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**AVAILABILITY OF ELECTRONIC COPIES OF INSTRUCTIONAL
MATERIALS FOR CAREER AND TECHNICAL EDUCATION**

A Research Paper

Presented to the Faculty of the Department of

STEM Education and Professional Studies

at Old Dominion University

In Partial Fulfillment for the

Requirements for the Master of Science Degree

in Occupational and Technical Studies

By

Farid Safarmamadov

April 2010

SIGNATURE PAGE

This research paper was prepared by Farid A. Safarmamadov under the direction of Dr. John M. Ritz in OTED 636, Problems in Occupational and Technical Education. It was submitted to the Graduate Program Director as partial fulfillment of the requirements for the Master of Science in Occupational and Technical Studies.

Approved by: _____

Dr. John M. Ritz

Date

Graduate Program Director

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CHAPTER I

INTRODUCTION

The technological world makes all aspects of people's lives much easier than it was in the past. In particular, the development of technology in the realm of education and training is offering remarkable opportunities for the public to update its knowledge and skills in accordance with the evolving demands of industry. Furthermore, educational technologies help to reform traditional learning and teaching styles in all levels of education, starting from the preschool level to on-the-job training and fundamentally replace them with state-of-the-art methods and techniques (SIIA, 2005).

As the Internet is becoming an accessible and convenient tool, people always refer to it as a first source to look for their needs by not leaving their homes. Sitting in their home or at work people not only can buy goods for everyday life, but they also can earn a degree attending distance learning classes. It should be noted that the availability of electronic educational materials online saves time for students, educators, and teachers, as well as parents. Students and parents can easily search for schools and access their offerings online instead of commuting. Educators, teachers, and counselors will save time and resources to develop instructional materials and lesson plans and access curriculum materials from other colleges, districts, and states. This mobility is particularly convenient for administrators and teachers of career and technical education (CTE) programs, because CTE curriculum and instructional materials need to be developed as fast as the changes occur in the labor market. Therefore, it is important that materials are available on websites of schools, state agencies, and other relevant educational associations across the country. Considering all the above mentioned issues, this paper

will focus on the extent that CTE instructional and curriculum materials are available in electronic format on the fifty U.S. state departments of education websites.

STATEMENT OF THE PROBLEM

The purpose of this study was to determine the availability of electronic copies of state level curriculum materials for career and technical education.

RESEARCH GOALS

With the purpose of determining the availability of electronic versions of state level curriculum materials for career and technical education, the research goals were:

1. Identify if electronic task/competency lists exist for career and technical education courses.
2. Identify if electronic instructional guides are available for career and technical education courses.
3. Identify other appropriate instructional and curriculum materials available on states' career and technical education web-sites.

BACKGROUND AND SIGNIFICANCE

The Internet is becoming one of the most valuable tools in education and training, since it provides an enormous amount of information and it turns to be the primary source of reference for educators, teachers, and students. According to the Pew Internet & American Life Project survey (2006), 73% (about 147 million) of U.S. adults use the Internet. The same source also indicates that the number of Americans who gave credit to the Internet is significantly improving their *ability to do their job* had grown to 35% in

2006, up from 24% in March 2001 (Pew Internet & American Life Project, 2006). Seeing this development, one can undoubtedly say that there are many people among the above mentioned statistics, who are working in education and training fields. Some of them surf the Internet to find a job with an educational institution, some of them look for teaching and training materials to make their classes more interesting, and probably some educators who are in the process of developing new instructional materials search the Internet to find samples developed by their colleagues from another school districts or states.

Development of high-quality curriculum for Career and Technical Education (CTE) programs plays a significant role in organizations for an effective learning process and future employment of CTE graduates. Therefore, the availability and accessibility of curriculum guidelines, task/competency lists, and other instructional related materials that make the development of curriculum more convenient is rather important. In particular, if all these resources are available in electronic version on the websites, the work of CTE teachers and administrators will become more effective and less time-consuming.

In addition, as it is obvious that recruitment and retention of teachers is a challenging problem in CTE today, the availability of electronic curriculum materials will make a contribution to CTE teachers' professional development, which is one of the Perkins Act requirements [Perkins Act, 2006, Section 135 (b) (5)]. Studies show that in many states CTE teachers are employed directly from industry without having teaching experience, and therefore, concerns arise around the effectiveness of the CTE programs. For example, according to the National Association of State Directors of CTE Consortium (NASDCTEc), career clusters such as STEM, Agriculture, Food, and Natural

Resources, Health Science, Manufacturing, and Information Technology were frequently mentioned to be closed due to the lack of teachers. The survey also revealed that 30 state directors were very concerned that CTE teacher retirements were going to cause a serious deficit of teachers in their states (2003). In this respect, having access to and using electronic curriculum materials and other relevant documentation, the new CTE teachers can develop their teaching proficiency in a short-term time period.

Moreover, electronic curriculum materials available on websites can benefit CTE teachers and administrators in satisfying the Perkins Act requirements in terms of collaboration between secondary and postsecondary CTE, in particular, section 135 (b)(2) linking secondary and postsecondary CTE programs, and section 135(c)(10) “articulation agreements between subbaccalaureate degree granting CTE postsecondary educational institutions and baccalaureate degree granting institutions” (Association for Career and Technical Education [ACTE], 2006, p. 61). By establishing collaboration and having access to each other’s curriculum materials, the secondary and postsecondary CTE faculties can easily avoid duplication of CTE program content; in other words, they will not teach students a program at the same level twice.

The issue of availability of electronic versions of curriculum has grabbed the attention of the researcher and, therefore, this curiosity made him first “to google” online sources, in particular websites of the federal and state levels through Departments of Education to see the scope and format of curriculum, task/competency lists, and other instructional materials that were available. However, as the results showed, not all of the websites provided the needed information.

Another reason was that this study would serve as a helpful source for CTE teachers and administrators to see what kind of curriculum and other materials were available in other states, so that they could use them as guidelines in developing their own materials. The last reason, as the investigation will show, there was not another report of this type available. To that end, it was decided to conduct a thorough study of all fifty states' department of education websites and analyze what kind of electronic instructional materials were available there.

LIMITATIONS

This research was bounded by the following limitations:

- The research was limited to the fifty U.S. states.
- The research's population was limited to Office of Career and Technical Education, in the individual state departments of education.
- The research was limited to electronic curriculum materials available on the websites of departments of education.
- The research was limited to the five CTE areas: Agricultural Education, Business and Marketing Education, Family and Consumer Sciences Education, Health Science Education, and Technical/Technology Education.
- The research was limited to task/competency lists, curriculum guides, and other curriculum materials.

ASSUMPTIONS

The results of this research were based on the following assumptions:

- It was assumed that task/competency lists for all subjects were posted on the websites.
- It was assumed that curriculum/instructional guides were stored in the websites.
- It was assumed that states should have curriculum materials available as outlined in the Perkins CTE Act (2006).

PROCEDURES

In order to conduct this study, the researcher needed to identify websites of the departments of education of all fifty states. Afterwards, the links to the Offices of Career and Technical Education within each state's department of education site were identified. The researcher then visited the homepage of CTE offices and studied how many of them had curriculum, task/competency lists, and other instructional materials available in electronic format. Further, after all the fifty websites were studied, a matrix was created that showed what type of materials (out of the three mentioned above) were available on the CTE agency websites.

DEFINITION OF TERMS

The following terms were used in this study in order to ensure the proper understanding of these terms. The definitions are provided:

Electronic resources refer to electronic versions of reference sources, curriculum, task/competency lists, and specifically web-based versions.

Curriculum guides are practical guides designed to aid teachers in planning and developing a teaching plan for specific subject areas (UCR Libraries, 2009).

Curriculum pathways are sub-groupings of occupations/career specialties used as an organizing tool for curriculum design and instruction. Occupations/career specialties are organized into Pathways based on the fact that they require common knowledge and skills (NCCTE, 2005).

Task/competency lists refers to the knowledge, skills, or attitudes which the learner should possess after completing instruction in the CTE class (Ritz & Joyner, 1979).

OVERVIEW OF CHAPTERS

The information in this study was divided into five chapters. Chapter I introduced the reader with the background information about electronic materials and their role in today's education and training world. In particular, the first chapter discussed how students, parents, teachers, and administrators can benefit from the electronic curriculum and other instructional materials accessible on websites. There were provided some statistics on use of internet and electronic resources by the adult population, particularly students and teachers. Also, in the first chapter, the researcher provided statements on significance of this research, particularly on the important role that electronic curriculum and other instructional materials play in developing effective teaching materials and professional development of new CTE teachers referring to the Perkins Act (2006) and other CTE reports. This chapter also stated the problem of the study and focused on

limitation by which this research was bounded. Also, Chapter I defined the procedures and special terms that were used in this research.

Chapter II presents information about the literature review. In particular, it focuses on the main variables of this research: what the Perkins Act mandates that states need to provide teachers of CTE curriculum, state level curriculum materials, and electronic resources for assisting teachers. In Chapter III focus is placed on methods and procedures employed in collecting data. Chapter IV outlines the findings of the study, and finally, Chapter V presents a review of the findings and establishes conclusions of the research. In this chapter recommendations are also introduced for future research.

CHAPTER II

REVIEW OF LITERATURE

This chapter is a review of literature that the researcher went through to better study the problem of this research. The purpose of this research was to determine the availability of electronic copies of state level curriculum materials for career and technical education (CTE). Three important variables that are key to this study will be presented in this chapter under the following subsections: what the Perkins CTE Act mandates that states need to provide teachers of CTE curriculum, state level curriculum materials, electronic resources for assisting teachers, and a summary.

PERKINS CTE ACT MANDATES FOR STATES

The Perkins Act (2006) or as it is officially called, *The Carl D. Perkins CTE Act of 2006*, is the federal legislation for CTE development. The new version was approved by Congress and signed by the President on August 12, 2006. This Act authorizes federal funds and provides direction to regularly support CTE improvement both at the state and local levels (ACTE, 2006).

In the new Act, although in volume it is similar to the previous, there are a number of important changes that have been made on topics such as accountability, coordination within the CTE system, enhanced integration of academic and technical courses, and the relation between secondary and postsecondary education. One of the evident differences between the previous and new Act, for example, is changing the term “vocational education” to “career and technical education” (ACTE, 2006). In addition, the Perkins Act mandates that states take appropriate measures in supporting CTE

teachers and administrators both at the state and local levels. In particular, under State Level Activities, Section 118 (c)(2) & (3) states:

In order for a state to receive a grant under this section, the eligible agency and the Governor of the State shall jointly designate an entity in the State –

- to make available to students, parents, teachers, administrators, faculty and career guidance and academic counselors, and to improve accessibility with respect to, information and planning resources that relate academic and career and technical educational preparation to career goals and expectations (Section 118 (c)(2));
- to provide academic and career and technical education teachers, faculty, administrators, career guidance and academic counselors with the knowledge, skills, and occupational information needed to assist parents and students, especially special populations, with career exploration, educational opportunities, education financing, and exposure to high skill, high wage, or high demand occupations and non-traditional fields, including occupations and fields requiring a baccalaureate degree (Section 118 (c)(3)).

In this legislation Section 124, under which the state is mandated to provide training on using technology, including distance learning for CTE teachers, career counselors and administrators, and professional development programs, including providing comprehensive professional development for CTE teachers, faculty and career counselors and administrators at both at the secondary and postsecondary levels (Section 124 (2) & (3)).

STATE LEVEL CURRICULUM MATERIALS

This part of the chapter focuses on curriculum materials provided at the state level, and specifically, it discusses *task/competency lists*, *instructional guides*, *curriculum*

guides, and *career pathways* that are the main components of curriculum materials.

Below are the descriptions of these four curriculum materials:

Task/competency lists identify the knowledge, skills, and attitudes that a learner should obtain after completing a CTE program (Ritz & Joyner, 1979). Competencies are developed as a result of cooperation between education and industry, and they describe what a student after completion of a program should know and be able to do within a certain career field. According to Brain (2008), competency is a person's capacity to effectively and successfully execute a task. Competencies describe the specific skills and aptitudes that a learner is expected to demonstrate as an evidence of successful completion of a program (Research and Development in Education [RANDE], LTD., 1976).

Instructional guide is a document that comprises specific information for developing competency-based courses and programs. It also includes information concerning the occupational or program domain, task list, performance and learning courses (Melvin, McGuire & Troutman, 1986).

Curriculum guides are practical guides to help teachers in planning and developing lesson plans for specific subject areas. Curriculum guides include course descriptions, goals, units of study, objectives, activities, and resources.

Career pathways are sub-groupings of occupations/career specialties used as an organizing tool for curriculum design and instruction. Occupations/career specialties are organized into Pathways based on the fact that they require common knowledge and skills (NCCTE, 2006). There are 79 pathways within sixteen clusters developed at the national level. For example, Network Systems is a career pathway found under the

Information Technology career cluster. Table 1 shows a sample of Network Systems Career Pathway plan of study.

ELECTRONIC RESOURCE FOR ASSISTING TEACHERS

For the last decade, the use of electronic resources, particularly retrieving information from the World Wide Web, has become a primary source for teachers, students, and researchers in their professional lives. This review of literature shows that teachers and students use the Internet very frequently for teaching and educational purposes. According to Becker's (1998) study among 2,250 teachers of 4th through 12th grade classes in the U.S. public and private schools, 68 percent of teachers reported that they use the Internet for finding information resources to apply in their lessons. This survey also listed two areas of use of the Internet such as e-mailing with teachers from other schools and publishing information on the World Wide Web. However only a few teachers (16%) used the Internet for these purposes and the majority's purposes were to find information resources (Becker, 1998). Given the fact that these statistics reflect the situation of ten years ago and the rapid development of technology, there is no doubt that these figures have tripled for the last ten years. This assumption can be supported by the fact that in 2006, 73% (about 147 million) of the adult population was using the Internet (Pew Internet & American Life Project, 2006).

Table 1

Information and Technology: Network Systems, Career Pathway Plan of Study for Learners, Parents, Counselors, Teachers/Faculty. From http://www.careerclusters.org/resources/pos_ks/POS/IT-51-POS.pdf

EDUCATION LEVELS	GRADE	English/ Language Arts	Math	Science	Social Studies/ Sciences	Other Required Courses Other Electives Recommended Electives Learner Activities	*Career and Technical Courses and/or Degree Major Courses for Network Systems Pathway	SAMPLE Occupations Relating to This Pathway	
<i>Interest Inventory Administered and Plan of Study Initiated for all Learners</i>									
SECONDARY	9	English/ Language Arts I	Algebra I or Geometry	Earth or Life or Physical Science	World History	All plans of study should meet local and state high school graduation requirements and college entrance requirements. Certain local student organization activities are also important including public speaking, record keeping and work-based experiences.	<ul style="list-style-type: none"> • Introduction to Information Technology • Information Technology Applications 	<ul style="list-style-type: none"> ▶ Communications Analyst ▶ Data Communications Analyst ▶ Information Systems Administrator ▶ Information Systems Operator ▶ Information Technology Engineer ▶ Network Administrator ▶ Network Architect ▶ Network Engineer ▶ Network Manager ▶ Network Operations Analyst ▶ Network Security Analyst ▶ Network Specialist ▶ Network Technician 	
	10	English/ Language Arts II	Geometry or Algebra II	Biology	U.S. History		<ul style="list-style-type: none"> • Fundamentals of Computer Systems 		
	11	English/ Language Arts III	Algebra II or Pre-Calculus or Trigonometry	Chemistry	Political Science Economics		<ul style="list-style-type: none"> • Introduction to Network Systems 		
	<i>College Placement Assessments-Academic/Career Advisement Provided</i>								
	12	English/ Language Arts IV Technical Reading	Pre-Calculus or Trigonometry AP Calculus or Advanced Math	Applied Physics			<ul style="list-style-type: none"> • Network System Design (Students are encouraged to have an internship/capstone experience to reinforce workplace skills.) 		
<i>Articulation/Dual Credit Transcribed-Postsecondary courses may be taken/moved to the secondary level for articulation/dual credit purposes.</i>									
POSTSECONDARY	Year 13	English Composition English Literature	Calculus	Chemistry	American Government Psychology	All plans of study need to meet learners' career goals with regard to required degrees, licenses, certifications or journey worker status. Certain local student organization activities may also be important to include.	<ul style="list-style-type: none"> • Network System Installation • Network Administration 	<ul style="list-style-type: none"> ▶ Network Transport Administrator ▶ PC Support Specialist ▶ Systems Administrator ▶ Systems Engineer ▶ Systems Support Leader ▶ Technical Support Specialist ▶ Telecommunications Network Technician ▶ User Support Specialist 	
	Year 14	Speech/ Oral Communication Technical Writing	Computer Applications	Biological Science Physics	American History Geography		<ul style="list-style-type: none"> • Network Systems Maintenance and Support 		
	Year 15	Continue courses in the area of specialization.					<ul style="list-style-type: none"> • Continue Courses in the Area of Specialization 		
	Year 16						<ul style="list-style-type: none"> • Complete Network Systems Major (4-Year Degree Program) 		

The above mentioned developments of Internet access and use will certainly have a positive impact in CTE teachers' professional lives by enabling them to be aware of all developments in their teaching area or generally in the realm of CTE throughout the U.S. Since changes in industry and consequently in education occur overnight, Internet resources are the only tools to make teachers update themselves in a timely manner and take the necessary measures to renew their teaching and learning strategies in order to satisfy the emerging needs.

SUMMARY

This chapter has covered the issues that play important roles in this research by reviewing other literature sources. It described what the Perkins Act of 2006 required toward state level leadership in supporting teachers of CTE programs. Also, it identified and briefly described some of the curriculum terms such as *task/competency lists*, *instructional guides*, *curriculum guides*, and *career pathways* that are available within CTE at the state level. Finally, the chapter discussed how CTE teachers can benefit from the use of electronic resources, especially the Internet.

The next chapter will discuss the methods and procedures that were employed for completing this research. It also describes the population of the research, as well as the methods used to list web resources available in career and technical education.

CHAPTER III

METHODS AND PROCDEDURES

Chapter III aims to describe methods and procedures employed to collect data on availability of electronic curriculum materials on the websites of the departments of education in the U.S. fifty states. This chapter also presents information on the population of the study, the instrument design, the methods used in collecting data, the statistical analysis of the data, and a summary.

POPULATION

The population of this study was Career and Technical Education (CTE) Offices in the state departments of education. The websites of the CTE Offices throughout the fifty U.S. states served as main sources of information.

INSTRUMENT DESIGN

Since the purpose of this research was to identify electronic copies of state level curriculum materials available on the websites, no other instruments such as surveys and interviews were used. The information for this research was gathered only by visiting the website of an individual state CTE Office.

METHODS OF DATA COLLECTION

After identified, the curriculum and other instructional materials that were available on the websites of CTE Offices were downloaded and sorted according to state and seven CTE areas – Agriculture education, Trade and industrial education, Business and information technology, Family and consumer sciences, Health and medical sciences,

Marketing, and Technology education. These materials were tracked in an electronic matrix. In the findings, the seven CTE areas are combined into five because many states have combined areas, such as Business and Information Technology and Marketing Education into Business & Marketing Education, and Trade and Industrial Education and Technology Education into Technical/Technology Education.

ANALYSIS OF DATA

The information revealed in the result of this research was analyzed to determine what types of curriculum and other instructional materials were available on the CTE Offices' websites for seven CTE areas. A matrix was developed to reflect the obtained results. Descriptive statistics were conducted with numbers cited to analyze the availability of the electronic curriculum resources.

SUMMARY

This chapter introduced the methods and procedures that were utilized to gather the needed information for this research. It also showed how the data were collected, what kinds of instruments were used, and how the data were statistically analyzed. The findings gained as a result of analysis will be presented in the Chapter IV.

CHAPTER IV

FINDINGS

The goal of this study was to identify whether electronic copies of career and technical education curriculum materials were available on the websites of the fifty U.S. states departments of education. This chapter presents the data yielded in the research process. Included will be sections on task/competency lists, instructional guides, and other curriculum materials. An electronic matrix was established to demonstrate the research result for each state.

Data Available

Of the fifty states, five have all three types of instructional materials posted on their websites. Twelve states have two types of materials and 19 states have only one type of materials posted on their websites. Twelve states have no instructional materials posted on their websites.

Task/Competency Lists

The researcher found that the following states have the task/competency lists available on their websites. Of the fifty states twenty-three states have task/competency lists for all five programs posted on their websites. Sixteen states do not have posted task/competency at all. One state has task/competency lists posted for only one program. Four states have task/competency lists posted for only two programs. Three states have task/competency lists posted for three programs. Four states have task/competency lists posted for four programs. Included is a description of what was available on the websites.

Alabama. The Alabama Department of Education’s Career and Technical Education website has 96 task/competency lists posted for all five programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has 38 task/competency lists for the courses of Agribusiness Management; Agribusiness Marketing; Agribusiness Technology; Agricultural Communications; Agriscience; Agriscience Exploration; Animal Biotechnology; Animal Science; Aqua Experience; Aquaculture Science; Aquatic Biology; Construction Finishing and Interior Systems; Construction Framing; Construction Site Preparation and Foundation; Creative Floral Design; Environmental Management; Equine Science; Fish and Wildlife Management; Floral Design and Interiorscaping; Forestry Equipment; Forestry, Greenhouse Production and Management; Horticultural Science; Introduction to Agriscience; Introduction to Drafting Design; Introduction to Masonry; Introduction to Metal Fabrication; Introduction to Metal Inert Gas and Flux Cored Arc Welding; Introduction Veterinary Science; Landscape Design and Management; Nursery Production and Management; Plant Biotechnology; Poultry Science; Power Equipment Technology; Residential and Commercial Power Equipment; Residential Landscape Establishment and Maintenance; Residential Wiring; Safety and Health Regulations; Specialty Floral Design and Management; Sports Turfgrass Production and Management; Two- and Four-Stroke Engines; Urban Forestry; and Veterinary Science.

Business & Marketing Education. The Business & Marketing Education program has 12 task/competency lists for the courses of Accounting Principles; Administrative Principles; Advanced Accounting; Business and Marketing Essentials; Business

Technology Essentials; Entrepreneurship and Management; Integrated Computer Technology; Interactive Multimedia Design; Law in Society; Marketing Dynamics; Network Management and Support; and Personal and Business Finance.

Family and Consumer Sciences Education. The Family & Consumer Sciences Education program has 13 task/competency lists for the courses of Teen Challenges; Fashion Dynamics; Family Dynamics; Parent and Child Dynamics; Human Dynamics; Food Dynamics; Housing Dynamics; Money Dynamics; Career Arts; Early Childhood Education; Education; Family and Community Services; and Food, Culinary Arts, and Hospitality.

Health Science Education. The Health Science Education program has 16 task/competency lists for the courses of Advanced Health Seminar; Dental Assisting; Diagnostic Services; Emergency Services; Foundations of Health Science; Health Explorations; Health Informatics; Health Promotion and Wellness; Health Science Internship; Human Body Structures and Functions; Introduction to Biotechnology; Introduction to Pharmacy; Safety and Health Regulations; Sports Medicine; Support Services; and Therapeutic Services.

Technical/Technology Education. The Technical/Technology Education program has 17 task/competency lists for the courses of Graphic Arts Technology; Television Production; Carpentry; Electrical Technology; Heating, Ventilation, Air Conditioning, and Refrigeration (HVACR); Masonry; Cosmetology; Computer Electronics Technology; Electronics Technology; Internetworking; Automotive Service Technology; Collision Repair Technology; Power Equipment Technology; Drafting Design Technology;

Industrial Maintenance Technology; Precision Machining Technology; and Welding Technology.

Alaska. There are no task/competency lists posted on the Alaska Department of Education's Career and Technical Education website.

Arizona. The Arizona Department of Education's Career and Technical Education website has 29 task/competency lists posted for all five programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agricultural Education program has seven task/competency lists for the courses of Food Products and Processing Systems; Plant Systems; Animal Systems; Natural Resources Systems; Power, Structural and Technical Systems; Agribusiness Systems; and Environmental Service Systems.

Business & Marketing Education. The Business & Marketing Education program has five task/competency lists for the courses of Business Management and Administrative Service; Professional Sales and Marketing; Advertising and Public Relations; Entertainment Marketing; and Entrepreneurship.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has four task/competency lists for the courses of Fashion Design and Merchandising; Interior Design and Merchandising; Early Childhood Education; and Education Professions.

Health Science Education. The Health Science Education program has four task/competency lists for the courses of Mental and Social Health Services; Nursing Services; Therapeutic Massage; and Emergency Medical Services.

Technical/Technology Education. The Technical/Technology Education program has nine task/competency lists for the courses of Welding Technologies; Transportation Technologies; Automotive Collision Repair; Aircraft Mechanics; Graphic Arts and Design; Heating, Ventilation and Air Conditioning; Heavy Equipment Operations; Electrical Technologies; and Electrical Systems Installation and Maintenance Technologies.

Arkansas. The Arkansas Department of Education's Career and Technical Education website has 150 task/competency lists posted for all five programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has 26 task/competency lists for the courses of Agricultural Business; Agricultural Electricity; Agricultural Marketing; Agricultural Mechanics; Agricultural Metals; Agricultural Power Systems; Agricultural Structural Systems; Agriculture Science; Agriculture Science and Technology; Animal Science; Aquaculture; Biological Animal Science; Biological Plant Science; Environmental Resources: Soil and Water; Floriculture; Food Science Technology; Forestry; Greenhouse Management; Introduction to Horticulture; Introduction to World Agricultural Science; Leadership and Communications; Managing Natural Resources; Nursery/Landscape; Plant Science; Small Engine Technology; and Turf Grass Management.

Business & Marketing Education. The Business & Marketing Education program has 62 task/competency lists for the courses of Advanced Database; Advanced Spreadsheets; Advertising; Banking and Finance Consumer Lending; Banking and Finance Law; Banking and Finance Operations; Banking and Finance Principles; Business

Communications; Business Law I; Business Law II; Computer Technology: Introduction; Computerized Accounting I; Computerized Accounting II; Computer Applications I; Computer Applications II; Computer Applications III; Computerized Business Applications; Database Applications; Desktop Publishing I; Desktop Publishing II; Economics; Enterprise Management I; Enterprise Management II; Fashion Merchandising; Introduction to Finance; Rapid Writing I; Rapid Writing II; Retailing; Salesmanship; Senior Technology Seminar; Sports & Entertainment Marketing; Spreadsheet Database – Advanced; Web Design; Web Design I: Design Methodology Technology; Web Design-Multimedia; Word Processing I; Word Processing II; Marketing Management; Multimedia Applications I; Multimedia Applications II; Office Education Cooperative; Office Management; Oracle - Database Fundamentals; Oracle - Database Programming; Programming I; Programming II; Programming One – Java; Programming II – Java; Information Technology Fundamentals; Insurance and Risk Management; International Business; International Travel; Introduction to Hospitality; Investments and Securities; Keyboarding; Keyboarding Applications; Keyboarding Connections; Keyboarding 9-week course; Lodging Management; Management; Introduction to Marketing; and Marketing.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has 22 task/competency lists for the courses of Child Development; Clothing Management; Consumer Services; Cosmetology; Customer Relations; Entrepreneurial Experience; Exploring Personal Finance; Introduction to Culinary Arts; Family and Consumer Sciences; Family Dynamics; Family and Consumer Science Investigation; Food and Nutrition; Food Science; Housing and Interior Design; Human Relations;

Personal and Family Finance; Nutrition and Wellness; Parenting; Child Care Guidance, Management, and Services; Food Production; Orientation to Teaching I; and Orientation to Teaching II.

Health Science Education. The Health Science Education program has eight task/competency lists for the courses of Abnormal Psychology; Human Anatomy and Physiology; Human Behavior and Disorders; Introduction to Medical Professions; Introduction to Medical Professions, Extended; Medical Procedures; Medical Procedures, Expanded; and Medical Terminology.

Technical/Technology Education. The Technical/Technology Education program has 32 task/competency lists for the courses of Air Force JROTC; Architectural CAD; Army JROTC; Automotive Collision Repair Technology; Automotive Service Technology; Aviation Technology; Carpentry; Computer Engineering; Construction Technology; Drafting and Design; Electronics; Engineering CAD I; Exploring Industrial Technology Education; Furniture Manufacturing; Gas Metal Arc Welding; Gas Tungsten Arc Welding; Gateway to Technology; Geospatial Technology; Heating Ventilation, Air Conditioning, and Refrigeration; Human Anatomy and Physiology; Industrial Cooperative Training; Industrial Equipment Maintenance; Introduction to Criminal Justice; Law Enforcement I; Law Enforcement II; Machine Tool Technology; Major Appliance Technology; Metal Fabrication Welding; Navy JROTC; Pre-Engineering; Power Equipment Technology Plumbing; and Shielded Metal Arc Welding.

California. The California Department of Education's Career and Technical Education website has 34 task/competency lists posted for all five programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has seven task/competency lists for the courses of Agricultural Business; Agricultural Mechanics; Agriscience; Animal Science; Forestry and Natural Resources; Ornamental Horticulture; and Plant and Soil Science.

Business & Marketing Education. The Business & Marketing Education program has seven task/competency lists for the courses of Accounting Services; Banking Related Services; Business Financial Management; E-commerce; Entrepreneurship; International Trade; and Professional Sales and Marketing.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has four task/competency lists for the courses of Child Development; Consumer Services; Education; and Family and Human Services.

Health Science Education. The Health Science Education program has five task/competency lists for courses of Biotechnology Research and Development; Diagnostic Services; Health Informatics; Support Services; and Therapeutic Services.

Technical/Technology Education. The Technical/Technology Education program has 11 task/competency lists for the courses of Graphic Arts Technology; Integrated Graphics Technology; Machine and Forming Technology; Welding Technology; Architectural and Structural Engineering; Computer Hardware; Electrical and Network Engineering; Engineering Design; Engineering Technology; and Environmental and Natural Science Engineering.

Colorado. The Colorado Department of Education's Career and Technical Education website has 13 task/competency lists posted for two programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has four task/competency lists for the courses of Agribusiness I; Agribusiness II; Advanced Agriscience; and Animal and Plant Sciences.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has nine task/competency lists for the courses of Catering; ProStart; Food Science; Dietics and Nutrition; Culinary Arts/Food Production; Wage Earning/World of Work; Early Childhood Education; Interior Design; Fashion Design and Merchandising; and Teacher Cadet.

Connecticut. The Connecticut Department of Education's Career and Technical Education website has 28 task/competency lists posted for all five programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has five task/competency lists for the courses of Agricultural Mechanics; Animal Science; Aquaculture and Marine-Related Technologies; Natural Resources and Environment; and Plant Science.

Business & Marketing Education. The Business & Marketing Education program has seven task/competency lists for the courses of Computer Information Systems and Communications; Computer Programming and Software Development; Entrepreneurship; Accounting; Business Management; Investing and Personal Finance; and Introduction of Law Government and Public Administration.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has five task/competency lists for the courses of Education and Training-Teaching/Training; Hospitality-Restaurants and Food Marketing and Management;

Human Services-Early Childhood Development; Human Services-Family and Community Service; and Marketing-Fashion Merchandising.

Health Science Education. The Health Science Education program has three task/competency lists for the courses of Diagnostic Services; Therapeutic Services; and Biotechnology Research and Development.

Technical/Technology Education. The Technical/Technology Education program has eight task/competency lists for the courses of Engineering and Technology; Audio and Video Technology and Film; Transportation, Distribution and Logistics; Visual Arts; Design/Pre-Construction; Manufacturing Production Process Development; and Performing Arts.

Delaware. The Delaware Department of Education's Career and Technical Education website has 44 task/competency lists posted for all five programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has six task/competency lists for the courses of Animal Science; Biotechnology; Environmental Science and Natural Resources; Food Science; Plant and Horticultural Science; Power, Structural, and Technical Systems.

Business & Marketing Education. The Business & Marketing Education program has eight task/competency lists for the courses of Business, Finance and Marketing Core; Accounting; Administrative Services; Banking; Business and Corporate Management; Business Information Technology; Marketing Communications; and Marketing Management.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has 14 task/competency lists for the courses of Wardrobe Planning; Apparel and Textiles; Advanced Apparel and Textiles; Fashion Design and Merchandising; Human Development; Child Development; Exploring Early Childhood; Early Childhood Professional; Human Development; Human Services; Family and Community Services Food Preparation and Production; Advanced Food Preparation and Production; and Culinary Professional.

Health Science Education. The Health Science Education program has 10 task/competency lists for the courses of Healthy Sexuality; Physical Activity; Project ALERT—Core Curriculum; Project ALERT—Booster; Communicating Through Feelings; Fact or Fiction: Alcohol & Tobacco; Fit for Life; Healthy Eating for Life; Making Proud Choices; and Talking Trash.

Technical/Technology Education. The Technical/Technology Education program has six task/competency lists for the courses of Architecture and Construction; Arts; AV Technology and Communication; Drafting, Design and CADD; Energy, Power, and Transportation Technologies; and Construction and Manufacturing Technologies.

Florida. The Florida Department of Education’s Career and Technical Education website has 132 task/competency lists posted for all five programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has 19 task/competency lists for the courses of Advanced Water Treatment Technologies; Agricultural Biotechnology Cluster; Agricultural Communications; Agricultural Sales and Services; Agritechnology; Animal Science and Services; Aquaculture; Agricultural Mechanics Cluster;

Environmental Horticulture Sciences and Services Cluster; Environmental Horticulture Science and Services Cluster; Environmental Studies Cluster; Food Science Applications; Floral Design & Marketing; Irrigation Operations; Natural Resources Cluster; Solid Waste Disposal Operation; Veterinary Assisting; Water Distribution Operations; and Water/Wastewater Treatment Plant Operations Cluster.

Business & Marketing Education. The Business & Marketing Education program has 12 task/competency lists for the courses of Accounting Operations; Administrative Assistant; Business Supervision and Management; Court Reporting 1; Court Reporting 2; Court Reporting 3; Customer Assistance Technology; Electronic Business Enterprise; International Business; Legal Administrative Specialist; Medical Administrative Specialist; and Promotional Enterprise.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has 13 task/competency lists for the courses of Advanced Esthetics; Barbering; Cosmetology; Dry Cleaning and Laundering; Facials Specialty; Nails Specialty; Family Dynamics; Family, Home and Consumer Technology; Life Management Skills; Parenting Skills; Career Discovery; Personal Development; and Personal Development & Career Planning.

Health Science Education. The Health Science Education program has 39 task/competency lists for the courses of Allied Health Assisting; Biomedical Sciences – PLTW; Dental Aide; Dental Laboratory Assisting; Electrocardiograph Aide; First Respond; Health Unit Coordinator; Home Health Aide; Medical Laboratory Assisting; Nursing Assistant; Nutrition and Dietetic Services; Practical Nursing; Vision Care Assisting; Basic X-Ray Machine Operator; Biomedical Technician; Central Service

Technology; Clinical Motion Capture Technician; Dental Assisting; Dental Laboratory Technology; Dietetic Management and Supervision; Electrocardiograph Technology; Electroneurodiagnostic Technology; Emergency Medical Technician – Basic; Health Unit Coordinator; Hemodialysis Technician; Home Health Aide; Massage Therapy; Medical Assisting; Medical Coder/Biller; Medical Laboratory Assisting; Medical Laboratory Technology; Medical Record Transcribing; Nursing Assistant; Optometric Assisting; Paramedic; Patient Care Assistant); Patient Care Technician; Pharmacy Technician; Phlebotomy; Psychiatric Technology; and Surgical Technology.

Technical/Technology Education. The Technical/Technology Education program has 49 task/competency lists for the courses of Applied Welding Technologies; Automation and Production Technology; Automotive Upholstery and Trim; Biomedical Equipment Technology; Biomedical Equipment Technology; Biomedical Equipment Technology; Boatbuilding - Wood and Fabricated; Boat and Yacht Repair/Refinishing; Boat and Yacht Repair/Refinishing Technology 1; Boat and Yacht Repair/Refinishing Technology 2; Clock/Watch Making & Repair; Commercial Sign Design and Fabrication; Consumer Electronic Product Servicing; Consumer Electronic Product Servicing 1; Consumer Electronic Product Servicing 2; Electrical and Instrumentation Technology; Electrical and Instrumentation Technology 1; Electrical and Instrumentation Technology 2; Electronic System Assembly; Electronic Technology; Electronic Technology 1; Electronic Technology 2; Engineering Assisting; Gaming Machine Repair Technician; Industrial Biotechnology; Industrial Cooperative Education-OJT; Industrial Education Directed Study; Industrial Machinery Maintenance and Repair; Industrial Machinery Maintenance 1; Industrial Machinery Maintenance 2; Jewelry Making and Repair;

Jewelry Making and Repair 1; Jewelry Making and Repair 2; Machining; Major Appliance and Refrigeration Repair; Major Appliance and Refrigeration Repair 1; Major Appliance and Refrigeration Repair 2; Millwright; Millwright 1; Millwright 2; Precision Metal Fabrication; Precision Metal Fabrication 1; Precision Metal Fabrication 2; Related Industrial Technology; Sheet Metal Fabrication Technology; Sheet Metal Fabrication Technology; Sheet Metal Fabrication Technology; and Upholstery and Furniture Refinishing.

Georgia. The Georgia Department of Education's Career and Technical Education website has 182 task/competency lists posted for all five programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has seven task/competency lists for the courses of Basic Agricultural Science and Technology; Animal Science Technology/Biotechnology; Plant Science and Biotechnology; Biotechnology; Forest Science; Wildlife Management; and Natural Resources Management.

Business & Marketing Education. The Business & Marketing Education program has 30 task/competency lists for the courses of Principles of Accounting I; Principles of Accounting II; Business Management; Communications for Business; Business Law Entrepreneurship; International Business; Banking; Finance; Risk Management and Insurance; Investing; Business Document Processing; Business Data Applications Business Procedures; Multimedia Presentations & Communication; Communications for Business; Introduction to Fashion Marketing; Fashion Marketing Sales and Promotion Fashion Marketing in Manufacturing and Wholesaling; Marketing Principles; Introduction to Retail Food Marketing; Principles of Food Marketing; Sales; and

Distribution; Introduction to the Hotel/Lodging and Travel/Tourism Industry; Hotel and Lodging I; Hotel and Lodging II; Travel and Tourism I; Travel and Tourism II; Marketing Principles; Advanced Marketing; Marketing via the Internet; and Marketing Research.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has 17 task/competency lists for the courses of Consumer Services I; Consumer Services II; Early Childhood Education I; Early Childhood Education II; Introduction to Family Services; Advanced Family Services; Foundations of Family and Consumer Science; Foundations of Family and Consumer Science; Introduction to Interior Design; Interior Design Fundamentals; Furniture; Accessories and Lighting; Walls, Window and Floor Covering ; Nutrition and Wellness; Advanced Nutrition and Wellness; Professional Foods I; and Professional Foods II.

Health Science Education. The Health Science Education program has 29 task/competency lists for the courses of Introduction to Dental Science Technology; Dental Science Technology I; Dental Science Technology II; Dental Science Technology Internship; First Responder; Introduction to Healthcare Science Technology Education; Applications of Healthcare Science Technology Education; Introduction to Medical Laboratory Technologies; Applications of Medical Laboratory Testing; Medical Laboratory Technology Internship; Applications of Medical Terminology in Healthcare Systems; Health Unit Coordinator; Medical Coder; Medical Information Technology Internship; Nursing Assistant; Introduction to Healthcare Science Technology Education; Applications of Healthcare Science Technology Education; Pharmacy Operations Fundamentals; Medical Calculations and Drug Administration; Pre-Pharmacy

Technology Internship; Introduction to Public Health; Advanced Public Health; Internship in Public Health; Introduction to Therapeutic Medicine; Kinesiology and Exercise Physiology in Therapeutic Medicine; Evaluation in Therapeutic Medicine; Rehabilitation in Therapeutic Medicine; and Therapeutic Medicine Internship.

Technical/Technology Education. The Technical/Technology Education program has 99 task/competency lists for the courses of Introduction to Automotive Service Technology; Foundations of Automotive Service Technology; Intermediate Automotive Service Technology; Advanced Automotive Service Technology; Automotive Service Technology Internship I; Fundamentals of Construction; Introduction to Building Carpentry I; Residential Carpentry; Construction Site Layout; Commercial Carpentry Electrical I; Electrical II; Commercial Wiring I; Commercial Wiring II; Masonry I Residential Masonry; Design Masonry; Commercial Masonry; Plumbing I; Residential Plumbing; Commercial Plumbing I; Commercial Plumbing II; Salon Services Core I 1 CU; Salon Services Core II 1 CU; 12.54700 Advanced Styling Principles .5 CU Haircutting .5 CU; Chemical Hair Processing .5 CU; Cosmetology Practicum I .5 CU Cosmetology Practicum II .5 CU; Cosmetology Practicum III .5 CU; Salon Management .5 CU; Advanced Skin & Nail Care .5 CU; Cosmetology Practicum IV .5 CU; Cosmetology Practicum V .5 CU; Cosmetology Practicum VI .5 CU; Fundamentals of Electronics; Alternating Current Circuits and Basic Computer Usage; Analog Circuits Digital Circuits; Advanced Direct Current and Alternating Current Circuits; Advanced Analog and Digital Circuits; Fundamentals of Microprocessors and Transmission Media; Introduction to Engineering Drawing; Engineering Concepts and Drawings; Solid Modeling and Design; Technical Manufacturing Concepts and Drawings; Architectural

Drawing and Design I; Architectural Drawing and Design II; Structural Detailing
Civil Engineering Drawing; Introduction to Graphic Design; Fundamentals of Graphic
Communications; Practicum A; Press Operations; Practicum B; Digital File Preparation
Practicum C; Binding & Finishing; Printing Technology Laboratory I; Printing
Technology Laboratory II; Printing Technology Laboratory III; Fundamentals of
Construction; Foundations of HVACR; HVACR Heating and Cooling Basics; Air Flow
Systems and Maintenance; HVACR Controls and Operation; Heat Pumps; Meter
Devices; and Refrigerant Handling; HVACR Servicing and Troubleshooting I
HVACR Servicing and Troubleshooting II; Introduction to Manufacturing & Engineering
Sciences; Electrical Systems I; Electrical Systems II; Mechanical & Electrical Systems I
Mechanical & Electrical Systems I; Integrating Systems; Introduction to Precision
Machining; Bench work and Drill Press; Basic Machine Tool Operations; Intermediate
Machine Tool Operations; Advanced Machine Tool Operations; Basic CNC Operations
Intermediate CNC Operations; Fundamentals of Construction; Introduction to Metals
Foundations of Sheet Metal; Parallel Line Development; Intermediate Sheet Metal Trade
Techniques; Radial Line Development; Advanced Sheet Metal Trade Techniques
Triangulation Fabrication; Sheet Metal Specialty Skills; Specialized Layout Techniques;
Fundamentals of Telecommunications; Network Concepts; Network Systems;
Fundamentals of Construction; Introduction to Metals; Arc Welding Processes I; Arc
Welding Processes II; Intermediate Arc Welding Processes I; Intermediate Arc Welding
Processes II; Advanced Arc Welding Processes I; Advanced Arc Welding Processes II
Gas Metal Arc Welding (GMAW) Specialty; Gas Tungsten Arc Welding (GTAW)
Specialty; and Arc Welding Specialty – Stainless Steel.

Hawaii. There are no task/competency lists posted on the Hawaii Department of Education's Career and Technical Education website.

Idaho. The Idaho Department of Education's website has 88 task/competency lists posted for four programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has 29 courses of Introduction to Ag Education; Introduction to the Ag Industry; Introduction to Ag Mechanics; Livestock; Introduction to the Agricultural Plant Industry; Ag Welding; Ag Power Technology; Gasoline Engines; Ag Power Technology/Large Engines; Ag Systems/Electricity & Hydraulics; Applied Crop; Landscape Design; Floral Design and Marketing; Applied Greenhouse and Nursery Management; Ag Forestry Wildlife; Personal Skills Development; Agribusiness Management and Marketing; Botany/Plant and Soil Science; Botany/Horticulture Plant Science; Botany Forestry Science; Botany Range Science; Ecology/Natural Resource Science; Zoology/Animal Science; Zoology/Science of Animal Nutrition; Zoology - Science of Animal Reproduction; Zoology/Fish and Wildlife; Aquaculture Science; Equine Crosswalk; and Agricultural Business and Economics.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has 23 task/competency lists for the courses of Exploratory Family & Consumer Sciences; Young living; Technology; Life & Careers; Teen living; Nutrition and Foods; Parenting & Child Development; Career & Personal Development; Personal & Family Finance/Economics; Adult Living; Family Health & Wellness; Teen Parenting; Food Science & Nutrition; Leadership; Entrepreneurship Experience; Early Childhood

Professions; Food Production, Management and Services; Apparel Design & Merchandising; Housing, Interiors & Furnishings; Education Assistant; Occupational & Career Experience; Cooperative Education; and Human Services.

Health Science Education. The Health Science Education program has 15 task/competency lists for the courses of Assistance With Medications for Unlicensed Assistive Personnel Course; Instructor Guide & Student Workbook; Nursing Assistants Level 1,2,3; Front Matter; Didactic Education (Emergency medical technician); Clinical (Lab / Psychomotor); Fundamentals of Dental Assisting and Expanded Functions Front Matter; Fundamentals of Dental Assisting; Functions; Nitrous Oxide; Application of Pit and Fissure Sealants; Polishing Amalgam restorations; Coronal Polishing; Temporary Crown Restorations; and Medical Assistant: Administrative and Clinical Mental Health Assistant.

Technical/Technology Education. The Technical/Technology Education program has 21 task/competency lists for the courses of Automated Manufacturing; Automotive Technology; Building Construction; Cabinet and Furniture Making; Collision Repair; Computer Aided Design (Drafting); Diesel Technology; Electronics Technology; Environmental Science; Home Technology Integration; Industrial Mechanics; Information Systems Technology; Law Enforcement; Masonry; Media Tech – Broadcasting; Commercial Graphic Designs; Media Technologies – Journalism; Commercial Photography; Precision Machining; Small Engine Repair; and Welding.

Illinois. There are no task/competency lists posted on the Illinois Department of Education's Career and Technical Education website.

Indiana. The Indiana Department of Education’s Career and Technical Education website has 118 task/competency lists posted for all five programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has 18 task/competency lists for the courses of Exploring Agricultural Science and Business; Advanced Life Science; Animals; Advanced Life Science; Foods; Advanced Life Science; Plants and Soils; Agribusiness Management; Agricultural Mechanization; Animal Science; Farm Management; Food Science; Fundamentals of Agricultural Science and Business; Horticultural Science; Landscape Management; Natural Resource Management; Plant and Soil Science; and Supervised Agricultural Experience.

Business & Marketing Education. The Business & Marketing Education program has 25 task/competency lists for the courses of Accounting I; Accounting II; Advanced Business; Business and Management Higher Level; Business and Management Standard Level; Business and Personal Law; Business and College Prep; Business Foundations; Business Management; Business Math; Computer Applications; Computer Applications Advanced; Computer Programming; Computer Science A; Advance Placement; Computer Science Higher Level; Desktop Publishing; Digital Communication Tools; Entrepreneurship; Global Economics; International Business; Marketing; Personal Finance; Technical/Business Communication; and Web Design.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has 22 task/competency lists for the courses of Middle School FACS; Adult Roles & Responsibilities; Advanced Child Development; Advanced Life Science; Foods; Advanced Foods & Nutrition; Chemistry of Foods; Child Development & Parenting;

Consumer Economics; Cooperative Occupational Family & Consumer Sciences; Culinary Arts Careers, Culinary Arts Foundations; Early Childhood Education; Education Professions; FACS Issues and Applications; Fashion & Textiles Careers; Fashion & Textiles Foundations; Housing & Interior Design Careers; Housing & Interior Design Foundations; Human Development & Family Wellness; Interpersonal Relationships; Nutrition & Wellness; Orientation to Life & Careers; and Personal Resource Management & Family Finance.

Health Science Education. The Health Science Education program has 21 task/competency lists for the courses of Anatomy and Physiology; Dental Assisting I; Dental Assisting II; Dental Assisting III; Dental Assisting IV; Health Careers I; Health Careers II; Health Careers III; Health Career Practicum; Integrated Health Sciences I; Integrated Health Sciences II; Introduction to Dental Health Careers; Introduction to Community Health Services; Introduction To Emergency Medical Services; Introduction To Health Care Specialties, Introduction to Health Care Systems; Introduction to Health Care Technology; Introduction to Medical Assisting; Introduction To Pharmacy; Introduction To Physical Therapy; and Medical Terminology.

Technical/Technology Education. The Technical/Technology Education program has 32 task/competency lists for the courses of Advanced Manufacturing; Aerospace Engineering Technology; Aircraft Operations; Appliance Technology; Automotive Collision Repair Technology; Automotive Service Technology; Aviation Maintenance Technology; Aviation Support Operations; Biotechnical Engineering; Building Facilities and Management; Building Trades Technology; Cabinet and Furniture Manufacturing; Civil-Architectural Engineering; Commercial Art and Graph Design; Commercial

Photography; Computer Integrated Manufacturing; Computer Network Technology; Computer Repair and Maintenance Technology; Digital Electronics; Technology; Drafting and Computer Aided Design; Electronics Technology; Engineering; Fire Science; Graphic Imaging Technology; Heating, Ventilation, Air Conditioning, and Refrigeration; Home Technology Integration; Industrial Repair and Maintenance; Integrated Electronic Technologies; Mobile Electronics; Plastics Technology; and Precision Machine Technology.

Iowa. The Iowa Department of Education's Career and Technical Education website has 83 task/competency lists posted for four programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education has seven task/competency lists for the courses of Agricultural Business; Supply and Service; Agricultural Production; Horticulture; Agricultural Products & Processing; Natural Resources; and Agricultural Mechanics.

Business & Marketing Education. The Business & Marketing Education program has 10 task/competency lists for the courses of Career Development; Communications; Computation; Economics; Entrepreneurship; Accounting and Finance; Information System Management; Business Administration and Management; and Marketing.

Family & Consumer Science Education. The Family & Consumer Sciences Education program has 31 task/competency lists for the courses of Housing; Interiors and Furnishings; Consumer and Family Resources; Facilities Management and Maintenance; Food Production and Services; Food Sciences; Dietetics and Nutrition; Family and Community Services; Interpersonal Relationships; Career, Community and Family

Connections; Early Childhood Education and Services; Consumer Services; Textiles and Apparel; Hospitality, Tourism and Recreation; Human Development; Family; Parenting (Middle School); Career, Community, and Family Connections; Consumer and Family Resources; Consumer Services; Early Childhood, Education, and Services; Maintenance; Family; Family and Community Services; Food Production and Services; Hospitality, Tourism, and Recreation; Housing, Interiors, and Furnishings; Human Development; Interpersonal Relationships; Nutrition and Wellness; Parenting; Textiles and Apparel; and Job Getting, Job Keeping & Entrepreneurship.

Technical/Technology Education. The Technical/Technology Education program has 33 task/competency lists for the courses of Art and Copy Preparation; Electronic Imaging; Reproduction Photography; Image Assembly/Platemaking; Basic Offset Press Bindery; Fundamental Drafting; Computer Aided Drafting; Design Drafting Applications; Safety; Preplanning; Sitework; Construction Processes; Concrete; Masonry; Metals; Woods and Plastics; Thermal and Moisture Protection; Door and Windows; Plumbing; Processes; Production; Materials; Manufacturing Enterprise; Safety; DC Circuits; AC Circuits; Analog Circuits; Discrete Solid State Devices; Digital Circuits; Microcomputers; Microprocessors; Structural Analysis and Damage Repair; Mechanical and Electrical Components; and Engine.

Kansas. The Kansas Department of Education's Career and Technical Education website has 31 task/competency lists posted for four programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has 16 task/competency lists for the courses of Introduction to Agriculture; Agriscience; Agriculture, Food & Natural

Resources Internship; Agribusiness; Ag Mechanics; Adv. Ag Mechanics; Ag Structures and Electricity; Ag Welding or Ag Welding I; Advanced Ag Welding or Ag Welding II; Ag Welding III; Ag Fabrication; Ag Power; Ag Metals; Ag Plastics; Energy Resources in Agriculture; and Exploratory Agriculture.

Business & Marketing Education. The Business & Marketing Education program has eight task/competency lists for the courses of Graphic Design; Database Applications; Webpage Design; Computer Graphics; Graphic Design; Business Communications; Advanced Accounting; and Sports & Entertainment Marketing.

Family & Consumer Science Education. The Family & Consumer Sciences Education program has four task/competency lists for the courses of Culinary Arts & Hospitality; Early Childhood Education; Fashion and Interiors; and Work & Family Studies.

Health Science Education. The Health Science Education program has three task/competency lists for the courses of Human Structure and Function; Disease and Disorders; and Medical Mathematics.

Kentucky. The Kentucky Department of Education's Career and Technical Education website has 68 task/competency lists posted for all five programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has six task/competency lists for the courses of Agri-Biology; Agriscience; Horticulture; Agribusiness Management; and Environmental Resources.

Business & Marketing Education. The Business & Marketing Education program has six task/competency lists for the courses of Business and Marketing Career Exploration;

Computer and Technology Concepts; Administrative Support Services; Accounting; Business Management; and Agribusiness.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has 17 task/competency lists for the courses of Life Skills Health; Money Skills for Math; Nutritional Food Science; Introductory Life Skills; Career Choices; Advanced Child/Human Development; Advanced Food & Nutrition; Child/Human Development; Child Development Services I & II; Culinary I & II; Fashion & Interior Design I & II; Foods & Nutrition Leadership Dynamics; Parenting; Principles of Hospitality; Services in Hospitality; Principles of Teaching; and Relationships.

Health Science Education. The Health Science Education program has nine task/competency lists for the courses of Medical Science; Health and Wellness; Health Science Introduction; Emergency Procedures; Medical Math; Medical Terminology; Healthcare Fundamentals; Advanced HCS/Practicum; and Medical Nurse Aide.

Technical/Technology Education. The Technical/Technology Education program has 30 task/competency lists for the courses of Air Conditioning Technology; Automotive Technology; Aviation Technology; Collision Repair and Refinish Technology; Communications; Electronics; Computer Aided Drafting; Computer Systems Technology; Commercial and Recreational Small Engine Technology; Desktop Publishing; Diesel Technology; Electrical Residential/Commercial Technology; Industrial Systems Maintenance; Industrial Automation Technology; Industrial Chemical Technology; Industrial Electronics Technology; Machine Tool Technology; Major Appliance Technology; Masonry; Metal Fabrication; Multimedia Technology; Plastics Technology; Plumbing Technology; Printing Technology; Residential/Commercial

Electricity; Residential/Commercial Carpentry; Telemedia Technology; Visual Communication Art Technology; Welding; and Wood Products Manufacturing.

Louisiana. The Louisiana Department of Education's Career and Technical Education website has 91 task/competency lists posted for all five programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has 19 task/competency lists for the courses of Agriscience II; Agriscience III; Agriscience Construction Technology; Agriscience Leadership; Agriscience Power Equipment; Animal Science; Biotechnology in Agriscience; Canine Care and Training; Cooperative Agriscience Education I; Cooperative Agriscience Education II; Environmental Studies in Agriscience; Equine Science; Floristry; Forestry; Horticulture; Landscape Design, Construction and Maintenance; Precision Instrumentation in Agriscience; Small Animal Care and Management; and Veterinary Assistant.

Business & Marketing Education. The Business & Marketing Education program has 20 task/competency lists for the courses of Accounting I; Accounting II; Administrative Support Occupations; Business Communications; Business Computer Applications; Business Law; Computer Multimedia Presentations; Computer Technology Literacy; Cooperative Office Education; Desktop Publishing; Economics; Entrepreneurship; Introduction to Business Computer Applications; Keyboarding; Keyboarding Applications; Principles of Business; Telecommunications; Web Design; Web Design II; and Word Processing.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has 21 task/competency lists for the courses of Adult Responsibilities;

Advanced Child Development; Advanced Clothing and Textiles; Advanced Nutrition & Food; Child Development; Clothing and Textiles Occ I; Clothing and Textiles Occ II; Clothing and Textiles; Early Childhood Education I; Early Childhood Education II; FACS Elective I AND II; Family Life Education; Food Science; Food Service I; Food Service II; Food Service Technician; Housing and Interior Design; Nutrition and Food; Parenthood Education; Personal and Family Finance; and Housing and Interior Design Occupations.

Health Science Education. The Health Science Education program has 21 task/competency lists for the courses of Allied Health Services I; Allied Health Services II; Cooperative Health Occupations; Dental Assistant I; Dental Assistant II; Emergency Medical Technician- Basic; First Responder; Health Science I; Health Science II; Introduction to Emergency Medical Technology; Introduction to Health Occupations; Introduction to Pharmacy Assistant; Medical Assistant I; Medical Assistant II; Medical Assistant III; Medical Terminology; Nurse Assistant; Pharmacy Technician; Sports Medicine I; Sports Medicine II; and Sports Medicine III.

Technical/Technology Education. The Technical/Technology Education program has 10 task/competency lists for the courses of Automotive Technology; Carpentry; Drafting; Electricity Trades; Welding; Computer Service Technology I; Computer Service Technology II; Networking Basics; Word; and Routers and Routing Basics I.

Maine. The Maine Department of Education's Career and Technical Education website has 34 task/competency lists posted for all five programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has three task/competency lists for the courses of Horticulture; Forestry; and Natural Resources.

Business & Marketing Education. The Business & Marketing Education program has 16 task/competency lists for the courses of Information Processing; Information Management; Electronics Communications; Administrative Support Foundations; Sale; Security and Risk Management; Merchandising; Promotion; Marketing; Pricing; Purchasing; Office Financial; Human Resource Foundations; Production; Business Planning; and Financial Planning.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has three task/competency lists for the courses of Culinary Arts; Early Childhood; and Hospitality.

Health Science Education. Health Science Education program has five task/competency lists for the courses of Safety Practices; Medical Ethics & Legal Responsibilities; Health Care Systems; Health Care Concepts; and Health Care Basic Skills.

Technical/Technology Education. The Technical/Technology Education program has seven task/competency lists for the courses of Automobile Collision; Automobile Technology; Drafting; Electric; Machine Tool; Plumbing and Heating; and Small Engine.

Maryland. There are no task/competency lists posted on the Maryland Department of Education's Career and Technical Education website.

Massachusetts. The Massachusetts Department of Education's Career and Technical Education website has 23 task/competency lists posted for all five programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has four task/competency lists for the courses of Agricultural Mechanics; Environmental Science and Technology; Horticulture; and Animal Science.

Business & Marketing Education. The Business & Marketing Education program has three task/competency lists for the courses of Fashion Technology; Marketing; and Office Technology.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has three task/competency lists for the courses of Cosmetology; Culinary Arts; and Hospitality Management.

Health Science Education. The Health Science Education program has three task/competency lists for the courses of Dental Assisting; Health Assisting; and Medical Assisting.

Technical/Technology Education. The Technical/Technology Education program has 10 task/competency lists for the courses of Carpentry; Cabinetmaking; Construction Craft Laborer; Electricity; Facilities Management; Heating, Ventilation, Air Conditioning, Refrigeration; Mason and Tile Setting; Painting and Design Technologies; Plumbing; and Sheet Metalworking.

Michigan. There are no task/competency lists posted on the Michigan Department of Education's Career and Technical Education website.

Minnesota. The Minnesota Department of Education's Career and Technical Education website has 30 task/competency lists posted for all five programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has five task/competency lists for the courses of Agricultural Agribusiness Exploration; Agricultural Business System Management; Global Agriculture Issues; Agricultural Mechanical Systems; and Agricultural Science Systems Management.

Business & Marketing Education. The Business & Marketing Education program has six task/competency lists for the courses of Accounting; Accounting Process; Contract Law; Law of Sales and Consumer Law; Agency and Employment; and Business Organization.

Family & Consumer Science Education. The Family & Consumer Sciences Education has nine task/competency lists for the courses of Family Systems; Lifelong Human Development; Parenting; Career Exploration/Investigation; Consumerism; Nutrition, Wellness, & Food Preparation; Community Service/Service Learning; Housing/Interior Design; and Textiles, Design & Apparel.

Health Science Education. The Health Science Education program has five task/competency lists for the courses of Health Care Systems and Issues; Medical Communications; Ethics and Legal Responsibilities in Healthcare; Medical/Health Career Exploration and Investigation; and Safety and Infection Control Practices.

Technical/Technology Education. The Technical/Technology Education program has five task/competency lists for the courses of Transportation; Manufacturing; Energy and Power; Information and Communication; and Construction.

Mississippi. The Mississippi Department of Education's Career and Technical Education website has 48 task/competency lists posted for all five programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has 12 task/competency lists for the courses of Agricultural and Environmental Science and Technology; Agriculture and Natural Resources; Agriculture Business and Management; Agriculture Power and Machinery; Agriculture Production; Agriscience; Aquaculture Technology; Custodian Caretaker Services; Food Products (Meats); Forestry; Horticulture; and Introduction to Agriscience.

Business & Marketing Education. The Business & Marketing Education program has six task/competency lists for the courses of Business and Computer Technology; Computer Programming Technology; Computer Systems Technology; Cooperative Education; Hotel Restaurant and Tourism Management; and Marketing Management Technology.

Family & Consumer Science Education. The Family & Consumer Sciences Education program has five task/competency lists for the courses of Culinary and Related Foods Technology; Design Technology for Fashion and Interiors; Early Childhood Services and Education; Family and Consumer Sciences; and Life Connections.

Health Science Education. The Health Science Education program has two task/competency lists for the courses of Aging Services and Allied Health.

Technical/Technology Education. The Technical/Technology Education program has 23 task/competency lists for the courses of Audio and Television Broadcasting; Automotive Collision Repair Technology; Automotive Service Technology; Basic Electronics; Building Trades; Computer Graphics; Cosmetology; Diesel Service Technology; Electrician; Furniture Manufacturing and Upholstering; General Drafting; Graphics and Print Communications; Heating and Air Conditioning; Industrial Maintenance Trades; Machine Tool Operation; Masonry; Metal Trades; Outboard Marine Engine Mechanics;

Plastics and Polymer Science Applications; Residential Carpentry; Small Engine Repair; Vehicle and Mobile Equipment Technician; and Welding Theory and Applications.

Missouri. The Missouri Department of Education’s Career and Technical Education website has 12 task/competency lists posted for two programs. Following are the courses with task/competency lists posted on the website:

Business & Marketing Education. The Business & Marketing Education program has three task/competency lists for the courses of Accounting I; Maintain Cash Control; and Accounting II.

Technical/Technology Education. The Technical/Technology Education program has nine task/competency lists for the courses of Introduction to Automotive Technology; Engine Repair; Automatic Transmission and Transaxle; Manual Drive Train and Axles; Steering and Suspension; Brakes; Electronic Systems; Heating and Air Conditioning; and Engine Performance.

Montana. There are no task/competency lists posted on the Montana Department of Education’s Career and Technical Education website.

Nebraska. There are no task/competency lists posted on the Nebraska Department of Education’s Career and Technical Education website.

Nevada. The Nevada Department of Education’s Career and Technical Education website has 29 task/competency lists posted for four programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has 10 task/competency lists for the courses of Agriculture Science; Agriculture & Natural Resource Education; Agriculture Business Systems; Agriculture Leadership; Communications & Policy;

Agriculture Mechanical Engineering Technology; Animal Science/Veterinary Medicine; Natural Resources & Wildlife Management; Plant Science and Environmental; and Horticulture.

Business & Marketing Education. The Business & Marketing Education program has three task/competency lists for the courses of Business Education Standards; Hospitality & Tourism; and Marketing Education.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has six task/competency lists for the courses of Culinary Arts; Early Childhood Education; Family and Consumer Sciences; Fashion, Textiles and Design; Foods and Nutrition; and Housing and Interior Design.

Technical/Technology Education. The Technical/Technology Education program has 10 task/competency lists for the courses of Automotive Technology; Collision Repair Technology; Computer-Aided Drafting & Design; Digital Video and Broadcast Production; Furniture and Cabinetmaking; Heating, Ventilation, Air Conditioning, and Refrigeration; Metalworking Skill Standards; Photography; Residential Building Construction; and Welding Skills Standards.

New Hampshire. The New Hampshire Department of Education's Career and Technical Education website has 23 task/competency lists posted for three programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has one task/competency list for the course of Agricultural Business and Management.

Business & Marketing Education. The Business & Marketing Education program has 12 task/competency lists for the courses of Marketing; Sales, and Services; Marketing; Sales,

and Services: e-marketing; Marketing e-commerce; Marketing I; Marketing II; Economics; Business; Management and Entrepreneurship; Financing; Marketing Information Management; Product Service Management; Promotion; and Selling.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has 10 task/competency lists for the courses of Adult Roles & Responsibilities; Child and/or Human Growth and Development Courses; Personal and Family Finance; Food and Nutrition; Cosmetology; Culinary Arts; Early Childhood Education; Teacher Education (Future Educators); Lodging Management; and Travel and Tourism Services.

New Jersey. There are no task/competency lists posted on the New Jersey Department of Education's Career and Technical Education website.

New Mexico. There are no task/competency lists posted on the New Mexico Department of Education's Career and Technical Education website.

New York. The New York Department of Education's Career and Technical Education website has 21 task/competency lists posted only for one program. Following are the courses with task/competency lists posted on the website:

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has 21 task/competency lists for the courses of Life Studies Core; Food and Nutrition Core; Clothing and Textiles Core; Housing and Environment Core; Child Development and Psychology Parenting; Early Childhood Education; Adolescent Psychology; Gerontology; Careers in Human Services; Food Science; Food Preparation and Nutrition; Nutrition, Health, and Fitness; Culture and Foods; Gourmet Foods; Commercial Food Program; World of Fashion; Interior Design; Home Furnishings; Clothing Production; Independent Living; and Entrepreneurship.

North Carolina. The North Carolina Department of Education's Career and Technical Education website has 118 task/competency lists posted for all five programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has 15 task/competency lists for the courses of Agriculture Mechanics I; Agriculture Mechanics II; Agriculture Mechanics II-Small Engines; Agricultural Production I & II; Agriscience Applications; Animal Science I & II; Animal Science II-Small Animal; Biotechnology and Agriscience Research I; Biotechnology and Agriscience Research II; Environmental and Natural Resources II; Equine Science I & II; Exploring Biotechnology; Horticulture I & II; Horticulture II- Landscaping; and Horticulture II-Turf Grass.

Business & Marketing Education. The Business & Marketing Education program has 34 task/competency lists for the courses of Business Advanced Studies; Business and Electronic Communications; Business Computer Technology; Business Law; Business Management and Applications; Computerized Accounting I; Computerized Accounting II; Computer Applications I; Computer Applications II; Computer Programming I; Computer Programming II; Digital Communications Systems; e-Commerce I; e-Commerce II; Exploring Business Technologies; Foundations of Information Technology; Keyboarding; Networking I; Network Administration II-Linux; Novell; Microsoft; Principles of Business and Personal Finance; Small Business/Entrepreneurship; Exploring Business Technologies; Fashion Merchandising; Marketing; Marketing Advanced Studies; Marketing Management; Marketing Technology and Media; Principles of Business and Personal Finance; Small Business Entrepreneurship;

Sports and Entertainment Marketing I & II; Strategic Marketing; and Travel; Tourism; and Recreation Marketing.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has 17 task/competency lists for the course of Apparel Development I; Apparel Development II; Culinary Arts and Hospitality I; Culinary Arts and Hospitality II; Early Childhood Education I; Early Childhood Education II; Exploring Life Skills; Family and Consumer Sciences; and Advanced Studies; Foods I-Fundamentals; Foods II-Advanced; Foods II-Food Technology; Housing and Interiors I; Housing and Interiors II; Life Management; Financial Education (LIFE) (Transitional Pilot); Parenting and Child Development; and Teen Living.

Health Science Education. The Health Science Education program has eight task/competency lists for the courses of Allied Health Sciences I; Allied Health Sciences II; Biomedical Technology; Exploring Biotechnology; Health Science Advanced Studies; Health Team Relations. Medical Sciences I; and Medical Sciences II.

Technical/Technology Education. The Technical/Technology Education program has 44 task/competency lists for the Automotive Service Technology I; Automotive Service Technology II; Automotive Service Technology III; Collision Repair Technology I; Collision Repair Technology II; Computer Engineering Technology I; Computer Engineering Technology II; Carpentry I; Carpentry II; Carpentry III; Cosmetology I; Cosmetology II; Digital Media I; Digital Media II; Drafting I; Drafting II – Architectural; Drafting II – Engineering; Drafting III – Architectural; Drafting III – Engineering; Electrical Trades I; Electrical Trades II; Electronics I; Electronics II; Furniture and Cabinetmaking I; Furniture and Cabinetmaking II; Introduction to Trade and Industrial

Education (ITIE); Masonry I; Masonry II; Masonry III; Metals Manufacturing; Technology I; Metals Manufacturing Technology II; Networking I; Network Engineering Technology II; Network Engineering Technology III; Printing Graphics I; Printing Graphics II; Scientific and Technical Visualization I; Scientific and Technical Visualization II; Trade and Industrial Advanced Studies; Trade and Industrial Cooperative Training I; Trade and Industrial Cooperative Training II; Welding Technology I; and Welding Technology II.

North Dakota. The North Dakota Department of Education’s Career and Technical Education website has 51 task/competency lists posted for all five programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has seven task/competency lists for the courses of Agricultural Processing; Agricultural Business Management; Agriculture Sales and Service; Agriscience; Botany/Horticulture; Foundations of Agriculture; and Introduction to Agriculture.

Business & Marketing Education. The Business & Marketing Education program has seven task/competency lists for the courses of Distribution; Marketing Information Management; Pricing; Product/Service Management; Promotion; Selling, and Business Administration.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has 14 task/competency lists for the courses of Career, Community, and Family Connections; Consumer and Family Resources; Family; Food; Housing, Interiors, and Furnishing; Human Development; Interpersonal Relationships; Nutrition and Wellness;

Parenting; Textiles and Apparel; Early Childhood Education, and Service; Food Production and Services.

Health Science Education. The Health Science Education program has 16 task/competency lists for the courses of Administrative Services; Dental Facility; Dietary Services; Geriatric Care; Medical Laboratory; Medical Records; Mental Health Aide; Nursing (Medical); Pharmacy; Physical Therapy; Radiology; Respiratory Therapy; Sports Medicine; Veterinary Assisting; Vision Services; and Ward Clerk.

Technical/Technology Education. The Technical/Technology Education program has seven task/competency lists for the courses of Drafting; Welding; Construction; Graphic Arts; Automotive Manufacturing; Automotive Collision; and Automotive Technology.

Ohio. The Ohio Department of Education's Career and Technical Education website has 28 task/competency lists for two programs. Following are the courses with task/competency lists posted on the website:

Business & Marketing Education. The Business & Marketing Education program has 18 task/competency lists for the courses of Management; Entrepreneurship; Marketing; Customer Relationship Management; Business Law; Risk Management; Communication Skills; Emotional Intelligence; Professional Development; Money and Personal Finance; Economics; Accounting; Financial Management; Technology; Information Management; Knowledge Management; Operations Management; Project Management; and Human Resources Management.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has 10 task/competency lists for the courses of Career Search I; Career Search II with Merchandising; Child Development; Foods and Healthy Living; Healthy and Safe

Foods; Life and Relationships; Consumer and Financial Literacy; Manage Transitions; Financial Management I; and Financial Management II.

Oklahoma. There are no task/competency lists posted on the Oklahoma Department of Education's Career and Technical Education website.

Oregon. The Oregon Department of Education's Career and Technical Education website has 69 task/competency lists posted for all five programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has 18 task/competency lists for the courses of Agribusiness; Animal Science Systems; Plant Sciences and Horticulture; Power, Structure and Technology; Energy Management; Environmental Administration and Planning; Hazardous Material Management; Waste Water; Water Quality; Marketing; Processing and Handling; Quality Control; Nutrition and Research; Aquatic and Marine Management; Fish and Wildlife Resources; Forestry and Forest Products; Geology and Mineral Industries; and Recreation and Cultural Resources.

Business & Marketing Education. The Business & Marketing Education program has 19 task/competency lists for the courses of Communication and Advertising Technology; Information Management; Network Administration and Support; Administrative and Information Support; Business Analysis; Business Financial Management and Accounting; Human Resources; Management; Marketing and Communications; Banking and Related Services; Financial and Investment Planning; Insurance Services; Buying and Merchandising; Distribution and Logistics; E-marketing; Management and Entrepreneurship; Marketing Communications and Promotion; Marketing Information Management and Research; and Professional Sales and Marketing.

Family & Consumer Services Education. The Family & Consumer Services Education program has five task/competency lists for the courses of Consumer Services; Counseling; Early Childhood Development and Services; Family and Community Services; and Personal Care Services.

Health Science Education. The Health Science Education program has six task/competency lists for the courses of Health Administration and Support Services; Health Diagnostic Services; Health Informatics; Health Promotion and Wellness; Health Research and Biosciences; and Health Therapeutic Services.

Technical/Technology Education. The Technical/Technology Education program has 21 task/competency lists for the courses of Automotive Service Technology; Collision Repair and Refinishing; Heavy Equipment Service Technology; Carpentry; Construction Crafts; Construction Management; Design/Pre-Construction; Low-Voltage Electrical; Maintenance/Operations; Masonry; Plumbing; Residential Electrical; Logistic and Inventory Control; Machining and Metalforming; Maintenance, Installation, and Repair; Manufacturing Production Process Development; Mechanical CAD/Drafting; Production; Quality Assurance; Secondary Wood Products; and Welding.

Pennsylvania. The Pennsylvania Department of Education's Career and Technical Education website has 24 task/competency lists posted for three programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has 10 task/competency lists for the courses of Agriculture General; Agribusiness; Agriculture Mechanization; Agriculture Production; Agriculture Food Processing; Horticulture; Forestry Technology

and Production; Agriculture Operations and Related Sciences; Natural Resources; and Biotechnology.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has six task/competency lists for the courses of Institutional Food Worker; Financial and Resource Management; Balancing Family; Work and Community Responsibility; Food Science and Nutrition; and Child Development.

Technical/Technology Education. The Technical/Technology Education program has eight task/competency lists for the courses of Building/Property Maintenance; Cabinetmaking and Millwork; Construction Trades; Masonry; Medium/Heavy Vehicle & Truck Technology/Technician; Plumbing Technology; Vehicle Maintenance Technology; and Computer Technology.

Rhode Island. There are no task/competency lists posted on the Rhode Island Department of Education's Career and Technical Education website.

South Carolina. The South Carolina Department of Education's Career and Technical Education website has 42 task/competency lists posted three programs. Following are the courses with task/competency lists posted on the website:

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has 26 task/competency lists for the courses of Introduction to Early Childhood Education; Early Childhood Education 1; Early Childhood Education 2 ; Child Development 1 ; Child Development 2 ; Introduction to Teaching 1; Introduction to Teaching 2; Introduction to Culinary Arts; Culinary Arts 1; Culinary Arts 2; Introduction to Hospitality Management and Operations; Hospitality Management and Operations 1; Hospitality Management and Operations 2; Cosmetology 1, 2, 3, and 4; Nail Technology

1, 2, 3, and 4; Fashion, Fabric, and Design 1; Fashion, Fabric, and Design 2; Family and Consumer Sciences 1, and 2; Financial Fitness 1; Family Life Education 1 and 2; Food Science and Dietetics 1 and 2; Foods and Nutrition 1 and 2; Housing and Interiors 1 and 2; Human Development: Responsible Life Choices 1 and 2; Parenting Education 1 and 2; and Sports Nutrition 1 and 2.

Health Science Education. The Health Science Education program has eight task/competency lists for the courses of Emergency Medical Services 1-4; Gerontology; Health Science 1 and 2; Health Science Work-Based; Introduction to Health Science; Medical Terminology; Pharmacy Technology; and Practical Nursing.

Technical/Technology Education. The Technical/Technology Education program has eight task/competency lists for the courses of Communication Electronics 1 and 2; Core Electronics 1, 2, 3, and 4; Industrial Electronics 1 and 2; Introduction to Manufacturing Technology; Machine Technology 1, 2, 3, and 4; Mechatronics Integrated Technologies (MIT) 1, 2, 3, and 4; Metal Fabrication 1, 2, 3, and 4; and Welding Technology 1, 2, 3, and 4.

South Dakota. There are no task/competency lists posted on the South Dakota Department of Education's Career and Technical Education website.

Tennessee. The Tennessee Department of Education's Career and Technical Education website has 135 task/competency lists posted for all five programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has 22 task/competency lists for the courses of Agriscience; Fundamentals of Agriculture; Advanced Business/Economics; Agriculture Mechanics & Maintenance; Agricultural Power &

Equipment; Principles of Agricultural Engineering; Small Animal Care; Horse Science; Livestock Management; Principles of Veterinary Science; Fundamental of Greenhouse Management; Nursery Production; Floral Design; Turfgrass Management; Aquaculture; Hydroponics; Exterior/Interior Landscaping; Horticulture Technology; Forestry; Wildlife Management; Soil & Land Management; and Crop Science.

Business & Marketing Education. The Business & Marketing Education program has 31 task/competency lists for the courses of Accounting I; Accounting II; Administrative Management; American Business Legal Systems; Banking & Finance; Business Economics; Business Management; Career Connections; Computer Applications; Computer Literacy; Computer Operating Systems & Hardware; Database Design/Management; Desktop Publishing; eBusiness Communications; Financial Planning; Information Technology Foundations; Integrated Input Technologies; Interactive Multimedia Presentation; International Business & Marketing; JAVA Programming; Keyboarding; Keyboarding/Document Formatting; Keyboarding/Document Layout and Design; Networking Essentials; Personal Finance; Spreadsheet Applications; Web Page Design — eCommerce; Web Site — Foundations; Web Page Design —Site Designer; Virtual Enterprise International; Web Design Applications; and Web Design Essentials;

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has 17 task/competency lists for the courses of Life Connections; Fashion Design & Merchandising; Child & Lifespan Development; Consumer Economics; Family & Consumer Sciences; Family & Parenting; Interior Design; Housing; Nutrition and Foods; Nutrition Science; Teen Living; Textiles & Apparel; Personal Finance; Personal;

Academic and Career Excellence; Teaching as a Profession; Culinary Arts I, II, III; Early and Childhood Education I, II, III.

Health Science Education. The Health Science Education program has 12 task/competency lists for the courses of Anatomy and Physiology; Biomedical Applications; Clinical Internship; Diagnostic Medicine; Emergency Medical Services; Forensic Services; Health Informatics; Health Science Education; Medical Therapeutics; Nursing Education; Rehabilitative Therapy; and Support Services.

Technical/Technology Education. The Technical/Technology Education program has 53 task/competency lists for the courses of Advanced Computer Aided Drafting; Advanced Welding Applications; Automotive: Brake Systems; Automotive: Electrical/Electronic Systems; Automotive: Engine Performance; Automotive: Suspension & Steering; Aviation Maintenance I; Aviation Maintenance II; Basic Principles of Welding; Cabling Technology; Carpentry I; Carpentry II; Career Management Success; Chemistry of Cosmetology; Collision Repair: Non-Structural; Collision Repair: Painting & Refinishing; Collision Repair: Structural; Computer Aided Drafting I; Computer Operating Systems & Hardware; Concrete I; Concrete II; Construction Core; Digital Design & Imaging; Digital Electronics; Electrical I; Electrical II; Electronic Media Management & Operations; Electronic Media Production; Foundations of Hospitality & Tourism; Graphic Communications I; Graphic Communications II; Heating, Ventilation, Air Conditioning & Refrigeration (HVAC) I ; Heating, Ventilation, Air Conditioning & Refrigeration (HVAC) II; Information Technology Foundations; Introduction to Aerospace; Leisure Craft/Small Engine Technology: Engine Performance; Craft/Small Engine Technology Systems; Manufacturing Applications; Masonry I; Masonry II;

Media Concepts; Networking; Plumbing I; Plumbing II; Principles of Cosmetology; Principles of Engineering; Principles of Machining & Manufacturing; Principles of Manufacturing; Programming & Logic; Theory of Flight; Transportation Core; Diesel: Engine; Diesel: Preventive Maintenance; and Diesel: Suspension & Steering.

Texas. There are no task/competency lists posted on the Texas Department of Education's Career and Technical Education website.

Utah. There are no task/competency lists posted on the Utah Department of Education's Career and Technical Education website.

Vermont. The Vermont Department of Education's Career and Technical Education website has 45 task/competency lists posted for all five programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has five task/competency lists for the courses of Agricultural Mechanics, Diversified Agriculture, Environmental Science and Technology, Forestry/Natural Resources, and Horticulture.

Business & Marketing Education. The Business & Marketing Education program has eight task/competency lists for the courses of Business Administration Information Support, Business Financial Support Occupations, Business Management, Communications Technology, Marketing, Pre-Tech Foundations in Business and Marketing (Entrepreneurship), Pre-Tech Foundations in Business Management and Administration, and Hotel Management.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has five task/competency lists for the courses of Culinary Arts, Culinary Management, Cosmetology, Family and Community Services, and Human Services;

Health Science Education. The Health Science Education program has five task/competency lists for the courses of Allied Health Services, Dental Assistant, Medical Records, Ophthalmic Medical Assistant, and Pre-Tech Foundations in Health.

Technical/Technology Education. The Technical/Technology Education program has 22 task/competency lists for the courses of Animation and Web Design, Auto Body Repair, Automotive Technology, Aviation Technology, Communications Technology, Computer Installation and Repair, Computer Network Management, Computer Programming, Construction Trades, Diesel/Truck Mechanic, Drafting and Design, Electrical/Electronics Occupations, Engineering Technician, Heating, Ventilation & Air Conditioning, Heavy Equipment, Industrial Maintenance, Industrial Mechanics, Precision Machining Technology, Pre-Tech Foundations in Architecture, Video Production, Web/Multimedia Management, Welding/Metal Fabrication, and Woodworking.

Virginia. The Virginia Department of Education's Career and Technical Education website has 284 task/competency lists posted for all five programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has 62 task/competency lists for the courses of Agricultural Business Fundamentals III; Agricultural Business Management V; Agricultural Business Operations IV; Agricultural Education for Students with Disabilities; Agricultural Education for the Disadvantaged; Agricultural Fabrication and Emerging Technologies; Agricultural Mechanics and Basic Animal Science; Agricultural Mechanics and Basic Plant Science; Agricultural Power Systems; Advanced; Agricultural Power Systems; Agricultural Production Management IV; Agricultural Production Technology III; Agricultural Structural Systems; Agriscience

Exploration; Agriscience and Technology; Applied Agricultural Concepts; Applied Agricultural Concepts; Aquaculture Infusion Units; Biological Applications in Agriculture; Biotechnology Applications in Agriculture; Biotechnology Foundations; Continuing Education in Agriculture in Virginia; Ecology and Environmental Management; Ecology and Environmental Management; Economics and Personal Finance (Formerly 6120 Finance); Entrepreneurship Education (formerly Exploring Entrepreneurship); Entrepreneurship Education; Advanced (formerly Entrepreneurship Education); Equine Management Production; Equine Management Production; Farm Equipment Operator; Finance; Fisheries and Wildlife Management; Floral Design I; Floral Design II; Floriculture; Forestry Guide for Agricultural Education in Virginia; Forestry Management (formerly Forestry, Wildlife, and Soil Management IV); Forestry Management; Advanced (formerly Natural Resources Business Management V); General Mechanics for the Disadvantaged; Greenhouse Plant Production and Management; Horticulture Sciences; Introduction to Agriscience; Introduction to Leadership; Introduction to Natural Resources and Ecology Systems; Introduction to Power, Structural and Technical Systems; Land Use and Conservation Management; Landscaping II; Landscaping; Leadership Development; Operating the Farm Business V; Outdoor Recreation, Parks, and Tourism Systems Management; Small Animal Care I; Small Animal Care I; Small Animal Care II; Small Engine Repair; Small Engine Repair; Specialty Horticulture Arts; Turf Grass Applications, Advanced; Turf Grass Establishment and Maintenance; Urban Forestry; and Veterinary Science.

Business & Marketing Education. The Business & Marketing Education program has 51 task/competency lists for the courses of Accounting; Advanced Accounting; Business

Individualized Program; Business Law; Business Law; Business Management; Business Management; Computer Applications; Computer Applications; Computer Information Systems; Advanced Computer Information Systems, Computer Network Software Operations; Advanced, Computer Network Software Operations; Computer Solutions; Database Design and Management (Oracle), Advanced; Database Design and Management (Oracle); Database Design and Management with PL/SQL (Oracle); Design, Multimedia, and Web Technologies; Advanced, Design, Multimedia, and Web Technologies; Digital Input Technologies; Economics and Personal Finance (Formerly 6120 Finance); Entrepreneurship Education (formerly Exploring Entrepreneurship); Entrepreneurship Education; Advanced (formerly Entrepreneurship Education); Finance; Information Technology (IT) Fundamentals; International Baccalaureate Information Technology in a Global Society; International Baccalaureate for Business and Management; Introduction to Leadership; Keyboarding (Middle School); Keyboarding (Middle School); Keyboarding (Secondary); Keyboarding Applications; Leadership Development; Leadership Development; Legal Systems Administration; Legal Systems Administration; Make It Your Business; Medical Systems Administration; Medical Systems Administration; Notetaking; Office Administration; Office Specialist I (Targeted Populations); Office Specialist II (Targeted Populations); Office Specialist III (Targeted Populations); Principles of Business and Marketing; Principles of Business and Marketing; Programming; Advanced Programming; Virginia Teachers for Tomorrow; and Word Processing.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has 30 task/competency lists for the courses of Culinary Arts I, II, III; Early

Childhood Education Planning Folder; Early Childhood, Education, and Services I, II; Economics and Personal Finance (Formerly 6120 Finance); Family Relations; Family and Consumer Sciences Exploratory I, II, III; Family and Human Services I; Family and Human Services II; Fashion Design I; Fashion Design II; Finance; GRADS (Graduation, Reality, And Dual-Role Skills): Family Focus; Hospitality, Tourism, and Recreation I; Hospitality, Tourism, and Recreation II; Independent Living (formerly Resource Management); Individual Development; Interior Design I; Interior Design II; Introduction to Culinary Arts; Introduction to Early Childhood, Education, and Services; Introduction to Family and Human Services; Introduction to Fashion Design and Marketing; Introduction to Hospitality, Tourism, and Recreation; Introduction to Interior Design; Introduction to Leadership; Leadership Development; Life Planning, Nutrition and Wellness; Parenting, and Work and Family Management.

Health Science Education. The Health Science Education program has 36 task/competency lists for the courses of Biomedical Technician; Biotechnology Foundations; Dental Assistant I; Dental Assistant II; Emergency Medical Technician I; Emergency Medical Technician II; Emergency Medical Technician III; Health Assistant I; Health Assistant II (Psychiatric Aide); Health and Medical Sciences Exploratory; Home Health Aide; Introduction to Health and Medical Sciences; Introduction to Leadership; Leadership Development; Leadership Development; Medical Assistant I; Medical Assistant II; Medical Laboratory Technology; Medical Terminology; Nurse Aide I; Nurse Aide II; Pharmacy Technician I; Pharmacy Technician II; Physical/Occupational Therapy; Practical Nursing I; Practical Nursing II; Practical Nursing III; Radiologic Technology I; Radiologic Technology II; Sports Medicine I;

Sports Medicine II; Surgical Technologist I; Surgical Technologist II; Veterinary Assistant I; Veterinary Assistant II; and Veterinary Assistant III.

Technical/Technology Education. The Technical/Technology Education program has 105 task/competency lists for the courses of Advertising Design I; Advertising Design II; Aircraft Pilot Training I; Aircraft Pilot Training II; Auto Body Repair I--Collision and Repair (Non-Certified); Auto Body Repair II--Painting and Refinishing (Non-Certified); Auto Body Repair III Collision and Repair and Painting and Refinishing (Non-Certified); Auto Body Technology I--Collision and Repair (Certified); Auto Body Technology II--Painting and Refinishing (Certified); Auto Body Technology III--Collision and Repair and Painting and Refinishing (Certified); Automotive Maintenance (Non-Certified); Automotive Servicing I (Non-Certified); Automotive Servicing II (Non-Certified); Automotive Servicing III (Non-Certified); Automotive Technology I (Certified); Automotive Technology II (Certified); Automotive Technology III (Certified); Aviation Maintenance Technology I; Aviation Maintenance Technology II; Barbering I; Barbering II; Basic Auto Body Repair; Basic Carpentry; Basic Photography; Beauty Salon Assistant; Bricklayer; Building Management I; Building Management II; Building Management III; Building Trades I; Building Trades II; Cabinetmaking I; Cabinetmaking II; Carpentry I; Carpentry II; Carpentry III; Commercial Photography I; Commercial Photography II; Computer Maintenance; Computer Networking Hardware Operations I-IV; Computer Systems Technology I; Computer Systems Technology II; Cosmetology I; Cosmetology II; Criminal Justice I; Criminal Justice II; Diesel Equipment Technology I; Diesel Equipment Technology II; Drafting I; Drafting II; Electricity I; Electricity II; Electricity III; Electronics Technology I; Electronics Technology II; Electronics

Technology III; Firefighting I; Firefighting II; Graphic Imaging Technology I; Graphic Imaging Technology II; Heating, Ventilation, Air Conditioning, and Refrigeration I & II; Industrial Cooperative Training I, II, III; Industrial Cooperative Training SIP; Industrial Maintenance Technology I; Industrial Maintenance Technology II; Introduction to Leadership; Leadership Development; Leadership Development; Marine Service Technology I; Marine Service Technology II; Masonry I; Masonry II; Masonry III; Motorsports Technology I; Motorsports Technology II; Motorsports Technology III; Nail Technician I; Nail Technician II; Plumbing I; Plumbing II; Precision Machining Technology I; Precision Machining Technology II; Public Safety I; Public Safety II; Radio Communications I; Radio Communications II; Robotic Workcell Technology I; Robotic Workcell Technology II; Sheet Metal I; Sheet Metal II; Small Engine Repair; Small Engine Technology I; Small Engine Technology II; Telecommunications I; Telecommunications II; Television Production I; Television Production II; Utility/Heavy Construction I; Utility/Heavy Construction II; Virginia Teachers for Tomorrow; Welding I; and Welding II.

Washington. The Washington Department of Education's Career and Technical Education website has 49 task/competency lists posted for all five programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has 12 task/competency lists for the courses of Animal Science; Animal Sciences, General; Aquaculture; Crop and Specialty Plant Production; Environmental Horticulture (Ornamental Expanded); Floriculture; Horticultural Science; Horticulture Nursery; Introduction to Agriculture;

Landscape Maintenance; Livestock and Specialty Animal Production; and Natural Resources; Turf and Turf Grass.

Business & Marketing Education. The Business & Marketing Education program has eight task/competency lists for the courses of Business Communications; Business Math; Electronic Commerce; Financial Fitness; Introduction to Business; Marketing Management; Marketing Operations, and Sports; Entertainment and Recreation Marketing.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has nine task/competency lists for the courses of Child Development-Parenting; Consumer and Family Resources; Cosmetology; Financial Fitness; Human Development; Independent Living; Interpersonal Relationships; Parenting; and Personal Choices.

Health Science Education. The Health Science Education program has 11 task/competency lists for the courses of Certified Nursing Assistant; Dental Assistant; Family Health; HSC-Informatics Services; HSC-Support Services; Intro to Health Science Careers; Nutrition and Wellness; Pre-Allied Health Careers; Sports Medicine 1; Sports Medicine 2; and Therapeutic Services.

Technical/Technology Education. The Technical/Technology Education program has nine task/competency lists for the courses of Manufacturing Foundations; Manufacturing Technology-Technician; Industrial Robotics Technology; Welding Technology – Welder; AutoBody Collision Repair Technology; Automotive Foundations; General Service Technician; Small Engine-Power Equipment Technology; and Automotive Technology.

West Virginia. There are no task/competency lists posted on the West Virginia Department of Education’s Career and Technical Education website.

Wisconsin. The Wisconsin Department of Education’s Career and Technical Education website has 10 task/competency lists posted for two programs. Following are the courses with task/competency lists posted on the website:

Agriculture Education. The Agriculture Education program has two task/competency lists for the courses of Agribusiness; and Animal Science.

Business & Marketing Education. The Business & Marketing Education program has eight task/competency lists for the courses of Business Foundations; Financial Procedures; Economics; Information Technology; Management; Entrepreneurship; International Business; and Marketing.

Wyoming. There are no task/competency lists posted on the Wyoming Department of Education’s Career and Technical Education website.

Table 2 shows availability of the task/competency lists by the number of programs and states.

Table 2

Summary of the task/competency lists number by program per state

Number of programs	Number of states
For 5 programs	23
For 4 programs	4
For 3 programs	3
For 2 programs	4
For 1 program	1
For none of the programs	15
TOTAL	50

Instructional Guides

The research found that not all of the states have instructional guides posted on Department of Education's Career and Technical Education websites. The results revealed that of the fifty states, only six states have instructional guides posted on their websites. Of the six states, one state has instructional guides posted for all five programs. One state has instructional guides posted for three programs. Four states have instructional guides posted for two programs, and one state has instructional guides posted for only one program. The detailed description of the courses for which instructional guides are posted is described below.

Colorado. The Colorado Department of Education's Career and Technical Education website has four instructional guides posted for the following courses of the Agricultural Education program: Agribusiness I; Agribusiness II; Advanced Agrisciences; and Animal & Plant Sciences.

Idaho. The Idaho Department of Education's Career and Technical Education website has 38 instructional guides posted for two programs. Following are the courses with instructional guides posted on the website:

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has 20 instructional guides for the courses of Exploratory Family & Consumer Sciences; Young Living; Technology; Life & Careers; Teen Living; Nutrition & Foods; Parenting & Child Development; Career & Personal Development; Personal & Family Finance/Economics; Teen Parenting; Food Science & Nutrition; Leadership; Entrepreneurship Experience; Early Childhood Professions; Food Production, Management, & Services; Hospitality Services; Housing, Interiors & Furnishings;

Education Assistant (Grades 11-12); Occupational & Career Experience; Human Services; and Cooperative Education.

Technical/Technology Education. The Technical/Technology Education program has 18 instructional guides for the courses of Automated Manufacturing; Automotive Technology; Building Construction; Cabinet and Furniture Making; Collision Repair; Computer Aided Design (Drafting); Diesel Technology; Electronics Technology; Environmental Science; Home Technology Integration; Industrial Mechanics; Information Systems Technology; Law Enforcement; Masonry; Media Technology; Precision Machining; Small Engine Repair; and Welding.

Mississippi. The Mississippi Department of Education's Career and Technical Education website has 49 instructional guides posted for all five programs. Following are the courses with instructional guides posted on the website:

Agriculture Education. The Agriculture Education program has 12 instructional guides for the courses of Agricultural and Environmental Science and Technology; Agriculture and Natural Resources; Agriculture Business and Management; Agriculture Power and Machinery; Agriculture Production; Agriscience; Aquaculture Technology; Custodian Caretaker Services; Food Products (Meats); Forestry; Horticulture; and Introduction to Agriscience.

Business & Marketing Education. The Business & Marketing Education program has six instructional guides for the courses of Business and Computer Technology; Computer Programming Technology; Computer Systems Technology; Cooperative Education; Hotel Restaurant and Tourism Management; and Marketing Management Technology.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has five instructional guides for the courses of Culinary and Related Foods Technology; Design Technology for Fashion and Interiors; Early Childhood Services and Education; Family and Consumer Sciences; and Life Connections;

Health Science Education. The Health Science Education program has two instructional guides for the courses of Aging Services and Allied Health.

Technical/Technology Education. The Technical/Technology Education program has 24 instructional guides for the courses of Audio and Television Broadcasting; Automotive Collision Repair Technology; Automotive Service Technology; Basic Electronics; Building Trades; Computer Graphics; Cosmetology; Diesel Service Technology; Electrician; Furniture Manufacturing and Upholstering; General Drafting; Graphics and Print Communications; Heating and Air Conditioning; Industrial Maintenance Trades; Machine Tool Operation; Masonry; Metal Trades; Outboard Marine Engine Mechanics; Plastics and Polymer Science Applications; Residential Carpentry; Small Engine Repair; Vehicle and Mobile Equipment Technician; and Welding Theory and Applications.

New York. The New York Department of Education’s Career and Technical Education website has 36 instructional guides posted for two programs. Following are the courses with instructional guides posted on the website:

Business & Marketing Education. The Business & Marketing Education program has one instructional guide for the course of Business Information Systems.

Technical/Technology Education. The Technical/Technology Education program has 35 instructional guides for the courses of Production Research and Development; Introduction to Technology; AC/DC Electronics; Aerospace; Architectural Drawing;

Audio Electronics; Automotive Technology; Communication Electronics; Communications Systems; Computer Aided Design; Computer Aided Manufacturing (CAM); Computer Applications; Construction Engineering and Management; Construction Systems; Creativity and Innovation; Design and Drawing for Production; Digital Electronics; Electricity/Electronics; School Technology Education Grades K – 6; Energy Applications; Graphic Communications; History of Technology; Manufacturing Systems; Materials Processing; Media Production Technology; Photography; Principles of Engineering: A MST Approach to Technology Education; Principles of Engineering: A High School Course Emphasizing Mathematics; Science and Technology; Principles of Engineering Energy Case Studies; Product Design and Engineering; Production Research and Development; Production Systems; Residential Structures; Technical Drawing; and Transportation Systems.

Pennsylvania. The Pennsylvania Department of Education’s Career and Technical Education website has five instructional guides posted for two programs. Following are the courses with instructional guides posted on the website:

Agriculture Education. The Agriculture Education program has four instructional guides for the courses of Agricultural Mechanics; Biotechnology; Introduction to GPS; and Weller Small Gasoline Engine.

Business & Marketing Education. The Business & Marketing Education program has one instructional guide for the course of Business Education: Educating for Success in Business and Life.

Virginia. The Virginia Department of Education’s Career and Technical Education website has four instructional guides posted for two programs. Following are the courses with instructional guides posted on the website:

Agricultural Education. The Agriculture Education program has one instructional guide for the course of Continuing Education in Agriculture.

Business & Marketing Education. The Business & Marketing Education program has three instructional guides for the courses of Economic Concepts; Customer Service Marketing; and Keyboarding Methodology.

Table 3 lists the number of instructional guides by program per state.

Table 3

Summary of the instructional guides number by program per state

Number of Programs	Number of States
For 5 programs	1
For 4 programs	0
For 3 programs	0
For 2 programs	4
For 1 program	1
For none	44
TOTAL	50

Other Curriculum Materials

The researcher found that there were some other curriculum materials posted on states Department of Education Career and Technical Education websites. These materials included sample programs of study, program description, lesson plans, and career pathways. The researcher also revealed that of the fifty state 29 do not have other curriculum materials posted on their websites. Eleven states have other curriculum materials posted for all five programs, three states have materials posted for four programs, three states have materials posted for two programs, and four states have materials posted only for one program. See Table 5 for detail information. The following is a description of what types of materials are posted on each state's website.

Alabama. The Alabama Department of Education's Career and Technical Education website has 27 other curriculum materials posted for all five programs. Following are the courses with other curriculum materials posted:

Agriculture Education. The Agriculture Education program has lesson plans for one course of Agriscience.

Business & Marketing Education. The Business & Marketing Education program has 13 lesson plans for the courses of Introduction to Banking; How Wide is My World; Dressing the Part; Our Business; How much Will This Lifestyle cost?; Visual Merchandising in a Box; Career Plans; What is Commerce and IT; What is Entrepreneurship?; Ethics and Social Responsibility in Business; Advertising; Force and Motion; and Employability Skills.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has eight lesson plans for courses of How much Is the First Year of College

Going to Cost?; Let's Make a Change; Embroidery Design; Eat, Drink, and Be Healthy; Party Time; Teaching with The Lorax by Dr. Seuss; What is in the Can; and How to Set the Table Correctly.

Health Science Education. The Health Science Education program has two lesson plans for the courses of Diseases and Medical Conditions.

Technical/Technology Education. The Technical/Technology Education program has three lesson plans for the courses of Hair Design (Computer Simulation); Land Surveying; and Architecture and Construction.

Alaska. There are no other curriculum materials posted on the Alaska Department of Education's Career and Technical Education website.

Arizona. The Arizona Department of Education's Career and Technical Education website has 28 other curriculum materials posted for all five programs. Those included project description, evaluation tools, and academic standards materials.

Agriculture Education. The Agriculture Education program has other curriculum materials for seven courses of Food Products and Processing Systems; Plant Systems; Animal Systems; Natural Resources Systems; Power, Structural and Technical Systems; Agribusiness Systems; and Environmental Service Systems.

Business & Marketing Education. The Business & Marketing Education program has other curriculum materials for four courses of a Business Management and Administrative Service; Professional Sales and Marketing; Advertising and Public Relations; Entertainment Marketing; and Entrepreneurship.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has other curriculum materials for four courses of Fashion Design and

Merchandising; Interior Design and Merchandising; Early Childhood Education; and Education Professions.

Health Science Education. The Health Science Education program has other curriculum materials for four courses of Mental and Social Health Services; Nursing Services; Therapeutic Massage; and Emergency Medical Services.

Technical/Technology Education. The Technical/Technology Education program has other curriculum materials for nine courses of Welding Technologies; Transportation Technologies; Automotive Collision Repair; Aircraft Mechanics; Graphic Arts and Design; Heating; Ventilation and Air Conditioning; Heavy Equipment Operations; Electrical Technologies; and Electrical Systems Installation and Maintenance Technologies.

Arkansas. The Arkansas Department of Education's Career and Technical Education website has 150 other curriculum materials posted for all five programs. Those included curriculum content framework materials.

Agriculture Education. The Agriculture Education program has other curriculum materials for 26 courses of Agricultural Business; Agricultural Electricity; Agricultural Marketing; Agricultural Mechanics; Agricultural Metals; Agricultural Power Systems; Agricultural Structural Systems; Agriculture Science; Agriculture Science and Technology; Animal Science; Aquaculture; Biological Animal Science; Biological Plant Science; Environmental Resources: Soil and Water; Floriculture; Food Science Technology; Forestry; Greenhouse Management; Introduction to Horticulture; Introduction to World Agricultural Science; Leadership and Communications; Managing

Natural Resources; Nursery/Landscape; Plant Science; Small Engine Technology; and Turf Grass Management.

Business & Marketing Education. The Business & Marketing Education program has other curriculum materials for 62 courses of Advanced Database; Advanced Spreadsheets; Advertising; Banking and Finance Consumer Lending; Banking and Finance Law; Banking and Finance Operations; Banking and Finance Principles; Business Communications; Business Law I; Business Law II; Computer Technology: Introduction; Computerized Accounting I; Computerized Accounting II; Computer Applications I; Computer Applications II; Computer Applications III; Computerized Business Applications; Database Applications; Desktop Publishing I; Desktop Publishing II; Economics; Enterprise Management I; Enterprise Management II; Fashion Merchandising; Introduction to Finance; Rapid Writing I; Rapid Writing II; Retailing; Salesmanship; Senior Technology Seminar; Sports & Entertainment Marketing; Spreadsheet Database – Advanced; Web Design; Web Design I: Design Methodology Technology; Web Design-Multimedia; Word Processing I; Word Processing II; Marketing Management; Multimedia Applications I; Multimedia Applications II; Office Education Cooperative; Office Management; Oracle - Database Fundamentals; Oracle - Database Programming; Programming I; Programming II; Programming One – Java; Programming II – Java; Information Technology Fundamentals; Insurance and Risk Management; International Business; International Travel; Introduction to Hospitality; Investments and Securities; Keyboarding; Keyboarding Applications; Keyboarding Connections; Keyboarding 9-week course; Lodging Management; Management; Introduction to Marketing; and Marketing.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has other curriculum materials for 22 courses of Child Development; Clothing Management; Consumer Services; Cosmetology; Customer Relations; Entrepreneurial Experience; Exploring Personal Finance; Introduction to Culinary Arts; Family and Consumer Sciences; Family Dynamics; Family and Consumer Science Investigation; Food and Nutrition; Food Science; Housing and Interior Design; Human Relations; Personal and Family Finance; Nutrition and Wellness; Parenting; Child Care Guidance, Management and Services; Food Production; Orientation to Teaching I; and Orientation to Teaching II.

Health Science Education. The Health Science Education program has other curriculum materials for eight courses of Abnormal Psychology; Human Anatomy and Physiology; Human Behavior and Disorders; Introduction to Medical Professions; Introduction to Medical Professions; Extended; Medical Procedures; Medical Procedures, Expanded; and Medical Terminology.

Technical/Technology Education. The Technical/Technology Education program has other curriculum materials for 32 courses of Air Force JROTC; Architectural CAD; Army JROTC
Automotive Collision Repair Technology; Automotive Service Technology; Aviation Technology; Carpentry; Computer Engineering; Construction Technology; Drafting and Design; Electronics; Engineering CAD I; Exploring Industrial Technology Education; Furniture Manufacturing; Gas Metal Arc Welding; Gas Tungsten Arc Welding; Gateway to Technology; Geospatial Technology; Heating Ventilation, Air Conditioning and

Refrigeration; Human Anatomy and Physiology; Industrial Cooperative Training; Industrial Equipment Maintenance; Introduction to Criminal Justice; Law Enforcement I Law Enforcement II; Machine Tool Technology; Major Appliance Technology; Metal Fabrication Welding; Navy JROTC; Pre-Engineering; Power Equipment Technology Plumbing; and Shielded Metal Arc Welding.

California. There are no other curriculum materials posted on the California Department of Education's Career and Technical Education website.

Colorado. There are no other curriculum materials posted on the Colorado Department of Education's Career and Technical Education website.

Connecticut. The Connecticut Department of Education's Career and Technical Education website has 30 other curriculum materials posted for four programs. Those included Sample Programs of Study materials.

Agriculture Education. The Agriculture Education program has other curriculum materials for four courses of Plant Science; Environmental and Natural Resources; Animal Science; and Power, Structural and Technical Systems.

Business & Marketing Education. The Business & Marketing Education program has other curriculum materials for 12 courses of Computer Information Systems and Communications; Computer Programming and Software Development; Entrepreneurship; Accounting; Business Management; Investing and Personal Finance; Introduction of Law; Government and Public Administration; International Marketing; Marketing Distribution; Marketing Information Management and Research; and Retail Merchandising.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has other curriculum materials for six courses of Teaching and Training; Restaurants; Food Marketing and Management; Early Child Development; Family and Community Service; and Fashion Merchandising.

Technical/Technology Education. The Technical/Technology Education program has other curriculum materials for eight courses of Engineering Technology; Audio and Video Technology and Film; Transportation; Distribution and Logistics; Visual Arts; Design/Pre-Construction; Manufacturing Production Process Development; and Performing Arts.

Delaware. There are no other curriculum materials posted on the Delaware Department of Education's Career and Technical Education website.

Florida. There are no other curriculum materials posted on the Florida Department of Education's Career and Technical Education website.

Georgia. The Georgia Department of Education's Career and Technical Education website has 28 other curriculum materials posted for four programs. Those included Career Pathway materials.

Agriculture Education. The Agriculture Education program has other curriculum materials for nine courses of Basic Agricultural Science and Technology; Animal Science Technology/Biotechnology; Plant Science and Biotechnology; Natural Resources Management; Floriculture Production and Management; Equine Science; Agricultural Mechanics; Agricultural Power and Machinery; and Agricultural Construction.

Business & Marketing Education. The Business & Marketing Education program has other curriculum materials for seven courses of Business Essentials; Legal Environment

of Business; Entrepreneurship Ventures; Financial Literacy; Business Procedures; Marketing Research; and International Business and Marketing.

Health Science Education. The Health Science Education program has other curriculum materials for four courses of Introduction to Healthcare Science; Application of Therapeutic Services; Nursing Essentials; and Nursing Internships.

Technical/Technology Education. The Technical/Technology Education program has other curriculum materials for eight courses of Preventive Maintenance Inspection; Engine Performance Concepts; Aviation Maintenance; Broadcast/Video Production Applications; Broadcast/Video Production Management; Foundations of Transportation and Logistics; Electrical/Electronic Systems and Design; and Heating, Ventilation and Air Conditioning Concepts.

Hawaii. There are no other curriculum materials posted on the Hawaii Department of Education's Career and Technical Education website.

Idaho. The Idaho Department of Education's Career and Technical Education website has 37 other curriculum materials posted for five programs. Those included Sample Program of Study materials.

Agriculture Education. The Agriculture Education program has other curriculum materials for seven courses of Agribusiness Systems; Animal Systems; Environmental Service Systems; Food Products and Processing Systems; Natural Resource Systems; Plant Systems; and Agricultural Welding.

Business & Marketing Education. The Business & Marketing Education program has other curriculum materials for 14 courses of Administrative Support; Banking Services; Business Finance; Securities and Investment; Insurance; Accounting; Marketing

Management; Professional Sales; Merchandising; Marketing Communications; Marketing Research; Lodging, Travel and Tourism; Recreation, Amusement and Attractions; and Restaurant & Food and Beverage Services.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has other curriculum materials for six courses of Visual Arts; Consumer Services; Early Childhood Development and Services; Lodging, Restaurant and Food Beverage Services; Teaching/Training; and Travel and Tourism.

Health Science Education. The Health Science Education program has other curriculum materials for two courses of Health Informatics and Therapeutic Services.

Technical/Technology Education. The Technical/Technology Education program has other curriculum materials for eight courses of Design/Pre-Construction; Construction; Journalism and Broadcasting; Printing Technology; Visual Arts; Maintenance, Installation and Repair; Production; and Facility and Mobile Equipment Maintenance.

Illinois. The Illinois Department of Education's Career and Technical Education website has four other curriculum materials posted for four programs. Those included Sample Lessons materials.

Business & Marketing Education. The Business & Marketing Education program has other curriculum materials for one course of Business, Marketing & Computer Education.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has other curriculum materials for one course of Food-Borne Illnesses and Their Prevention.

Health Science Education. The Health Science Education program has other curriculum materials for one course of Health Science Technology.

Technical/Technology Education. The Technical/Technology Education program has other curriculum materials for one course of Technology & Engineering Education.

Indiana. The Indiana Department of Education's Career and Technical Education website has 116 other curriculum materials posted for five programs. Those included course descriptions materials.

Agriculture Education. The Agriculture Education program has other curriculum materials for 15 courses of Exploring Agricultural Science and Business; Advanced Life Science, Animals; Advanced Life Science, Foods; Advanced Life Science, Plants and Soils; Agribusiness Management; Agricultural Mechanization; Animal Science; Farm Management; Food Science; Fundamentals of Agricultural Science and Business; Horticultural Science; Landscape Management; Natural Resource Management; Plant and Soil Science; and Supervised Agricultural Experience.

Business & Marketing Education. The Business & Marketing Education program has other curriculum materials for 25 courses of Accounting I; Accounting II; Advanced Business; Business and Management Higher Level; Business and Management Standard Level; Business and Personal Law; Business and College Prep; Business Foundations; Business Management; Business Math; Computer Applications; Computer Applications Advanced; Computer Programming; Computer Science A; Advance Placement; Computer Science Higher Level; Desktop Publishing; Digital Communication Tools; Entrepreneurship; Global Economics; International Business; Marketing; Personal Finance; Technical/Business Communication; and Web Design.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has other curriculum materials for 23 courses of Middle School FACS; Adult

Roles & Responsibilities; Advanced Child Development; Advanced Life Science: Foods; Advanced Foods & Nutrition; Chemistry of Foods; Child Development & Parenting; Consumer Economics; Cooperative Occupational Family & Consumer Sciences; Culinary Arts Careers; Culinary Arts Foundations; Early Childhood Education; Education Professions; FACS Issues and Applications; Fashion & Textiles Careers; Fashion & Textiles Foundations; Housing & Interior Design Careers; Housing & Interior Design Foundations; Human Development & Family Wellness; Interpersonal Relationships; Nutrition & Wellness; Orientation to Life & Careers; and Personal Resource Management & Family Finance.

Health Science Education. The Health Science Education program has other curriculum materials for 21 courses of Anatomy and Physiology; Dental Assisting I; Dental Assisting II; Dental Assisting III; Dental Assisting IV; Health Careers I; Health Careers II; Health Careers III; Health Career Practicum; Integrated Health Sciences I; Integrated Health Sciences II; Introduction to Dental Health Careers; Introduction to Community Health Services; Introduction To Emergency Medical Services; Introduction To Health Care Specialties, Introduction to Health Care Systems; Introduction to Health Care Technology; Introduction to Medical Assisting; Introduction To Pharmacy; Introduction To Physical Therapy; and Medical Terminology.

Technical/Technology Education. The Technical/Technology Education program has other curriculum materials for 32 courses of Advanced Manufacturing; Aerospace Engineering Technology; Aircraft Operations; Appliance Technology; Automotive Collision Repair Technology; Automotive Service Technology; Aviation Maintenance Technology; Aviation Support Operations; Biotechnical Engineering; Building Facilities

and Management; Building Trades Technology; Cabinet and Furniture Manufacturing; Civil-Architectural Engineering; Commercial Art and Graph Design; Commercial Photography; Computer Integrated Manufacturing; Computer Network Technology; Computer Repair and Maintenance Technology; Digital Electronics; Technology; Drafting and Computer Aided Design; Electronics Technology; Engineering; Fire Science; Graphic Imaging Technology; Heating, Ventilation, Air Conditioning, and Refrigeration; Home Technology Integration; Industrial Repair and Maintenance; Integrated Electronic Technologies; Mobile Electronics; Plastics Technology; and Precision Machine Technology.

Iowa. There are no other curriculum materials posted on the Iowa Department of Education's Career and Technical Education website.

Kansas. There are no other curriculum materials posted on the Kansas Department of Education's Career and Technical Education website.

Kentucky. The Kentucky Department of Education's Career and Technical Education website has 17 other curriculum materials posted for all five programs. Those included Sample Career Pathway/Program of Study materials.

Agriculture Education. The Agriculture Education program has other curriculum materials for three courses of Agriculture Education/Communications/Leadership; Agricultural Power Structures and Technical Systems; and Agribiotechnology.

Business & Marketing Education. The Business & Marketing Education program has other curriculum materials for five courses of Accounting; Finance; Management; Marketing; and Office Systems.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has other curriculum materials for three courses of Human Services/Social Work; Hospitality; and Child Development.

Health Science Education. The Health Science Education program has other curriculum materials for one course of Therapeutic Services and Nursing.

Technical/Technology Education. The Technical/Technology Education program has other curriculum materials for five courses of Maintenance Worker/Supervisor; Chemical Technician/Engineer; Machinist/Manufacturing Manager; Architecture Technology; and Civil Engineering.

Louisiana. The Louisiana Department of Education's Career and Technical Education website has 91 other curriculum materials posted for all five programs. Those included Course Descriptions materials.

Agricultural Education. The Agriculture Education program has other curriculum materials for 19 course of Agriscience II; Agriscience III; Agriscience Construction Technology; Agriscience Leadership; Agriscience Power Equipment; Animal Science; Biotechnology in Agriscience; Canine Care and Training; Cooperative Agriscience Education I; Cooperative Agriscience Education II; Environmental Studies in Agriscience; Equine Science; Floristry; Forestry; Horticulture; Landscape Design, Construction, and Maintenance; Precision Instrumentation in Agriscience; Small Animal Care and Management; and Veterinary Assistant.

Business & Marketing Education. The Business & Marketing Education program has other curriculum materials for 20 courses of Accounting I; Accounting II; Administrative Support Occupations; Business Communications; Business Computer Applications;

Business Law; Computer Multimedia Presentations; Computer Technology Literacy; Cooperative Office Education; Desktop Publishing; Economics; Entrepreneurship; Introduction to Business Computer Applications; Keyboarding; Keyboarding Applications; Principles of Business; Telecommunications; Web Design; Web Design II; and Word Processing.

Family & Consumer Science Education. The Family & Consumer Sciences Education program has other curriculum materials for 21 courses of Adult Responsibilities; Advanced Child Development; Advanced Clothing and Textiles; Advanced Nutrition & Food; Child Development; Clothing and Textiles Occ. I; Clothing and Textiles Occ. II; Clothing and Textiles; Early Childhood Education I; Early Childhood Education II; FACS Elective I and II; Family Life Education; Food Science; Food Service I; Food Service II; Food Service Technician; Housing and Interior Design; Nutrition and Food; Parenthood Education; Personal and Family Finance; and Housing and Interior Design Occupations.

Health Science Education. The Health Science Education program has other curriculum materials for 21 courses of Allied Health Services I; Allied Health Services II; Cooperative Health Occupations; Dental Assistant I; Dental Assistant II; Emergency Medical Technician- Basic; First Responder; Health Science I; Health Science II; Introduction to Emergency Medical Technology; Introduction to Health Occupations; Introduction to Pharmacy Assistant; Medical Assistant I; Medical Assistant II; Medical Assistant III; Medical Terminology; Nurse Assistant; Pharmacy Technician; Sports Medicine I; Sports Medicine II; and Sports Medicine III.

Technical/Technology Education. The Technical/Technology Education program has other curriculum materials for 10 courses of Automotive Technology; Carpentry; Drafting; Electricity Trades; Welding; Computer Service Technology I; Computer Service Technology II; Networking Basics; Word; and Routers and Routing Basics I.

Maine. There are no other curriculum materials posted on the Maine Department of Education's Career and Technical Education website.

Maryland. There are no other curriculum materials posted on the Maryland Department of Education's Career and Technical Education website.

Massachusetts. There are no other curriculum materials posted on the Massachusetts Department of Education's Career and Technical Education website.

Michigan. There are no other curriculum materials posted on the Michigan Department of Education's Career and Technical Education website.

Minnesota. There are no other curriculum materials posted on the Minnesota Department of Education's Career and Technical Education website.

Mississippi. The Mississippi Department of Education's Career and Technical Education website has 40 other curriculum materials posted for all five programs. Those included Sample of Career Planning and Assessment System materials:

Agriculture Education. The Agriculture Education program has other curriculum materials for eight courses of Agricultural and Environmental Science and Technology; Agriculture and Natural Resources; Agriculture Power and Machinery; Agriscience; Aquaculture Technology; Food Products (Meats); Forestry; and Horticulture.

Business & Marketing Education. The Business & Marketing Education program has other curriculum materials for eight courses of Business and Computer Technology;

Computer Programming Technology; Cooperative Education; Hotel Restaurant and Tourism Management; Marketing Management Technology; and Computer Systems Technology.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has other curriculum materials for four courses of Culinary and Related Foods Technology; Design Technology for Fashion and Interiors; Early Childhood Services; and Education.

Health Science Education. The Health Science Education program has other curriculum materials for two courses of Aging Services and Allied Health.

Technical/Technology Education. The Technical/Technology Education program has other curriculum materials for 22 courses of Audio and Television Broadcasting; Automotive Collision Repair Technology; Automotive Service Technology; Basic Electronics; Building Trades; Computer Graphics; Diesel Service Technology; Electrician; Furniture Manufacturing and Upholstering; General Drafting; Graphics and Print Communications; Heating and Air Conditioning; Industrial Maintenance Trades; Machine Tool Operation; Masonry; Metal Trades; Outboard Marine Engine Mechanics; Plastics and Polymer Science Applications; Residential Carpentry; Small Engine Repair; Vehicle and Mobile Equipment Technician; and Welding Theory and Applications.

Missouri. There are no other curriculum materials posted on the Missouri Department of Education's Career and Technical Education website.

Montana. There are no other curriculum materials posted on the Montana Department of Education's Career and Technical Education website.

Nebraska. The Nebraska Department of Education’s Career and Technical Education website has two other curriculum materials posted for one program. Those included Lesson Plans materials.

Business & Marketing Education. The Business & Marketing Education program has other curriculum materials for two courses of Advertising, Selling, and Promotion; and Teacher’s Guide for Entrepreneurship Course.

Nevada. The Nevada Department of Education’s Career and Technical Education website has four other curriculum materials posted for one program. Those included Sample Program of Study materials.

Health Science Education. The Health Science Education program has other curriculum materials for four courses of Medical Assisting; Medical Photography; Nursing Assistant; and Emergency Medical Technician.

New Hampshire. There are no other curriculum materials posted on the New Hampshire Department of Education’s Career and Technical Education website.

New Jersey. There are no other curriculum materials posted on the New Jersey Department of Education’s Career and Technical Education website.

New Mexico. There are no other curriculum materials posted on the New Mexico Department of Education’s Career and Technical Education website.

New York. The New York Department of Education’s Career and Technical Education website has 14 other curriculum materials posted for two programs. Those included Equipment and Facilities Guide materials.

Health Science Education. The Health Science Education program has other curriculum materials for five courses of Nursing; Dental Assisting; Medical Assisting; Dental Lab Technician; and Medical Lab Assisting.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has other curriculum materials for nine courses of Food and Nutrition; Housing & Environment; Human Services and Family Studies; Textiles; Design; Apparel; Food and Nutrition; Human Services and Family Studies; Textiles; and Design.

North Carolina. There are no other curriculum materials posted on the North Carolina Department of Education's Career and Technical Education website.

North Dakota. The North Dakota Department of Education's Career and Technical Education website has 24 other curriculum materials posted for two programs. Those included Curriculum Frameworks and Curriculum Guides materials.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has other curriculum materials for eight courses of Child Development; Consumer and Resource Management; Family Living; Housing; Interiors and Furnishings; Independent Living; Individual and Family Health; Nutrition and Foods; and Textiles and Clothing.

Health Science Education. The Health Science Education program has other curriculum materials for 16 courses of Administrative Services; Dental Facility; Dietary Services; Geriatric Care; Medical Laboratory; Medical Records; Mental Health Aide; Nursing (Medical); Pharmacy; Physical Therapy; Radiology; Respiratory Therapy; Sports Medicine; Veterinary Assisting; Vision Services; and Ward Clerk.

Ohio. There are no other curriculum materials posted on the Ohio Department of Education's Career and Technical Education website.

Oklahoma. There are no other curriculum materials posted on the Oklahoma Department of Education's Career and Technical Education website.

Oregon. There are no other curriculum materials posted on the Oregon Department of Education's Career and Technical Education website.

Pennsylvania. The Pennsylvania Department of Education's Career and Technical Education website has two other curriculum materials posted for one program. Those included Framework Competency materials.

Technical/Technology Education. The Technical/Technology Education program has other curriculum materials for two courses of Energy Generation and Transmission and Distribution Industry.

South Carolina. The South Carolina Department of Education's Career and Technical Education website has three other curriculum materials posted for one program. Those included Sample Program of Study materials.

Business & Marketing Education. The Business & Marketing Education program has other curriculum materials for three courses of Marketing Communications; Marketing Management; and Merchandising.

South Dakota. The South Carolina Department of Education's Career and Technical Education website has 41 other curriculum materials posted for all five programs. Those included Sample Program of Study materials.

Agriculture Education. The Agriculture Education program has other curriculum materials for seven courses of Products and Processing Systems; Plant Systems; Animal

Systems; Power, Structural and Technical Systems; Natural Resources Systems; Environmental Service Systems; and Agribusiness Systems.

Business & Marketing Education. The Business & Marketing Education program has other curriculum materials for 10 courses of General Management; Human Resources Management; Business Information Management; Administrative Services; Operations Management; Marketing Management; Professional Sales/Sales Management; Marketing Research; Merchandising; and Marketing Communications.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has other curriculum materials for five courses of Early Childhood Development & Services; Counseling & Mental Health Services; Family & Community Services; Personal Care Services; and Consumer Services.

Health Science Education. The Health Science Education program has other curriculum materials for five courses of Therapeutic Services; Diagnostic Services; Health Informatics; Support Services; and Biotechnology Research and Development.

Technical/Technology Education. The Technical/Technology Education program has other curriculum materials for 14 courses of Production; Manufacturing Production Process Development; Maintenance; Installation & Repair; Quality Assurance; Design/Pre-Construction; Construction; Maintenance/Operations; Transportation Operations; Logistics Planning and Management Services; Warehousing and Distribution Center Operations; Facility and Mobile Equipment Maintenance; Transportation Systems/Infrastructure Planning, Management, and Regulation; Health, Safety and Environmental Management; and Sales and Service.

Tennessee. The Tennessee Department of Education’s Career and Technical Education website has 12 other curriculum materials posted for two programs. Those included Sample Program of Study materials.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has other curriculum materials for 10 courses of Interior Design; Fashion Design; Teaching and Training Services; Teaching Training Services–Pre K Early Childhood Education; Food and Beverage Services; Nutritional Counseling; Early Childhood Development and Services; Counseling and Mental Health Services; and Family and Community Services.

Health Science Education. The Health Science Education program has other curriculum materials for two courses of Therapeutic Services and Therapeutic Emergency Services.

Texas. There are no other curriculum materials posted on the Texas Department of Education’s Career and Technical Education website.

Utah. The Utah Department of Education’s Career and Technical Education website has seven other curriculum materials posted for all five programs. Those included Sample Program of Study materials.

Agriculture Education. The Agriculture Education program has other curriculum materials for one course of Agricultural Systems Technology.

Business & Marketing Education. The Business & Marketing Education program has other curriculum materials for two courses of Accounting & Finance and Marketing Entrepreneurship.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has other curriculum materials for one course of Child Development.

Health Science Education. The Health Science Education program has other curriculum materials for one course of Biotech Research & Development/Biotechnology.

Technical/Technology Education. The Technical/Technology Education program has other curriculum materials for two course of Building Trades and Carpentry.

Vermont. There are no other curriculum materials posted on the Vermont Department of Education's Career and Technical Education website.

Virginia. The Virginia Department of Education's Career and Technical Education website has 34 other curriculum materials posted for all five programs. Those included Occupations Description materials.

Agriculture Education. The Agriculture Education program has other curriculum materials for seven courses of Animal Systems; Plant Systems; Agribusiness Systems; Power, Structural, and Technical Systems; Environmental Service Systems; Food Products and Processing Systems; and Natural Resources Systems.

Business & Marketing Education. The Business & Marketing Education program has other curriculum materials for 10 courses of Administrative Support; Business Information Management; General Management; Human Resources Management; Operations Management; Marketing Communications; Marketing Management; Marketing Research; Merchandising; and Professional Sale.

Family & Consumer Sciences Education. The Family & Consumer Sciences Education program has other curriculum materials for five courses of Consumer Services; Counseling and Mental Health Services; Early Childhood Development and Services; Personal Care Services; and Family and Community Services.

Health Science Education. The Health Science Education program has other curriculum materials for five courses of Biotechnology Research and Development; Therapeutic Services; Diagnostic Services; Health Informatics; and Support Services.

Technical/Technology Education. The Technical/Technology Education program has other curriculum materials for seven courses of Logistic and Inventory Control; Maintenance, Installation, and Repair; Manufacturing Production Process Development; Production; Facility and Mobile Equipment Maintenance; Warehousing and Distribution Center Operations; and Logistic Planning and Management.

Washington. There are no other curriculum materials posted on the Washington Department of Education’s Career and Technical Education website.

West Virginia. There are no other curriculum materials posted on the West Virginia Department of Education’s Career and Technical Education website.

Wisconsin. There are no other curriculum materials posted on the Wisconsin Department of Education’s Career and Technical Education website.

Wyoming. There are no other curriculum materials posted on the Wyoming Department of Education’s Career and Technical Education website.

Table 4 shows the availability of the other curriculum materials by the number of programs and states.

Table 4

Summary of other curriculum materials number by program per state

Number of Programs	Number of States
For 5 programs	11
For 4 programs	3

For 3 programs	0
For 2 programs	3
For 1 program	4
For none of the programs	29
TOTAL	50

Summary

In this chapter the findings of the research were presented. The goals of the research were restated and the data reported for each goal. Of the fifty states' Department of Education websites searched, thirty-one states had task/competency lists, six states had instructional guides, and twenty-one states had other curriculum materials posted on their websites. A matrix that describes the availability of task/competency lists, instructional guides, and other curriculum materials for each program was included in this chapter. The chapter also described each course for which task/competency lists, instructional guides, and other curriculum materials were available.

Chapter V presents a summary of the research findings. It will also draw conclusions and provide recommendations based on the conclusions.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter's goal is to summarize the research and draw conclusions based on the findings of the research. Also, based on the conclusions, recommendations are made in this chapter for further considerations of the research problem.

Summary

The aim of this research was to determine the availability of electronic copies of state level curriculum materials for career and technical education (CTE). In order to reach the aim, the following goals were set:

1. Identify if electronic task/competency lists exist for career and technical education courses.
2. Identify if electronic instructional guides are available for career and technical education courses.
3. Identify other appropriate instructional and curriculum materials available on states' career and technical education web-sites.

The research was bounded with five limitations. It was limited to the fifty U.S. states and its population was limited to the Office of Career and Technical Education in the individual state departments of education. The research was also limited to electronic curriculum materials available on the websites of the departments of education and was only to report on five CTE program areas, such as Agriculture Education, Business and Marketing Education, Family and Consumer Sciences Education, Health Science Education, and Technical/Technology Education. The reason for reporting only on five

programs rather than seven is that many states have combined areas, such as Business and Information Technology and Marketing Education into Business & Marketing Education and Trade and Industrial Education and Technology Education into Technical/Technology Education. It was also limited to task/competency lists, instructional guides, and other curriculum materials. The significance of the study was justified by the statements that the results will ease the work of CTE teachers and administrators in devising curricula knowing that there are samples available online. The other reason is that this study was not conducted before. The information was gathered by visiting the websites of CTE offices. As a result, matrices were set up that illustrated the availability of curriculum materials for each CTE area and its courses.

Conclusions

The conclusions were made based on the findings of the research. The conclusions are presented by the order of the research goals.

Goal 1 was to identify if electronic task/competency lists existed for career and technical education courses. It was identified that 30 state departments of education CTE websites had task/competency lists posted for five to three programs and five states for two to one programs. Fifteen states did not have task/competency lists posted on their websites. This shows that the majority of the states do have task/competency lists that exist in electronic format and are available for others to use.

Goal 2 was to identify if electronic instructional guides are available for career and technical education courses. The research found that very few states departments of education CTE websites had instructional guides posted. There were only six states that

had the materials posted on the websites, and only one state had them for all five programs. This implies that 90% of the states' education departments do not have instructional guides posted on their websites. This shortage implies that those CTE stakeholders who consult the websites will not find them helpful.

Goal 3 was to identify other appropriate instructional and curriculum materials available on states' career and technical education web-sites. The results revealed that fourteen states had other curriculum materials posted for four to five programs; seven states posted for one to two programs; while 29 states did not have other curriculum materials posted on their websites. These numbers also indicate that the majority of the states do not have other curriculum materials posted on websites. These numbers, even though they are higher than those in the Goal 3, still do not provide the CTE community a wide choice of curriculum materials from which they could select the most appropriate ones. Table 5 shows the summary of research findings.

Table 5

Matrix of Career and Technical Education (CTE) Instructional Materials

Available on State Departments' CTE Websites (P = Posted; N/P = Not Posted)

States & CTE programs	Instructional materials		
	Task/ competency List	Instructional Guides	Other curriculum materials
Alabama			
▪ Agriculture Education	P	N/P	P
▪ Business & Marketing Education	P	N/P	P

▪ Family & Consumer Sciences Education	P	N/P	P
▪ Health Science Education	P	N/P	P
▪ Technical/Technology Education	P	N/P	P
Alaska			
▪ Agriculture Education	N/P	N/P	N/P
▪ Business & Marketing Education	N/P	N/P	N/P
▪ Family & Consumer Sciences Education	N/P	N/P	N/P
▪ Health Science Education	N/P	N/P	N/P
▪ Technical/Technology Education	N/P	N/P	N/P
Arizona			
▪ Agriculture Education	P	N/P	P
▪ Business & Marketing Education	P	N/P	P
▪ Family & Consumer Sciences Education	P	N/P	P
▪ Health Science Education	P	N/P	P
▪ Technical/Technology Education	P	N/P	P
Arkansas			
▪ Agriculture Education	P	N/P	P
▪ Business & Marketing Education	P	N/P	P
▪ Family & Consumer Sciences Education	P	N/P	P
▪ Health Science Education	P	N/P	P
▪ Technical/Technology Education	P	N/P	P
California			
▪ Agriculture Education	P	N/P	N/P
▪ Business & Marketing Education	P	N/P	N/P

▪ Family & Consumer Sciences Education	P	N/P	N/P
▪ Health Science Education	P	N/P	N/P
▪ Technical/Technology Education	P	N/P	N/P
Colorado			
▪ Agriculture Education	P	P	N/P
▪ Business & Marketing Education	N/P	N/P	N/P
▪ Family & Consumer Sciences Education	P	N/P	N/P
▪ Health Science Education	N/P	N/P	N/P
▪ Technical/Technology Education	N/P	N/P	N/P
Connecticut			
▪ Agriculture Education	P	N/P	P
▪ Business & Marketing Education	P	N/P	P
▪ Family & Consumer Sciences Education	P	N/P	P
▪ Health Science Education	P	N/P	N/P
▪ Technical/Technology Education	P	N/P	P
Delaware			
▪ Agriculture Education	P	N/P	N/P
▪ Business & Marketing Education	P	N/P	N/P
▪ Family & Consumer Sciences Education	P	N/P	N/P
▪ Health Science Education	P	N/P	N/P
▪ Technical/Technology Education	P	N/P	N/P
Florida			
▪ Agriculture Education	P	N/P	N/P
▪ Business & Marketing Education	P	N/P	N/P

▪ Family & Consumer Sciences Education	P	N/P	N/P
▪ Health Science Education	P	N/P	N/P
▪ Technical/Technology Education	P	N/P	N/P
Georgia			
▪ Agriculture Education	P	N/P	P
▪ Business & Marketing Education	P	N/P	P
▪ Family & Consumer Sciences Education	P	N/P	N/P
▪ Health Science Education	P	N/P	P
▪ Technical/Technology Education	P	N/P	P
Hawaii			
▪ Agriculture Education	N/P	N/P	N/P
▪ Business & Marketing Education	N/P	N/P	N/P
▪ Family & Consumer Sciences Education	N/P	N/P	N/P
▪ Health Science Education	N/P	N/P	N/P
▪ Technical/Technology Education	N/P	N/P	N/P
Idaho			
▪ Agriculture Education	P	N/P	P
▪ Business & Marketing Education	N/P	N/P	P
▪ Family & Consumer Sciences Education	P	P	P
▪ Health Science Education	P	N/P	P
▪ Technical/Technology Education	P	P	P
Illinois			
▪ Agriculture Education	P	N/P	N/P
▪ Business & Marketing Education	P	N/P	P

▪ Family & Consumer Sciences Education	P	N/P	P
▪ Health Science Education	P	N/P	P
▪ Technical/Technology Education	P	N/P	P
Indiana			
▪ Agriculture Education	P	N/P	P
▪ Business & Marketing Education	P	N/P	P
▪ Family & Consumer Sciences Education	P	N/P	P
▪ Health Science Education	P	N/P	P
▪ Technical/Technology Education	P	N/P	P
Iowa			
▪ Agriculture Education	P	N/P	N/P
▪ Business & Marketing Education	P	N/P	N/P
▪ Family & Consumer Sciences Education	P	N/P	N/P
▪ Health Science Education	N/P	N/P	N/P
▪ Technical/Technology Education	P	N/P	N/P
Kansas			
▪ Agriculture Education	P	N/P	N/P
▪ Business & Marketing Education	P	N/P	N/P
▪ Family & Consumer Sciences Education	P	N/P	N/P
▪ Health Science Education	P	N/P	N/P
▪ Technical/Technology Education	N/P	N/P	N/P
Kentucky			
▪ Agriculture Education	P	N/P	P
▪ Business & Marketing Education	P	N/P	P

▪ Family & Consumer Sciences Education	P	N/P	P
▪ Health Science Education	P	N/P	P
▪ Technical/Technology Education	P	N/P	P
Louisiana			
▪ Agriculture Education	P	N/P	P
▪ Business & Marketing Education	P	N/P	P
▪ Family & Consumer Sciences Education	P	N/P	P
▪ Health Science Education	P	N/P	P
▪ Technical/Technology Education	P	N/P	P
Maine			
▪ Agriculture Education	P	N/P	N/P
▪ Business & Marketing Education	P	N/P	N/P
▪ Family & Consumer Sciences Education	P	N/P	N/P
▪ Health Science Education	P	N/P	N/P
▪ Technical/Technology Education	P	N/P	N/P
Maryland			
▪ Agriculture Education	N/P	N/P	N/P
▪ Business & Marketing Education	N/P	N/P	N/P
▪ Family & Consumer Sciences Education	N/P	N/P	N/P
▪ Health Science Education	N/P	N/P	N/P
▪ Technical/Technology Education	N/P	N/P	N/P
Massachusetts			
▪ Agriculture Education	P	N/P	N/P
▪ Business & Marketing Education	P	N/P	N/P

▪ Family & Consumer Sciences Education	P	N/P	N/P
▪ Health Science Education	P	N/P	N/P
▪ Technical/Technology Education	P	N/P	N/P
Michigan			
▪ Agriculture Education	N/P	N/P	N/P
▪ Business & Marketing Education	N/P	N/P	N/P
▪ Family & Consumer Sciences Education	N/P	N/P	N/P
▪ Health Science Education	N/P	N/P	N/P
▪ Technical/Technology Education	N/P	N/P	N/P
Minnesota			
▪ Agriculture Education	P	N/P	N/P
▪ Business & Marketing Education	P	N/P	N/P
▪ Family & Consumer Sciences Education	P	N/P	N/P
▪ Health Science Education	P	N/P	N/P
▪ Technical/Technology Education	P	N/P	N/P
Mississippi			
▪ Agriculture Education	P	P	P
▪ Business & Marketing Education	P	P	P
▪ Family & Consumer Sciences Education	P	P	P
▪ Health Science Education	P	P	P
▪ Technical/Technology Education	P	P	P
Missouri			
▪ Agriculture Education	N/P	N/P	N/P
▪ Business & Marketing Education	P	N/P	N/P

▪ Family & Consumer Sciences Education	N/P	N/P	N/P
▪ Health Science Education	N/P	N/P	N/P
▪ Technical/Technology Education	P	N/P	N/P
Montana			
▪ Agriculture Education	N/P	N/P	N/P
▪ Business & Marketing Education	N/P	N/P	N/P
▪ Family & Consumer Sciences Education	N/P	N/P	N/P
▪ Health Science Education	N/P	N/P	N/P
▪ Technical/Technology Education	N/P	N/P	N/P
Nebraska			
▪ Agriculture Education	N/P	N/P	N/P
▪ Business & Marketing Education	N/P	N/P	P
▪ Family & Consumer Sciences Education	N/P	N/P	N/P
▪ Health Science Education	N/P	N/P	N/P
▪ Technical/Technology Education	N/P	N/P	N/P
Nevada			
▪ Agriculture Education	P	N/P	N/P
▪ Business & Marketing Education	P	N/P	N/P
▪ Family & Consumer Sciences Education	P	N/P	N/P
▪ Health Science Education	NP	N/P	P
▪ Technical/Technology Education	P	N/P	N/P
New Hampshire			
▪ Agriculture Education	P	N/P	N/P
▪ Business & Marketing Education	P	N/P	N/P

▪ Family & Consumer Sciences Education	P	N/P	N/P
▪ Health Science Education	N/P	N/P	N/P
▪ Technical/Technology Education	N/P	N/P	N/P
New Jersey			
▪ Agriculture Education	N/P	N/P	N/P
▪ Business & Marketing Education	N/P	N/P	N/P
▪ Family & Consumer Sciences Education	N/P	N/P	N/P
▪ Health Science Education	N/P	N/P	N/P
▪ Technical/Technology Education	N/P	N/P	N/P
New Mexico			
▪ Agriculture Education	N/P	N/P	N/P
▪ Business & Marketing Education	N/P	N/P	N/P
▪ Family & Consumer Sciences Education	N/P	N/P	N/P
▪ Health Science Education	N/P	N/P	N/P
▪ Technical/Technology Education	N/P	N/P	N/P
New York			
▪ Agriculture Education	N/P	N/P	N/P
▪ Business & Marketing Education	N/P	P	N/P
▪ Family & Consumer Sciences Education	P	N/P	P
▪ Health Science Education	N/P	N/P	P
▪ Technical/Technology Education	N/P	P	N/P
North Carolina			
▪ Agriculture Education	P	N/P	N/P
▪ Business & Marketing Education	P	N/P	N/P

▪ Family & Consumer Sciences Education	P	N/P	N/P
▪ Health Science Education	P	N/P	N/P
▪ Technical/Technology Education	P	N/P	N/P
North Dakota			
▪ Agriculture Education	P	N/P	N/P
▪ Business & Marketing Education	P	N/P	N/P
▪ Family & Consumer Sciences Education	P	N/P	P
▪ Health Science Education	P	N/P	P
▪ Technical/Technology Education	P	N/P	N/P
Ohio			
▪ Agriculture Education	N/P	N/P	N/P
▪ Business & Marketing Education	P	N/P	N/P
▪ Family & Consumer Sciences Education	P	N/P	N/P
▪ Health Science Education	NP	N/P	N/P
▪ Technical/Technology Education	N/P	N/P	N/P
Oklahoma			
▪ Agriculture Education	N/P	N/P	N/P
▪ Business & Marketing Education	N/P	N/P	N/P
▪ Family & Consumer Sciences Education	N/P	N/P	N/P
▪ Health Science Education	N/P	N/P	N/P
▪ Technical/Technology Education	N/P	N/P	N/P
Oregon			
▪ Agriculture Education	P	N/P	N/P
▪ Business & Marketing Education	P	N/P	N/P

▪ Family & Consumer Sciences Education	P	N/P	N/P
▪ Health Science Education	P	N/P	N/P
▪ Technical/Technology Education	P	N/P	N/P
Pennsylvania			
▪ Agriculture Education	P	P	N/P
▪ Business & Marketing Education	N/P	P	N/P
▪ Family & Consumer Sciences Education	P	N/P	N/P
▪ Health Science Education	N/P	N/P	N/P
▪ Technical/Technology Education	P	P	P
Rhode Island			
▪ Agriculture Education	N/P	N/P	N/P
▪ Business & Marketing Education	N/P	N/P	N/P
▪ Family & Consumer Sciences Education	N/P	N/P	N/P
▪ Health Science Education	N/P	N/P	N/P
▪ Technical/Technology Education	N/P	N/P	N/P
South Carolina			
▪ Agriculture Education	N/P	N/P	N/P
▪ Business & Marketing Education	N/P	N/P	P
▪ Family & Consumer Sciences Education	P	N/P	N/P
▪ Health Science Education	P	N/P	N/P
▪ Technical/Technology Education	P	N/P	N/P
South Dakota			
▪ Agriculture Education	N/P	N/P	P
▪ Business & Marketing Education	N/P	N/P	P

▪ Family & Consumer Sciences Education	N/P	N/P	P
▪ Health Science Education	N/P	N/P	P
▪ Technical/Technology Education	N/P	N/P	P
Tennessee			
▪ Agriculture Education	P	N/P	N/P
▪ Business & Marketing Education	P	N/P	N/P
▪ Family & Consumer Sciences Education	P	N/P	P
▪ Health Science Education	P	N/P	P
▪ Technical/Technology Education	P	N/P	N/P
Texas			
▪ Agriculture Education	N/P	N/P	N/P
▪ Business & Marketing Education	N/P	N/P	N/P
▪ Family & Consumer Sciences Education	N/P	N/P	N/P
▪ Health Science Education	N/P	N/P	N/P
▪ Technical/Technology Education	N/P	N/P	N/P
Utah			
▪ Agriculture Education	N/P	N/P	P
▪ Business & Marketing Education	N/P	N/P	P
▪ Family & Consumer Sciences Education	N/P	N/P	P
▪ Health Science Education	N/P	N/P	P
▪ Technical/Technology Education	N/P	N/P	P
Vermont			
▪ Agriculture Education	P	N/P	N/P
▪ Business & Marketing Education	P	N/P	N/P

▪ Family & Consumer Sciences Education	P	N/P	N/P
▪ Health Science Education	P	N/P	N/P
▪ Technical/Technology Education	P	N/P	N/P
Virginia			
▪ Agriculture Education	P	P	P
▪ Business & Marketing Education	P	P	P
▪ Family & Consumer Sciences Education	P	N/P	P
▪ Health Science Education	P	N/P	P
▪ Technical/Technology Education	P	N/P	P
Washington			
▪ Agriculture Education	P	N/P	N/P
▪ Business & Marketing Education	P	N/P	N/P
▪ Family & Consumer Sciences Education	P	N/P	N/P
▪ Health Science Education	P	N/P	N/P
▪ Technical/Technology Education	P	N/P	N/P
West Virginia			
▪ Agriculture Education	N/P	N/P	N/P
▪ Business & Marketing Education	N/P	N/P	N/P
▪ Family & Consumer Sciences Education	N/P	N/P	N/P
▪ Health Science Education	N/P	N/P	N/P
▪ Technical/Technology Education	N/P	N/P	N/P
Wisconsin			
▪ Agriculture Education	P	N/P	N/P
▪ Business & Marketing Education	P	N/P	N/P

▪ Family & Consumer Sciences Education	N/P	N/P	N/P
▪ Health Science Education	N/P	N/P	N/P
▪ Technical/Technology Education	N/P	N/P	N/P
Wyoming			
▪ Agriculture Education	N/P	N/P	N/P
▪ Business & Marketing Education	N/P	N/P	N/P
▪ Family & Consumer Sciences Education	N/P	N/P	N/P
▪ Health Science Education	N/P	N/P	N/P
▪ Technical/Technology Education	N/P	N/P	N/P

Recommendations

Based on the findings of research, the following recommendations are made:

1. All the state departments of education CTE offices should be encouraged to post their developed task/competency lists on their websites so that the rate of exchange between CTE stakeholders is increased. This will also bring an increase to the quality of its curriculum.
2. All the states' departments of education CTE offices should be required or encouraged by the U.S. Department of Education to make their instructional guides and other curriculum materials available online. This will help both CTE teachers and administrators learn and share with each other some of the common materials instead of spending time to design them from the beginning. This will also benefit those parents who are interested to see what kind of materials their children are going to learn from while in CTE classes.

3. State departments of education should be encouraged to improve the technical and organizational aspects of their websites, since it was quite challenging to navigate through many of the websites to locate appropriate CTE curriculum.
4. State curriculum should be unified since many are preparing students to test for certifications. If so, they should be teaching similar curriculum.
5. Finally, it is recommended that the states' leadership should unify the names of the courses across the U.S.

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