Introduction to Career Clusters

What are Career Clusters?

In our economy, there are hundreds of occupations and numerous ways of grouping them. The classification system most commonly used in schools and state agencies is the National Career Clusters Framework. This framework groups occupations into sixteen different clusters based on similarities in foundational knowledge and skills needed to achieve career success. The core academic and technical competencies that define each cluster provide the foundation on which students develop more advanced, industry-specific skills.

Detailed descriptions of the knowledge and skills associated with each cluster can be can be found at: https://careertech.org/career-clusters

Agriculture, Food and Natural Resources	Architecture and Construction	Arts, Audio/Video 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, Sales and Service	Science Technology, Engineering and Mathematics	Transportation, Distribution and Logistics

The benefit of using the National Career Clusters Framework is that occupations are grouped on the basis of shared educational and training requirements. This allows for a more direct link to be established between educational practices and careers. Curriculum and programs of study can be developed that incorporate foundational skills that are essential to success in specific fields. Furthermore, clear pathways can be established that can guide students in selecting programs of study that will support their employment goals.

What are Career Pathways?

Within each cluster, pathways have been identified that focus on smaller subsets of related occupations. Career pathways have their own knowledge and skill requirements that support success in occupations aligned with the pathway. Courses and training programs are typically outlined in career pathways that can guide students as they develop and maintain progress toward career goals. While clusters provide a broad picture of foundational skills, pathways can help students focus on specific occupations and develop clear, more informed educational plans.

Career Cluster	Career Pathway	Career Cluster	Career Pathway
Agriculture, Food and Natural Resources	• Agribusiness Systems • Animal Systems • Environmental Service Systems • Food Products & Processing Systems • Natural Resources Systems • Plant Systems • Power, Structural & Technical Systems	**Hospitality and Tourism**	• Lodging • Recreation, Amusements & Attractions • Restaurants & Food/Beverage Services • Travel & Tourism
Architecture and Construction	• Construction • Design/Pre-Construction • Maintenance/Operations	**Human Services**	• Consumer Services • Counseling & Mental Health Services • Early Childhood Development & Services • Family & Community Services • Personal Care Services
Arts, Audio/Video Technology and Communications	• A/V Technology & Film • Journalism & Broadcasting • Performing Arts • Printing Technology • Telecommunications • Visual Arts	**Information Technology**	• Information Support & Services • Network Systems • Programming & Software Development • Web & Digital Communications
Business, Management and Administration	• Administrative Support • Business Information Management • General Management • Human Resources Management • Operations Management	**Law, Public Safety, Corrections and Security**	• Correction Services • Emergency & Fire Management Services • Law Enforcement Services • Legal Services • Security & Protective Services
Education and Training	• Administration & Administrative Support • Professional Support Services • Teaching/Training	**Manufacturing**	• Health, Safety & Environmental Assurance • Logistics & Inventory Control • Maintenance, Installation & Repair • Manufacturing Production Process Development • Production • Quality Assurance
Finance	• Accounting • Banking Services • Business Finance • Insurance • Securities & Investments	**Marketing, Sales and Service**	• Marketing Communications • Marketing Management • Marketing Research • Merchandising • Professional Sales
Government and Public Administration	• Foreign Service • Governance • National Security • Planning • Public Management & Administration • Regulation • Revenue & Taxation	**Science Technology, Engineering and Mathematics**	• Engineering & Technology • Science & Mathematics
Health Science	• Biotechnology Research & Development • Diagnostic Services • Health Informatics • Support Services • Therapeutic Services	**Transportation, Distribution and Logistics**	• Facility & Mobile Equipment Maintenance • Health, Safety & Environmental Management • Logistics Planning & Management Services • Sales & Service • Transportation Operations • Transportation Systems/Infrastructure Planning, Management & Regulation • Warehousing & Distribution Center Operations

Detailed descriptions of the knowledge and skills associated with career pathways can be can be found at:
https://careertech.org/career-clusters

Programs of Study

Programs of study are a critical component of career pathways. They provide a more focused and comprehensive outline of courses and trainings that lead to a specific career. Successful completion of a program of study typically results in certification or a degree that provides entry into a field of work. Where career pathways provide insight into various educational options and goals within a career field, programs of study target individual careers and specify the particular courses and trainings, as well as the sequence, needed to meet basic job requirements.
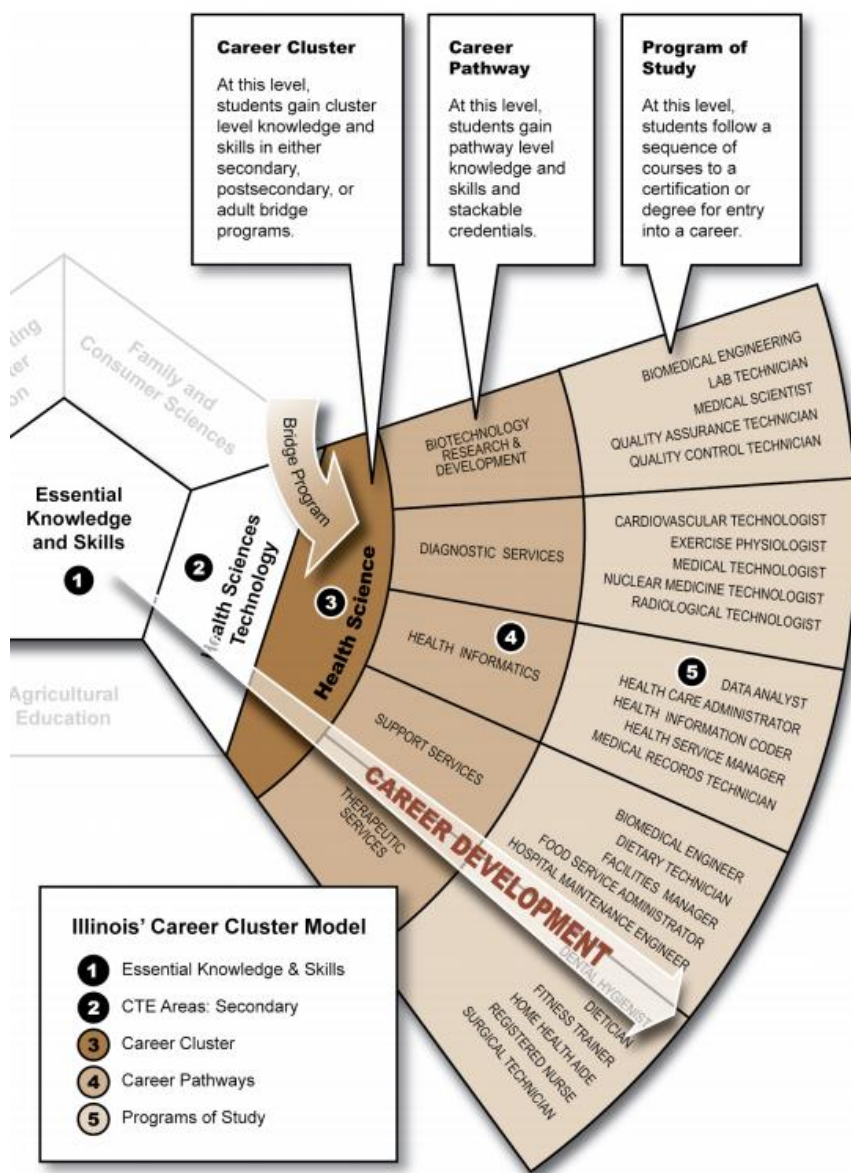
Detailed descriptions of various programs of study can be found at:
https://nces.ed.gov/ipeds/cipcode/Default.aspx?y=55

How does it all fit together?

The organizational structure of the Career Clusters Framework moves from general to specific. Career clusters are the largest category, where jobs are classified according to foundational level knowledge and skills. Career pathways further delineate occupations within clusters by grouping jobs based on common courses and training programs. Finally, programs of study are more refined components of career pathways that focus on individual careers and specify the particular courses and sequences needed to obtain necessary certificates and/or degrees.

There are several career cluster models and diagrams available that illustrate the organizational structure of the Career Clusters Framework. One model that incorporates the major components of the framework is the Illinois' Career Cluster Model. This model effectively demonstrates the increasing specificity as transitions are made from clusters, to pathways, to programs of study.

Overall, the Career Clusters Framework provides a basis for understanding the fundamental knowledge and skills required for various careers. This can facilitate a more direct alignment between educational program offerings and occupational opportunities.

Source: Illinois' Career Cluster Model

Helpful Resources

Several online resources are available that provide detailed descriptions of individual career clusters and pathways. Below is a list of government and state guides that can assist in further exploration of career clusters and their use.

Bureau of Labor Statistics
https://www.bls.gov/careeroutlook/2015/article/career-clusters.htm

O*NET Browse by Career Cluster
https://www.onetonline.org/find/career

North Carolina Career Clusters Guide
https://www.nccareers.org/careerguide/index.html
https://www.nccareers.org/careerguide/print/Career_Clusters_Guide_2018.pdf

Nebraska Career Education Model and Resources
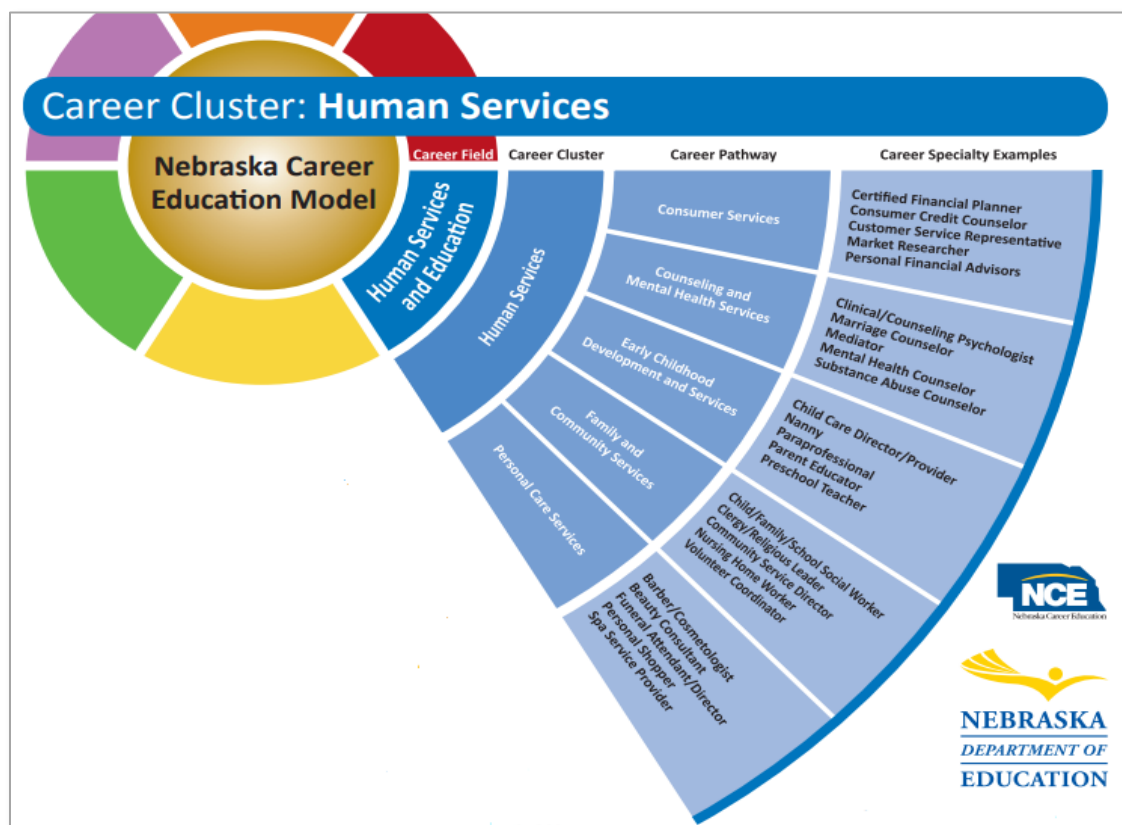https://www.education.ne.gov/nce/career-clusters/

Illinois Career Clusters, Pathways, and Programs of Study Guide
https://occrl.illinois.edu/docs/librariesprovider4/prc/career-cluster-guide.pdf?sfvrsn=24b9bc89_6

Minnesota State CAREERwise Education
https://careerwise.minnstate.edu/careers/clusters.html

Source: Nebraska Career Education Model and Resources