Ohio Career Field Initiative

What is a career field?

A career field is "a grouping of occupations and broad industries based on commonalities (Source: National Career Cluster Initiative)." The career field concept calls for balancing broad-based, career-technical education and the specialized training necessary for success in employment, further study and adaptation to an ever-changing economy.

The career field concept is the basis for developing both broad and specialized technical content standards that serve as a framework for curriculum, instruction, assessment and program design addressing the needs of an entire industry/business sector. Previously, Ohio used a framework of six career clusters as the basis for exploring and introducing careers to students. To avoid confusion with those introductory clusters, Ohio opted to use the term "career field" to define its workforce development curricular framework. The Ohio career fields align with national efforts to broaden career-technical education, integrate career-technical and academic study and reflect the workforce needs of today and tomorrow.

How many career fields are recognized in Ohio's educational system?

Ohio has identified 16 career fields. These fields are modeled after the States' Career Clusters Initiative, developed cooperatively by the National Association of State Directors of Career Technical Education Consortium and the Office of Vocational and Adult Education, U.S. Department of Education.

What are the 16 Ohio career fields?

1) **Agricultural and Environmental Systems** – Includes technical-and professional-level careers in animal and crop production, agricultural services and engineering, food processing, horticulture, natural resource management, environmental services, agricultural and environmental education, communications and research.
2) **Arts and Communication** – Includes technical- and professional-level careers related to the humanities and the performing, visual, literary and media arts.
3) **Business and Administrative Services** – Includes technical- and professional-level careers in business management, administrative support, human resources and business administration that encompass planning, organizing, directing and evaluating business functions essential to efficient and productive business operations.
4) **Construction Technologies** – Includes technical- and professional-level careers in designing, planning, managing and building and maintaining the built environment, including roadways and bridges and industrial, commercial and residential facilities and buildings.
5) **Education and Training** – Includes technical- and professional-level careers in planning, managing and providing education and training services and related learning support services.
6) **Engineering and Science Technologies** – Includes technical- and professional-level careers in planning, managing, and providing scientific research and services such as laboratory and testing and research and development; and (b) design, process and development services such as electrical engineering, industrial engineering, materials science, nanofabrication, fuel cell technology and robotics.
7) **Finance** – Includes technical- and professional-level careers in financial and investment planning, accounting, banking, insurance, real estate and business financial management.
8) **Government and Public Administration** – Includes technical- and professional-level careers in national defense, foreign service, governance, revenue and taxation, regulation and public administration at local, state and federal levels.
9) **Health Science** – Includes technical- and professional-level careers in planning, managing and providing therapeutic services, diagnostic services, health informatics, support services and biotechnology research and development.

10) **Hospitality and Tourism** – Includes technical- and professional-level careers in the management, marketing and operations of restaurants and other food services, lodging, attractions, recreation events and travel-related services.
11) **Human Services** – Includes technical- and professional-level careers related to families and human needs within economic, political and social systems such as social services, counseling and mental health services, consumer services and personal care services.
12) **Information Technology** – Includes technical- and professional-level careers in the design, development, support and management of hardware, software, multimedia and systems integration services. The four IT pathways are Information Support and Services, Communication Network Services, Programming and Software Development/Applications and Interactive Multi-Media Development.
13) **Law and Public Safety** – Includes technical- and professional-level careers in planning, managing, and providing judicial, legal, public administration, public safety and protective services and homeland security including professional and technical support services in public planning, emergency management planning, fire protection, emergency medical services and the criminal justice system.
14) **Manufacturing Technologies** – Includes technical- and professional-level careers in planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering.
15) **Marketing** – Includes technical-and professional-level careers in planning, managing, and performing marketing activities such as distribution, promotion, pricing, selling, financing, information management and product/service management to reach organizational objectives.
16) **Transportation Systems** – Includes technical- and professional-level careers in planning, management and movement of people, materials and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services and mobile equipment and facility maintenance.

Is the move to career fields reflected in Ohio policy?

Yes, as required by Chapter 3313.90 of the Ohio Revised Code, the State Board of Education established operating standards (Ohio Administrative Rules) for Ohio career-technical education. Rules aligned with currency and expectations of 21st century career-technical education in Ohio were adopted in 2003 and 2004. Included in the provisions of Ohio Administrative Rule 3301-61-03 (Criteria for Secondary Workforce Development Programs), adopted in May 2004, was the requirement that students should have access to 10-to-12 programs (depending on school district size) in at least eight career fields. The rule also specifies that "technical and academic course offerings must meet established guidelines, specify the sequence for grades nine through twelve, include work-based learning experiences and identify postsecondary and employment options ..."

What is a career pathway?

A career pathway is a series of academic and technical career-focused coursework and other educational learning experiences leading to a career specialty and employment in a career field. Pathways facilitate a seamless transition from high school to postsecondary education (including apprenticeships, adult education, two- and four-year colleges and graduate school) and from postsecondary education to the workplace.

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What should a high school career pathway look like?

To effectively facilitate the transition from secondary to postsecondary education and a career, high school career pathways should encompass:

1) Challenging technical coursework in a chosen career field based on career field technical content standards;
2) Rigorous academics that meet Ohio academic content standards and grade-level expectations;
3) Electives that relate to career objectives;
4) Instructional enhancements such as experiential and authentic learning opportunities (e.g., work-based learning, mentorships, internships) and career-technical student organization participation;
5) Opportunities (when appropriate) for program and student certification and licensure;
6) Preparation for transition to further study that includes college readiness and opportunity to earn college credit while in high school;
7) Preparation for transition to employment with advancement opportunities; and
8) Performance targets that include high school academic and technical testing/exit and postsecondary entry/placement requirements.

What are career field technical content standards?

Career field technical content standards outline the knowledge and skills needed for success within a career field, multiple pathways, and in some cases, areas of specialization. Validated by Ohio business and industry representatives in conjunction with Ohio educators, these standards are the basis for the development of educational programming in Ohio secondary and postsecondary schools. The standards also serve as the framework for the development of strong career pathways that connect secondary, adult and postsecondary education systems and the workplace.

While mirroring the diverse nature of each career field, all career field technical content standards documents will delineate competencies that outline the knowledge and skills that span the career field (core competencies), as well as those that relate to specific career field pathways (pathway competencies) and, in some cases, career field specialization (specialization competencies).

Additionally, academic benchmarks from the Ohio Academic Content Standards for mathematics, English language arts, social studies and science are correlated with the career field technical content standards. The embedded benchmarks have been determined by business representatives and academic and technical educators from secondary and postsecondary institutions to be strongly related to specific knowledge and skills statements or competencies for the given career field.

How many career field technical content standards documents exist?

All of Ohio's 16 career fields had technical content standards by the summer of 2008. These newer standards replace the Integrated Technical and Academic Competencies (ITACs), Occupational Competency Analysis Profiles (OCAPs) and Technical Competency Profiles (TCPs).

What are the key features of the career field technical content standards?

Key features of Ohio Career Field Technical Content Standards are:

1) Broad as well as specialized technical competencies
2) Embedded Mathematics, English Language Arts, Social Studies and Science Academic Content Standards benchmarks
3) Workplace readiness competencies (communications, safety/health/environment, problem solving and critical thinking, leadership/management/teamwork, information technology applications, ethics/legal

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responsibility, business systems, career development/employability)

How does the Career Field Initiative impact what happens in the classroom?

1) Workplace readiness knowledge and skills – particularly those related to business processes that are core to the career field – and technical competencies that are both broad and specialized should put a notable emphasis on project-based instruction where students can learn and practice specialized skills in a broad context.
2) Mathematics, English Language Arts, Social Studies and Science Academic Content Standard aligned with technical content standards should dictate collaboration between academic and career-technical teachers and the development of integrated academic/technical projects.
3) Updated technical content standards should lead to student course taking patterns that reflect high level academic credits earned.

Who can be contacted for more information about career fields, pathways and technical content standards?

Staff members within the Office of Career-Technical and Adult Education, Ohio Department of Education, are available to assist with overall and career field-specific questions. The key contact is Rick Mangini, associate director, Pathways, Programs and Services. Mr. Mangini can be reached at
(614) 752-5073.