



Section 11: Instructional Planning with Career Clusters, Career Pathways, and Occupations 2008-2009

- Overview of Career Clusters
- The 16 Career Clusters
- Common Core of Knowledge and Skills
- Connection of Career Pathways and Occupations to CTE Courses

September 2008



Section 11: Instructional Planning with Career Clusters, Career Pathways, and Occupations

To help students investigate careers and design their courses of study to advance their future goals, the Virginia Department of Education's Office of Career and Technical Education has adopted the nationally accepted structure of 16 career clusters, their accompanying career pathways, and their sample career specialties or occupations. Detailed information about Career Clusters in Virginia is available at <http://www.doe.virginia.gov/VDOE/instruction/CTE/Careerclusters>, including applications that may be used locally. Model templates in each of the 16 clusters are available to assist local school divisions in developing career pathways. Each school division is being asked to develop sample plans of study, based on the courses offered within their schools, the employment needs of the area, and the post-high school educational opportunities needed for these careers. Once these sample plans are developed, they can be customized to the needs of individual students so that all students have the opportunity to have an individualized plan of study. Additionally, the National Directors of Career and Technical Education association has developed an informative Web site on Career Clusters and Plans of Study. See <http://www.careerclusters.org>.

Reporting by Career Cluster

In addition to using career clusters for student career exploration and instructional planning, local school divisions report to the USDOE the numbers of students who are exploring or preparing for each career cluster. To simplify federal reporting, the *Career and Technical Education Reporting System (CTERS) User's Manual* assigns a career cluster to each course. The cluster assignment is also identified in the program area sections (Sections 1-8). Because some career clusters overlap (have similar occupations), teachers may have a choice of more than one cluster and should select the most appropriate one based on the student's career pathway for their federal report.

The 16 Career Clusters

- Agriculture, Food and Natural Resources
- Architecture and Construction
- Arts, Audio/Visual Technology and Communications
- Business Management and Administration
- Education and Training
- Finance
- Government and Public Administration
- Health Science
- Hospitality and Tourism
- Human Services
- Information Technology
- Law, Public Safety, Corrections and Security
- Manufacturing
- Marketing
- Science, Technology, Engineering and Mathematics
- Transportation, Distribution and Logistics

Common Core of Knowledge and Skills

The 16 career clusters and their accompanying 79 career pathways are built on common core of knowledge and skills required for career success in all the occupations included in the cluster. This shared core of knowledge and skills consists of the following elements, which may require different applications in different clusters. (For example, the academic foundations and technical skills needed in architecture and construction differ from those needed in health science.)

- Academic foundations
- Communication
- Problem solving and critical thinking
- Information technology applications
- Systems
- Safety, health, and environment
- Leadership and teamwork
- Ethics and legal responsibilities
- Employability and career development
- Technical skills

As students explore careers, they also should investigate the core elements to gain a comprehensive picture of, for example, the ethical issues surrounding Hospitality and Tourism industries and the similarities and differences between them and the ethical issues encountered in Finance or Human Services careers.

Examples of Career Pathways and Occupations Connected to CTE Courses

Each pathway within a cluster offers many occupations. Students may choose CTE and academic courses that will help them explore or prepare for a group of careers (a cluster), a group of careers within a cluster (pathway), or a single occupation.

The charts that follow show samples from two clusters and their associated pathways, sample occupations for one pathway, and a sample sequence of applicable CTE courses. The sequence applies to the pathways and occupations shown in italics.

Career Cluster	Career Pathways	Sample Occupations	Sample CTE Concentration Sequences (a combination equivalent to two 36-week courses)
Agriculture, Food and Natural Resources	<p><i>Plant Systems</i></p> <p>Other pathways in this cluster:</p> <ul style="list-style-type: none"> • Food Products and Processing Systems • Animal Systems • Power, Structural, and Technical Systems • Natural Resources Systems • Environmental Service Systems • Agribusiness Systems 	<p><i>Plant Breeder/Geneticist</i> <i>Botanist</i> <i>Greenhouse Manager</i></p> <p>Other occupations in this pathway:</p> <ul style="list-style-type: none"> • Soil and Water Specialist • Certified Crop Adviser • Tree Surgeon • Education/Extension Specialist • Golf Course Superintendent 	<ul style="list-style-type: none"> • Floral Design I 8055 • Floriculture 8038 • Greenhouse Plant Production and Management 8035 • Horticulture Sciences 8034 • Landscaping 8036 • Specialty Horticulture Arts 8037

Career Cluster	Career Pathways	Sample Occupations	Sample CTE Concentration Sequences (a combination equivalent to two 36-week courses)
Education and Training	<p><i>Teaching/Training</i></p> <p>Other pathways in this cluster:</p> <ul style="list-style-type: none"> • Administration and Administrative Support • Professional Support Services 	<p><i>Director, Childcare Facility</i> <i>Childcare Worker</i> <i>Nanny</i> <i>Preschool, Kindergarten Teacher</i> <i>Teacher Assistant</i> <i>Parent Educator</i></p> <p>Other occupations in this pathway:</p> <ul style="list-style-type: none"> • Secondary Teacher • Special Education Teacher • Coach • Teacher Aide 	<ul style="list-style-type: none"> • Early Childhood, Education, and Services I 8285 • Early Childhood, Education, and Services II 8286 • Family Relations 8225/8223* • GRADS 8213 (with cooperative education) • Individual Development 8210/8209* • Introduction to Early Childhood, Education, and Services 8234 • Parenting 8231 <p><i>*18-week course</i></p>

Other Career Resources

The Career Clusters in Virginia Web site also offers a variety of resources for career planning:

- [CTE Career Planning Guide](#) (targeted to students, their parents, and guidance counselors)
- [CTE Trailblazers](#) (supporting CTE personnel in increasing enrollment and completers, particularly nontraditional students)
- [KnowHowVirginia](#) (promoting career exploration and preparation through CTE programs)
- [r u ready?](#) (career resource magazine distributed to Virginia school juniors)
- [Virginia's Career Planning System](#) (an electronic portfolio powered by Kuder)
- [Virginia Career VIEW](#) (resources and activities for kindergarten through adult)

