broad goals -- faculty development and curriculum development.

The first goal, faculty development, is intended to promote technical update training opportunities which will provide system-wide transportation programs instructors with the knowledge to teach new and emerging automotive technologies. Faculty at Central Piedmont Community College in Charlotte have taken the lead role in this effort. During the 1991-1992 program year several activities were conducted to reach this goal.

Two state-wide conferences were held during this program year. The first was held at Wilkes Community College in October, 1991 and combined the efforts of the North Carolina Automotive and Diesel Instructors Association (NCADIA) and CIP members from Central Piedmont Community College. Eighty-

one instructors from 42 community colleges attended. Each received approximately 11 hours of technical update training.

A second conference was held in March, 1992. The conference, the Recruitment/Technical Updating Conference, was attended by 55 instructors from 32 community colleges. Presentations were made by Central Piedmont faculty, non-NCCCS faculty, and industry representatives. Topics included student recruiting methods, a detailed introduction to the national certification program by a representative of the National Automotive Technician Educational Foundation (NATEF), and several technical training update subjects such as ABS Brakes for Heavy Duty Trucks, Federal Heavy Duty Brake Inspection, and new safety device familiarization. At this conference many faculty (82%) expressed concerns that recruitment was a problem for these programs. After hearing the NATEF presentation, 70% responded that they were interested in pursuing NATEF certification for their students. Ninety-five percent responded that the technical update training provided valuable information and techniques which could be used in their programs.

In addition to the two state-wide conferences, Central Piedmont faculty received specialized training at General Motors facilities in Michigan and Oregon. This training will be shared with other instructors across the state through presentation scheduled for the Fall, 1993 conference, as well as a CIP conference tentatively planned for February, 1993.

The second goal of the CIP, curriculum development, was pursued through activities to develop curriculum models for Automotive Body Repair, Automotive Service, and Diesel Vehicle Maintenance programs. Each developed model will, at the end of the CIP process, include a curriculum description, a listing of major, related, general education, and elective coursework with credit hour parameters in accordance with established NC curriculum standards, a suggested sequence of courses by academic quarter, and a set of comprehensive course descriptions for all major courses.

The CIP revealed that there is great diversity among transportation programs in the NCCCS. With this diversity and with the evolving need to address national standards of excellence in program content, it was concluded that the best approach was to start almost from ground zero and use the NATEF Tasks List and minimum instructional time requirements to form a framework for the new curriculum models.

To meet this goal a listing of knowledge elements and performance tasks with accompanying knowledge and performance standards for each course were generated from NATEF validated task lists. A target projection for the curriculum is that the composite of major courses will contain at least 80% of the NATEF high priority tasks. Additionally, a DACUM process was conducted for Auto Body



and Diesel programs. Additionally, curricula materials were obtained from programs in Florida, Oklahoma, and Georgia for comparison. These were reviewed for ideas that could be of assistance in program model development.

Child Development  
Wilkes Community College

Thirty-nine community colleges in North Carolina offer programs in the Child Development Curricula. Wilkes Community College in Wilkesboro, North Carolina was selected as the lead school for the two year Curriculum Improvement Project (CIP) for these programs. As in other CIP processes funded with Perkins II during the 1991-1992 program year, the project focuses on faculty inservice education, curriculum materials development, and increasing system-wide interaction with business and industry. A Project Steering Committee was established and consisted of representatives from seven community colleges.

Faculty inservice education goals were approached using several methods. Several regional orientation workshops for instructors were held, and the instructors were surveyed to determine professional development needs. Throughout the year several topics were discussed and shared at these meetings. These included recruitment and retention ideas. Due to the concern expressed by many faculty, a regional workshop was held in February to deal specifically with these issues. Another issue raised was the need for more information concerning state-agency requirements for credentialing child day care facilities and workers. A workshop on this topic was presented in April and was attended by 75 personnel from 38 community colleges. That workshop was co-sponsored by the NC Child Day Care Section and focused on state Child Care Credential requirements. Information on current issues and trends in Early Childhood Education were also presented. A total of ten inservice training hours were received by each participant.

Curricula materials development activities included an examination of current program delivery systems throughout the state. Committees were established to collect and analyze instructional materials from each of these programs. From these a list of competencies and core curriculum requirements were developed. A student text was developed for two programs, Child Care Credential I and II. Six instructors were granted release time during the Winter Quarter 1991-1992 to develop a companion instructor's manual for each program. Field testing of both courses at eight community colleges began in the Spring and Summer, 1992 quarters. Final copies of the manuals will be distributed to all participating colleges in late summer, 1992.

Increased interaction with business and industry activities were designed to help identify current and emerging educational and training needs to prepare students for employment and to upgrade the education of current child care



workers. Two approaches were taken. The first was the establishment of a CIP Project Advisory Committee. This group included 12 members from university education programs, state-level departments and agencies with child care oversight responsibilities, and local business leaders. This group met twice during the 1991-1992 program year and provided review input for the development of the instructional materials. The second approach was to increase coordination with the staff of the NC Child Day Care Section on the development of the basic Child Care Credential course content and materials. This led to a review process which greatly enhanced the validity and usefulness of the materials. Details were also identified which led to the approval for colleges to award state Credentials in Child Day Care upon course completion.

**Other Projects.** Two other projects were funded during the 1991-1992 program year. One project was an exploratory effort to determine the feasibility of developing an interagency follow-up system to track employment of community college students after either completing or leaving community college instruction. This exploratory effort led to the development of a consortia of the NCDCC, the NC Department of Public Instruction's Division of Vocational and Technical Educational services, the NC Employment Security Commission, Division of Vocational Rehabilitation Services, and the NC Department of Labor. The agencies have agreed to support and share data to develop an automated records matching system to link necessary record information and gather supporting data annually and over time, in order to improve the evaluation, assessment and planning of job preparatory programs. An agreement was reached between all the parties in April, 1992. The project has received full funding for the Worker Training Trust Fund. Upon implementation, the NCDCC will have a greatly increased ability to identify the status of its students as they are dispersed into the workforce. In this way, appropriate actions can be taken by the community colleges to further ensure the relevance and effectiveness of their instructional programs and delivery systems.

#### **VIII. Community-based Organizations (Title III, Part A, Sections 301 and 302).**

Three community colleges worked in collaboration with community organizations under this program during the 1991-1992 program year. These are listed in Table 3 below.

Alamance Community College  
Transitional Entrepreneurship and Apprenticeship in  
Technical Industries (TrEAT)

This project targeted persons with closed head and/or spinal cord injuries who were still in public schools and were over 17 years of age or were currently placed in a sheltered workshop or other rehabilitation program. It is intended to

Table 3

Community-based Organization Projects  
 1991-1992 Program Year

<u>College</u>	<u>CBO</u>
Alamance Community College P.O. Box 623 Haw River NC 27258	Vocational Trades of Alamance 717 N. Park Avenue Burlington NC 27215
Catawba Valley Community College Route 3, Box 283 Hickory NC 28602	Hmong Natural Association, Inc. P.O. Box 1709 Morganton NC 28655
	Catawba County Council on Adolescents 231 Third Avenue, NE Hickory NC 28601
	Women's Resource Center 328 N. Center Street Hickory NC 28601
	Salvation Army 750 Third Ave., Place SE Hickory NC 28602
	Catawba County Department of Social Services Fairgrove Church Road Hickory NC 28602
	General Electric Company 1223 Fairgrove Church Rd. Hickory NC 28602
Guilford Technical CC P.O. Box 309 Jamestown NC 27282	Guilford Native American Association 400 Prescott Street P.O. Box 5623 Greensboro NC 27403

develop a model program which deals with the increase in the number of young adults who have such disabilities and desire vocational educational services. The model involves industrial apprenticeships for individuals and small groups of students who can be trained and supported at work in prearranged industrial settings with a full-time trainer who remains as long as needed until industrial staff take over the apprenticeship activities.

Activities of the project during the 1991-1992 program year included the study of three national programs to identify best practices in the field. These resulted in best practice recommendation in physical integration, earning, social interaction, outcome orientation, innovativeness, positive image, individual choice, organizational stability, "rights" orientation, and futurism and planning. These were developed and presented in the form of suggested guidelines for future participants, both student and employer.

Using equipment which had been donated to the project, the staff equipped a classroom and designed a curriculum for teaching students basic computer skills. Eight students were enrolled (5 males, and 3 females) after being referred by their case managers. Topics covered in the classroom included basic keyboard skills, computer peripheral device recognition, MS DOS commands, word processing, spread sheets, introduction to telecommunications, and various program operations. Other activities included the coordination and implementation of two job shadowing experiences for the students where they saw firsthand the skills they were learning being applied in the work place.

As those students progressed, some were placed in paid positions within the workshop utilizing the skills they had learned. Other services provided this special population included counseling, referral to other agencies, and coordination with group home staff. Two students were referred to a job cooperative for supported employment outside the workshop environment.

#### Catawba Valley Community College Vocational Explorations

This project was developed to assist in facilitating the entry of disadvantaged youth and displaced homemakers into the workforce through a program of information provision and structured participatory activities. The program provided the participants with information on over 15 vocations, assessed their vocational interests and abilities, introduced them to appropriate role models, and exposed them to actual work-site conditions.

Four series of workshops were presented. Each workshop consisted of 40 hours of activities over a two week period. The sessions included an overview of careers, skills, and job availability, hands-on exploration through lab, shop, and



classroom visits at Catawba Valley Community College, administration and interpretation of testing instruments, self-esteem building and goal setting activities, and a tour of the local General Electric manufacturing plant.

The sessions were attended by 60 females and seven males which included 39 displaced homemakers and 52 JOBS recipients. Results from the program have been very positive to date. As of the end of the program year, four students have completed their GED. Three students have enrolled in curriculum programs at the community college. One student enrolled in continuing education programs for hosiery workers at the college and has been employed in the field. Another five students are studying for their GED tests.

Guilford Technical Community College  
Model for Improving Vocational, Choice, Education, and  
Training

The purpose of this project is to provide Native American youth with assistance in improving their quality of life. The project attempts to reduce or remove barriers which this ethnic group encounters in successfully targeting and completing appropriate educational and leadership goals. The 1991-1992 program year was the fourth year of the program's operation.

An annual American Indian Youth Career Day was sponsored. This year 33 students attended, and heard presentations by community leaders. A full-time Advisor/Outreach worker was based at the community college, but spent a portion of each week at the Guilford Native American Association. This allowed the Advisor/Outreach Worker to better coordinate work with at-risk Indian youth in the high schools.

During the 1991-1992 program year 62 students were served by the project. These included 42 females and 20 males. Forty three students received financial assistance which included payment of tuition, purchase of textbooks, tools, and day care and transportation reimbursement. As a result of these efforts Guilford Technical Community College increased its Native American enrollment by 20% over the project period.

**IX. Consumer and Homemaking Education (Title III, Part B, Sections 311, 312, and 313).**

No postsecondary programs were supported or presented in North Carolina.



**X. Tech-Prep (Title III, Part E, Sections 341-347).**

During the 1991-1992 program year there were no Tech-Prep students enrolled in the North Carolina Community College system. This was due to the relatively recent introduction of the program throughout the state. Thus, the colleges were in the process of planning and in the early stages of implementing articulated Tech-Prep programs. See the Secondary portion of this report for a more detailed description of Tech-Prep activities.

Perkins II funds were distributed via a competitive bid process. Two categories or levels of effort were funded -- planning and implementation. During the 1991-1992 program year 42 requests for planning grants were received from tech prep consortia. Of these, 23 were funded. During the same period 36 requests for implementation grants were received of which 19 were funded. System-wide, 16 community colleges participated in planning efforts and 14 were involved in implementation projects.

The tech prep movement and program in North Carolina integrates academic and occupational subjects, placing heavy emphasis on articulation between secondary and postsecondary education. Articulation between high schools and the community college embodies a competency-based, technical curriculum, designed jointly by business/labor and the participating education institutions. This collaboration is designed to result in instructional sequences offered by the schools which will teach job-essential competencies without duplication or repetition.

The Tech-Prep planning process involves many constituent elements in North Carolina. These include employers, labor representatives, parents, community organizations, and, of course, the secondary and postsecondary schools. The business/labor community identifies student outcomes required for future as well as current jobs. It also reviews curricula and course content for job relevance, and participates with school officials to develop and provide work-based learning experiences such as shadowing, mentoring, cooperative learning, internships, and apprenticeships. These comprehensive and intensive cooperative efforts assure that Tech-Prep students receive appropriate training consistent with the availability of jobs when they complete the course of study.

**XI. Integrating Applied Academics into Vocational Education (Title I, Part B, Section 116; Title II, Part A, Section 201; Title II, Part C, Section 235, 240).**

The North Carolina Department of Community Colleges recognizes the need to integrate academic and vocational content in a coherent and meaningful manner for its students. As postsecondary institutions, its member colleges provided technical and vocational curricula to 111,081 students. Each curriculum

program is reviewed by the NCDCC and approved by the State Board of Community Colleges. The standards used to determine approval are consistent with regional accrediting agencies such as the Southern Association of Colleges and Schools. All approved and Perkins II eligible programs include both technical/job-specific course work as well as academic preparation courses. Therefore, by choosing a specific course of study, the student receives an integrated program of academic and vocational training.

Since the nature of postsecondary education is learner-chosen, i.e., a curriculum of interest is chosen by the student, programs are available which include both academic and vocational components. To ensure that students are successful in these programs the North Carolina Community College system provides extensive academic support services to vocational and technical students. These include counseling, career assessment, tutoring, and a wide-array of remedial classes. Many of these programs have been previously described in this report.

Another program previously described in this report is the Curriculum Improvement Project process. These projects identify all competencies, both academic and vocational, needed by students to become productive employees. As a result, the programs developed include a system of coherently developed courses to provide such. This is the nature of program development at the community college level. As such, these programs embody the concept of academic and vocational integration.

## **XII. Career Guidance and Counseling (Title II, Title III, Part C, Section 321-323).**

No postsecondary funds were used for Title III, Part C, Section 321-323 eligible programs during the 1991-1992 program year. However, as previously described, many community colleges apply Perkins II funds to provide a more comprehensive guidance and counseling program at their respective campuses. Several colleges hire full-time counselors for special population students or use part-time (prorated full-time) counselors for such activities. Additionally, many colleges have increased their guidance capabilities through the purchase of computer software designed to assess a student's career interests and abilities. Since the mission of a comprehensive community college is to provide complete educational services to all its constituents, programs such as these are indispensable.

**Appendix A**  
**Performance Measures and Standards**  
**- Postsecondary -**





# **Performance Measures and Standards**

**Carl Perkins Vocational and Applied  
Technology Education Act of 1990**

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**Department of Community Colleges  
North Carolina State Board of Community Colleges  
200 W. Jones Street  
Raleigh, NC 27603-1337**



## Performance Measures and Standards for Compliance with the Carl Perkins Vocational and Applied Technology Education Act of 1990

The Carl Perkins Vocational and Applied Technology Education Act of 1990 (Perkins II) requires that recipients of funds under the Act establish sufficient measures and performance standards to determine the degree of improvement in vocational education programs. The rationale for the establishment of the measures and standards for the North Carolina Department of Community Colleges has been to meet this requirement with the least additional burden to its member institutions. The development of the measures and standards has taken into consideration the additional reporting requirements imposed on the institutions by the General Assembly, the Right to Know Act, system-wide Critical Success Factors, and so forth. Therefore, to the extent possible, the measures and standards required by Perkins II have been developed to minimize or eliminate redundant data collection and reporting. Where possible, data collection is coordinated with the Student Progress Monitoring System currently being developed. The following narrative describes the measures and standards adopted to demonstrate compliance with Perkins II.

### Part I: The Measures

Perkins II states that the minimum core measures needed for compliance include

- (1) [a] *Measures of learning and competency gain, including student progress in [b] the achievement of basic and more advanced academic skills . . .* In response the following guidelines have been reviewed and adopted.

- [a] Curricula approved during the last seven years have required to define such competencies. Each college should, therefore, define 5 to 15 measurable competencies for each curriculum. While aggregate competencies are difficult to trace to specific courses, completion of the entire sequence of required courses may be presented as evidence of completion of all competencies in targeted skills.

**Performance Measure:** Record the percentage of the required credit hours completed for the curriculum, i.e., number of students who have completed 25%, 50%, 75%, or 100% of the courses needed for curriculum completion/graduation.

- [b] For compliance purposes, *basic academic skills* are defined as those necessary for entering a community college curriculum program. *Advanced*

*academic skills* are those that are attained in General Education or Related courses, as stated in the Curriculum Standards for each curriculum program. Curriculum standards require a minimum number of credits in General Education and Related topics for diploma and degree programs.

**Performance Measure:** Colleges will report the rates at which vocational education students are required to take remedial basic academic courses (such as English and mathematics) and the rates at which they pass these academic courses. Additionally, rates at which vocational education students take and pass General Education and Related courses shall be reported.

- (2) *One or more measures of performance, including only*
- (i) *Student competency gain.*
  - (ii) *Job or work skill attainment or enhancement including student progress in achieving occupational skills necessary to obtain employment in the field for which the student has been prepared, including occupational skills in the industry the student is preparing to enter.*
  - (iii) *Retention in school or completion of secondary school or its equivalent.*
  - (iv) *Placement into additional training or education, military service or employment.*

This part of the Perkins II requirements relates to labor market results rather than measurements taken in the educational setting as was required in the previous measure. Since only one measure must be reported (though more than one may be chosen), reporting options are flexible and have been developed to include existing data collection systems wherever possible. Given this rationale, item (iii) which examines retention rates has been determined to most easily and effectively meet this criteria at this time. Future performance measures and standards will address other criteria as data collection and reporting capabilities are developed.

- (iii) A measure of retention rates has been developed for the Critical Success Factors, and has been adopted to comply with this requirement.

**Performance Measure:** Students are considered to be retained if they were enrolled in the fall quarter, did not complete (graduate) in the quarter, and completed at least one additional course during the subsequent winter or spring quarters. Students who are enrolled as special credit, or in dual enrollment or Huskins Bill courses are to be omitted from the retention cohort group, as are students in the V099 and T099 curriculum codes.



Retention rates are to be reported by credit hour categories, as presented in the Annual Statistical Report. Thus, student data will be separated into four groups based upon the following course loads during the fall quarter:

1. 12 or more credit hours
2. 9 to 11 credit hours
3. 6 to 8 credit hours
4. 5 or fewer

(3) *Incentives or adjustments that are*

- (i) *Designed to encourage service to targeted groups or special populations; and*
- (ii) *Developed for each student, and, if appropriate, consistent with the student's Individualized Education Program developed under section 614(a)(5) of the Education of the Handicapped Act:*

It is the interpretation of the North Carolina Department of Community Colleges (NCDCC) that the requirements of item (i) are substantially met through the nature and specificity of assurances given to the US Department of Education which state that funds from the Perkins II grants will be used to consistently encourage the participation of special populations in vocational and technical programs.

- (i) Colleges identify vocational education students who are members of special populations in several ways (declaration at registration, remedial classes for academic disadvantaged, or requests for financial aid, readers, interpreters, tutors, special counseling, etc.). These methods and the delivery of other supplemental services are designed to meet the needs of special populations as defined in Perkins II and to provide comparability between special and non-special (regular) vocational education students.

**Performance Measure:** Special population participation may be measured by either of two methods:

1. The ratio of percent of special population students enrolled in vocational-technical curricula to the percent of special population students enrolled in all curricula programs in the school population; or
2. The ratio of percent of special population students completing vocational-technical curricula to the percent of special population students completing all curricula programs in the school population.

Additionally, the NCDCC shall maintain a monitoring instrument which records the colleges' compliances with all assurances of equal access for members of special populations to meet the assurances contained in Perkins II grant applications.

- (ii) It is the interpretation of the NCDCC that this section applies to secondary education programs because community colleges do not provide Individualized Education Programs.

## **Part II: The Standards**

Standards shall be established after first analyzing the state average data on the above measures. Data will be collected for the 1992-1993 school year to establish the baseline state averages. These baseline data will be analyzed to determine which, if any, measure of central tendency is most appropriate for each measure. These standards will be monitored subsequently to provide trend analysis in subsequent reporting periods. As additional data collection and analysis capabilities are developed and implemented (such as placement data), standards will be similarly developed and added to this initial base of measures and standards.

Appendix B

Enrollment Tables - Program Year 1991-1992

- Postsecondary -





NORTH CAROLINA DEPARTMENT OF COMMUNITY COLLEGES  
CURRICULUM POSTSECONDARY ENROLLMENT  
FOR CARL PERKINS PERFORMANCE REPORT--7/1/91 TO 6/30/92  
(TECHNICAL AND VOCATIONAL ONLY)

REPORT # CC815CPP

CIP CODE	CIP NAME	TOT ENR	MALE	FEMALE	REG. VO-TE-ED	DIS-ADV	LEP	DIS-ABLED	CORR	SP/DH SPH	SEX EQ (NON-TRAD)	COMP-LETER
01.0101	AGRICULTURAL BUSINESS	21	14	7	14	6				3		5
01.0104	AGRICULTURAL TECH.	6	4	2	6							1
01.0201	FARM MACHINERY MECH	12	12		9					1		3
01.0301	AGRICULTURAL SCIENCE	8	6	2	4							1
01.0302	SMITH MGMT	110	69	41	58	46				7	1	15
01.0304	HORTICULT. & FRUIT PROD	20	7	13	10	8				5		
01.0399	DAIRY MANAGEMENT TECH.	3	2	1	2							
01.0505	EQUINE TECHNOLOGY	62	13	49	28	28				2		1
01.0599	TAXIDERM	71	65	6	70							16
01.0601	HORTICULTURE	512	361	151	312	100				45	13	11
01.0604	GREENHOUSE & GRNDS MGMT	397	360	37	111	75				12	6	49
01.0605	LANDSCAPE GARDENING	96	79	17	68	22				5	37	36
01.0607	RECREATIONAL GRND. MGT.	98	97	1	67	28				3	17	23
03.0401	FOREST MANAGEMENT	175	160	15	130	42				1	15	1
03.0404	WOOD PRODUCTS	5	5		2					1		39
03.0499	LUMBER SPECIALIST	17	16	1	14							1
03.0601	FISH AND WILDLIFE MGT.	140	121	19	82	55				3	1	17
07.0699	DESKTOP PUBLISHING (T S)	25	3	22	16					3	19	27
08.0102	FASHION MERCHANDIS & MKT	185	6	179	102	69				3	3	2
08.0503	FLORAL DES & COMM. HORT.	64	10	54	46	17				26	6	24
08.0705	MARKETING & RETAILING	716	241	475	504	153				63	10	21
08.0901	HOSPITALITY MGMT. TRNG.	6	2	4	6							84
08.1001	INSURANCE	108	48	60	101					1		2
08.1104	TRAVEL AND TOURISM TECH	156	21	135	131	18				10	21	2
08.9999	CUSTOMER SERVICE TECH	105	18	87	65	32				16	18	5
10.0101	COMMUNICATIONS TECH.	23	13	10	17					5	9	1
10.0103	PHOTOFINISHING SPEC.	33	18	15	14					2		8
10.0104	BROADCASTING TECH	239	168	71	166	61				16		26
12.0403	FUNERAL SERVICE	163	110	53	135					8		13
12.0403	COSMETOLOGY	3,778	221	3,557	2,011	1,456				790	221	484
13.1501	TEACHER ASSOCIATE	3,395	15	3,380	164	182				115	15	38
13.9999	AD FOR VOC INSTRUCTORS	25	17	8	20					12		4
14.3001	MANUFACTURING ENG.	323	270	53	231	71				18	53	14
15.0101	ARCHITECTURAL	924	725	199	637	235				32	199	118
15.0201	CIVIL ENGINEERING	625	543	82	472	112				22	82	77
15.0303	ELECTRONICS ENGINEERING	3,807	3,395	412	2,590	1,031				203	412	409
15.0304	LASER/ELECTRO-OPTICS TEC	49	37	12	25					3		6
15.0399	IND ELECT/ELECTRO TECH	169	151	18	116	45				12	18	21
15.0401	BIOMEDICAL EQUIPMENT	164	148	16	67	90				14	16	25
15.0402	COMPUTER ENGINEERING TEC	854	672	182	556	240				71	182	85
15.0403	IND MAINTENANCE TECH.	572	495	77	378	169				28	77	52
15.0404	INSTRUMENTATION	99	85	14	90					6	14	22
15.0405	INSTRUMENTATION	130	116	14	80	62				17	14	16
15.0501	A/C, HEAT, & REFRIG TEC	239	232	7	163					7	7	29
15.0506	ENVIRONMENTAL SCIENCE	56	37	19	34	19				2		1

## REPORT # CC815CPP

138

NORTH CAROLINA DEPARTMENT OF COMMUNITY COLLEGES  
CURRICULUM POSTSECONDARY ENROLLMENT  
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48.0105	DRAFTING-MECHANICAL	215	173	42	120	63	6	10	20	13	42	34
48.0199	FURNITURE DFT & PROD DEV	39	24	15	26	12	2	2		5		6
48.0201	GRAPHIC ARTS--PRNT MGMT	411	228	183	129	129	3	29		36		56
48.0303	UPHOLSTERING	161	97	64	115	30	5	4		21		35
48.0503	MACHINIST	1,730	1,583	147	1,307	349	18	53	4	97	147	283
48.0507	TOOL & DIE	1,701	1,628	73	1,153	362	6	51	183	84	73	149
48.0508	WELDING	22	18	4	157	12	2	1		2	4	10
48.0701	FINE & CREATIVE WOODMKG	170	166	4	10	9		1		2	4	55
48.0702	FURNITURE MACH OPERATION	16	9	7	53	9		1		5		
48.0799	WOOD PRODUCTION CRAFTS	68	19	49	231	63	2	4		5		
48.9999	POTTERY PRODUCTION	299	265	34	15	3		1		1		
49.0102	AVIATION MGT & C PILOT	19	11	8	59	7		3		1		
49.0105	AIR TRAFFIC MGMT	70	69	1	623	1			1	1		
49.0202	HEAVY EQUIP. OPERATOR	625	540	85	14	5				34		5
49.0205	TRUCK DRIVER TRAINING	19	19		34	7				1		43
49.0306	MARINE MECHANICS	44	26	18	881	343	1	67		3		11
49.9999	TRAFFIC AND TRANS.	1,293	620	673	116	80	1	9		98		389
50.0402	COM. ART & ADV. DES.	225	121	105	280	99	1	14		52		5
50.0408	INTERIOR DESIGN	444	29	415	39	15	1	14		84		111
51.0205	INTERPRETER TRAINING	63	6	57	293	150	2	7		12		76
51.0601	DENTAL ASSISTING	462	6	456	273	105	2	4		40		5
51.0602	DENTAL HYGIENE	407	3	404	16	18				51		139
51.0603	DENTAL LABORATORY	36	14	22	64	51	2			6		114
51.0703	HOSPITAL WARD SECRETARY	132	13	119	118	104		10		40		9
51.0707	MED. RECORDS TECHNOLOGY	289	6	236	492	451	2	14	1	62		40
51.0801	MEDICAL ASSISTING	1,022	10	103	27	76	3	42		249	13	22
51.0803	OCCUP. THERAPY ASST.	113	71	214	135	135	1	11		27	6	176
51.0805	INDUS. PHARMACEUTICAL TEC	285	66	386	261	185	6	14		53	10	57
51.0806	PHYSICAL THERAPIST ASST.	452	9	99	335	45	5	13		57	66	89
51.0808	VETERINARY MEDICAL	452	289	163	335	87	1	6		6	9	31
51.0904	EMERGENCY MEDICAL	24	12	12	542	4	3	21		29		44
51.0905	NUCLEAR MEDICINE TECH	958	197	761	542	325	7	40		3		6
51.0907	RADIOLOGIC TECH / RADPHY	652	197	455	313	280	7	23		151	197	188
51.0908	RESPIRATORY CARE TECH	287	26	241	179	86	7	23		135		185
51.0909	SURGICAL TECH.	61	6	55	33	22	4	6		52	26	75
51.0910	MEDICAL SONOGRAPHY	59	15	44	44	22		6		7	6	30
51.0999	ELECTRODIAGNOSTICS TECH	438	70	368	255	156	5	16		8		16
51.1004	MEDICAL LABORATORY TECH	89	11	78	46	32	1	8		76	70	76
51.1099	PHLEBOTOMY	131	11	101	63	55	1	9		21	11	49
51.1501	DRUG & ALCOHOL TECH	461	54	407	136	295	5	23		33	30	15
51.1502	HUMAN SERVICES TECH.	8,821	720	8,101	4,967	3,113	68	206	7	129	54	42
51.1601	ASSOC. DEGREE NURSING	1,937	113	1,824	1,035	717	16	45		435	720	1,588
51.1613	PRACTICAL NURSING	1,932	78	1,854	339	297		12	35	229	113	492
51.1614	NURSING ASSISTANT											255

NORTH CAROLINA DEPARTMENT OF COMMUNITY COLLEGES  
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CIP CODE	CIP NAME	TOT ENR	MALE	FEMALE	REG- VO-TE-ED	DIS- ADV	LEP	DIS- ABLED	CORR	SP/DH SPH	SEX EQ (NON- TRAD)	COMP- LETER
51.1615	HOMEMAKER/HOME HEALTH AI	174	6	168	98	59		7		42	6	108
51.1699	OPERATING ROOM TECHNICI	10		10	4	5				4		
51.1802	OPTICIANRY	91	52	39	48	39	1	3		10	2	15
51.2399	DEVELOPMENT DISABILITIES	24	2	22	3	20		15		8	32	28
51.2401	THERAPEUTIC RECREATION	195	32	163	55	106	3	413	373	1,413		1,073
52.0201	BUSINESS ADMINISTRATION	11,324	3,905	7,419	7,018	3,265	76	44		815	1,019	551
52.0205	INDUSTRIAL MANAGEMENT	1,404	804	600	3,598	1,743	43	228	3	618	35	266
52.0302	ACCOUNTING	5,758	1,019	4,739	1,446	1,161	23	130	1	86	5	45
52.0402	SECRETARIAL-EXECUTIVE	2,852	35	2,817	246	741	12	59		348	10	118
52.0403	SECRETARIAL-LEGAL	1,467	10	1,457	767	6		1		2	1	33
52.0405	COURT REPORTING	29	17	12	22	52	4	11		49	17	33
52.0407	DATA ENTRY OPERATIONS	1,874	24	1,850	101	878	13	108		471	24	181
52.0408	GENERAL OFFICE TECH	98	46	52	859	20		6		14		11
52.0701	SMALL BUS MGMT, ENTR DEV	31	17	14	30	78	4	12		34	42	28
52.0803	BANKING AND FINANCE	421	42	379	323	89	11	14	1	36		24
52.0902	HOTEL & RESTAURANT MGMT	317	153	164	203	20	8	123		5	477	130
52.1101	INTERNATIONAL BUSINESS	72	30	42	45	676	29	375	18	425		594
52.1201	MICROCOMPUTER SYSTE TECH	2,080	477	1,603	1,203	2,488	119	38	19	1,067		54
52.1202	BUSINESS COMPUTER PROG	7,629	2,693	4,936	4,583	2,488	14	30		116		32
52.1205	COMPUTER OPERATIONS	1,667	939	728	1,481	99	8			76		
52.1501	REAL ESTATE (TEC SPEC)											
		111,081	47,361	63,720	68,901	32,745	876	4,236	2,714	14,026	7,166	14,166



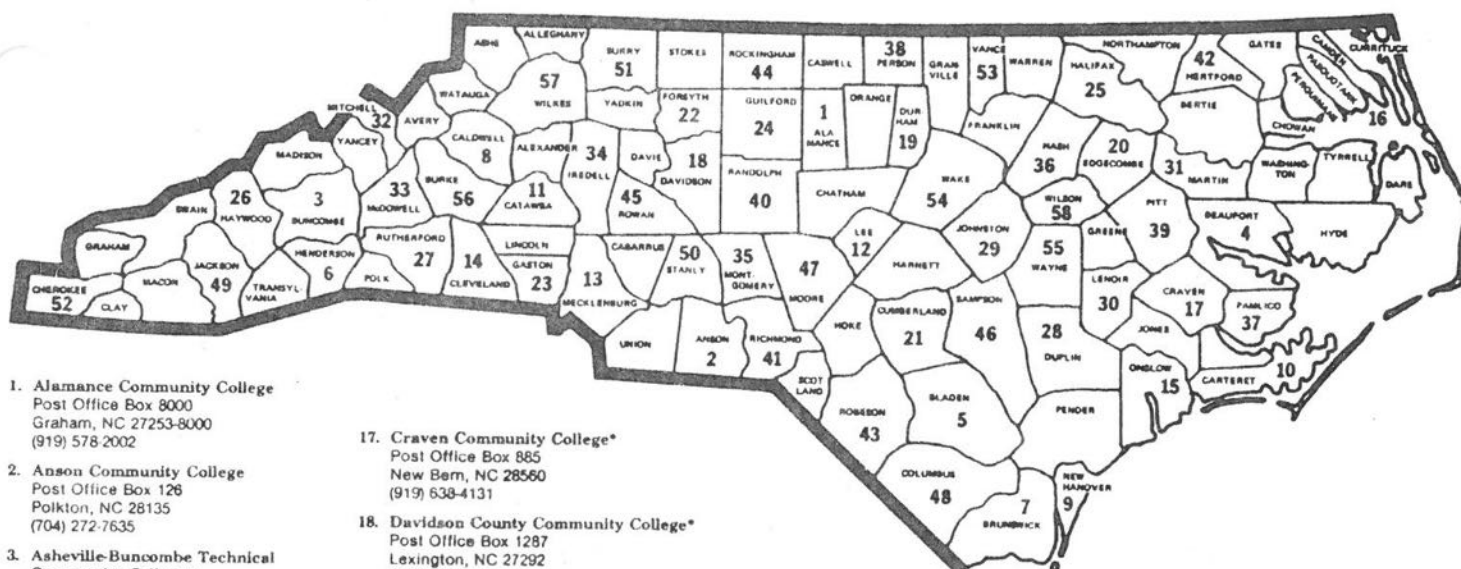
## **Appendix C**

### **Member Community Colleges**

#### **North Carolina Department of Community Colleges**



# The North Carolina Community College System



1. Alamance Community College  
Post Office Box 8000  
Graham, NC 27253-8000  
(919) 578-2002
2. Anson Community College  
Post Office Box 126  
Polkton, NC 28135  
(704) 272-7635
3. Asheville-Buncombe Technical Community College\*  
340 Victoria Road  
Asheville, NC 28801  
(704) 254-1921
4. Beaufort County Community College\*  
Post Office Box 1069  
Washington, NC 27889  
(919) 946-6194
5. Bladen Community College  
Post Office Box 266  
Dublin, NC 28332  
(919) 862-2164
6. Blue Ridge Community College\*  
Fiat Rock, NC 28731  
(704) 692-3572
7. Brunswick Community College  
Post Office Box 30  
Supply, NC 28452  
(919) 754-6900
8. Caldwell Community College and Technical Institute\*  
1000 Hickory Boulevard  
Hudson, NC 28638  
(704) 726-2200
9. Cape Fear Community College  
411 N. Front Street  
Wilmington, NC 28401  
(919) 343-0481
10. Carteret Community College  
3505 Arendell Street  
Morehead City, NC 28557  
(919) 247-6000
11. Catawba Valley Community College\*  
Route 3, Box 283  
Hickory, NC 28602  
(704) 327-7000
12. Central Carolina Community College  
1105 Kelly Drive  
Sanford, NC 27330  
(919) 775-5401
13. Central Piedmont Community College\*  
Post Office Box 35009  
Charlotte, NC 28235  
(704) 342-6566
14. Cleveland Community College\*  
137 S. Post Road  
Shelby, NC 28150  
(704) 484-4000
15. Coastal Carolina Community College\*  
444 Western Boulevard  
Jacksonville, NC 28546  
(919) 455-1221
16. College of The Albemarle\*  
Post Office Box 2327  
Elizabeth City, NC 27909  
(919) 335-0821
17. Craven Community College\*  
Post Office Box 885  
New Barn, NC 28560  
(919) 638-4131
18. Davidson County Community College\*  
Post Office Box 1287  
Lexington, NC 27292  
(704) 249-8186
19. Durham Technical Community College\*  
Post Office Drawer 11307  
Durham, NC 27703  
(919) 598-9222
20. Edgecombe Community College\*  
2009 W. Wilson Street  
Tarboro, NC 27886  
(919) 823-5166
21. Fayetteville Technical Community College  
Post Office Box 35236  
Fayetteville, NC 28303  
(919) 678-8400
22. Forsyth Technical Community College\*  
2100 Silas Creek Parkway  
Winston-Salem, NC 27103-5197  
(919) 723-0371
23. Gaston College\*  
201 Highway 321 South  
Dallas, NC 28034-1499  
(704) 922-6200
24. Guilford Technical Community College\*  
Post Office Box 309  
Jamestown, NC 27282  
(919) 334-4822
25. Halifax Community College\*  
Post Office Drawer 809  
Weidon, NC 27890  
(919) 536-2561
26. Haywood Community College  
Freedlander Drive  
Clyde, NC 28721  
(704) 627-4516
27. Isothermal Community College\*  
Post Office Box 804  
Spindale, NC 28180  
(704) 286-3636
28. James Sprunt Community College\*  
Post Office Box 398  
Kenansville, NC 28349-0398  
(919) 296-1341
29. Johnston Community College  
Post Office Box 2350  
Smithfield, NC 27577  
(919) 934-3051
30. Lenoir Community College\*  
Post Office Box 188  
Kinston, NC 28501  
(919) 527-6223
31. Martin Community College\*  
Kehukee Park Road  
Williamston, NC 27892  
(919) 792-1521
32. Mayland Community College  
Post Office Box 547  
Spruce Pine, NC 28777  
(704) 765-7351
33. McDowell Technical Community College  
Route 1, Box 170  
Marion, NC 28752  
(704) 852-6021
34. Mitchell Community College\*  
West Broad Street  
Statesville, NC 28677  
(704) 878-3200
35. Montgomery Community College  
Post Office Box 787  
Troy, NC 27371  
(919) 572-3691
36. Nash Community College\*  
Old Carriage Road  
Post Office Box 7488  
Rocky Mount, NC 27804-7488  
(919) 443-4011
37. Pamlico Community College  
Highway 306 South  
Grantsboro, NC 28529  
(919) 249-1851
38. Piedmont Community College  
Post Office Box 1197  
Roxboro, NC 27573  
(919) 599-1181
39. Pitt Community College\*  
Post Office Drawer 7007  
Greenville, NC 27834  
(919) 355-4200
40. Randolph Community College  
Post Office Box 1009  
Asheboro, NC 27204-1009  
(919) 629-1471
41. Richmond Community College\*  
Post Office Box 1189  
Hamlet, NC 28345  
(919) 582-7000
42. Roanoke-Chowan Community College  
Route 2, Box 46-A  
Ahoskie, NC 27910  
(919) 332-5921
43. Robeson Community College  
Post Office Box 1420  
Lumberton, NC 28359  
(919) 738-7101
44. Rockingham Community College\*  
Wentworth, NC 27375  
(919) 342-4261
45. Rowan-Cabarrus Community College\*  
Post Office Box 1595  
Salisbury, NC 28144  
(704) 637-0760
46. Sampson Community College  
Post Office Drawer 318  
Clinton, NC 28328  
(919) 592-8081
47. Sandhills Community College\*  
2200 Airport Road  
Pinehurst, NC 28374  
(919) 692-8185
48. Southeastern Community College\*  
Post Office Box 151  
Whiteville, NC 28472  
(919) 642-7141
49. Southwestern Community College  
275 Webster Road  
Sylva, NC 28779  
(704) 586-4091
50. Stanly Community College\*  
Route 4, Box 55  
Albemarle, NC 28001  
(704) 982-0121
51. Surry Community College\*  
Box 304  
Dobson, NC 27017  
(919) 386-8121
52. Tri-County Community College\*  
Post Office Box 40  
Murphy, NC 28608  
(704) 837-6810
53. Vance-Granville Community College\*  
Box 917  
Henderson, NC 27536  
(919) 492-2061
54. Wake Technical Community College\*  
9101 Fayetteville Road  
Raleigh, NC 27603  
(919) 772-0551
55. Wayne Community College\*  
Carter Box 8002  
Goldsboro, NC 27533-8002  
(919) 735-5151
56. Western Piedmont Community College\*  
1001 Burkemont Avenue  
Morganton, NC 28655  
(704) 438-6000
57. Wilkes Community College\*  
Post Office Box 120  
Wilkesboro, NC 28697  
(919) 667-7136
58. Wilson Technical Community College  
Post Office Box 4305 - Woodard Station  
Wilson, NC 27893  
(919) 291-1195

