Standards by Design Tool Instructions

INTRODUCTION

The Ohio Department of Education & Workforce created the Standards by Design tool to help both career-technical and academics educators instruct their students more efficiently and effectively. Often, the skills being taught in career-technical education classrooms are simply practical applications of the concepts being taught in academic classrooms across the hall. To spotlight these similarities, career-tech and academics educators across Ohio examined the teaching standards and competencies of all career pathways and academic subjects. The Department then compiled the results in a searchable database called the Standards by Design tool for all educators to use.

Educators can use the tool in several ways to design instruction. For example, a student may ask, "Why are we learning this? I'll never use this in real life!"
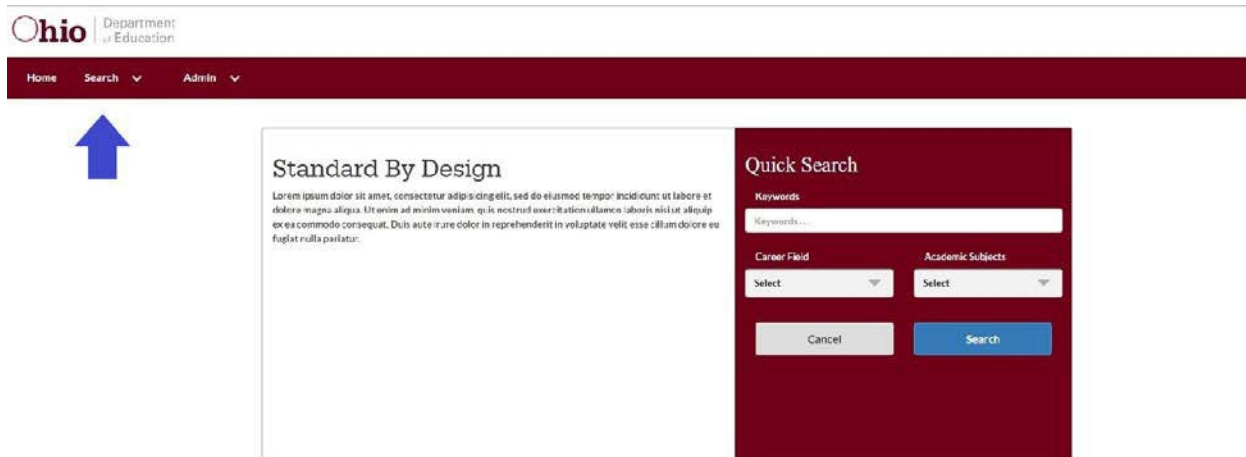
The Standards by Design tool can answer this and similar questions. Educators can use it to uncover new ideas for lesson plans or build instructional units they will deliver concurrently with their colleagues in multiple courses. Schools can use the Standards by Design tool to promote collaboration among faculty. They also can use it to make use of precious instruction time to deliver simultaneous credit.

The Department has provided a few examples of standards alignments to help walk educators through the process of using the Standards by Design tool. Be sure to have all your educators explore the database.
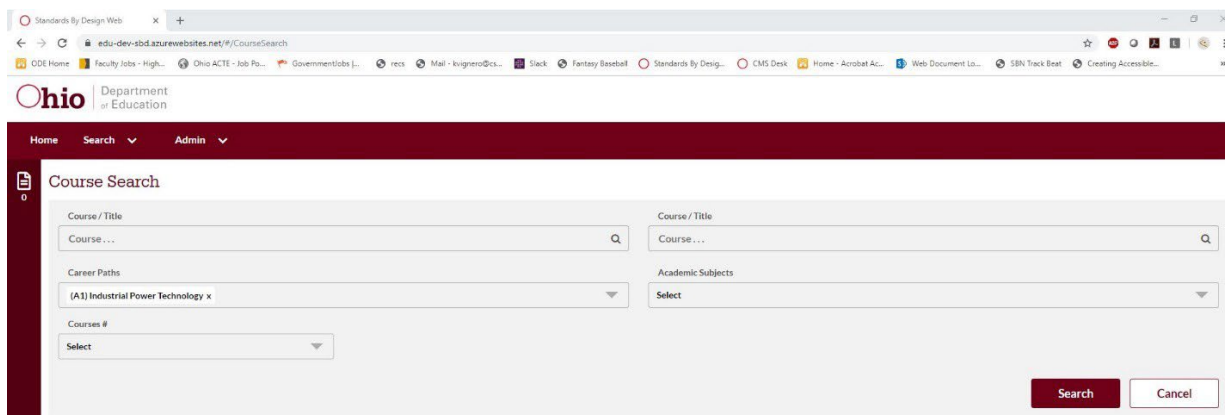
HOW TO: Search a Course

The course Search function helps educators discover and use alignments for specific courses.
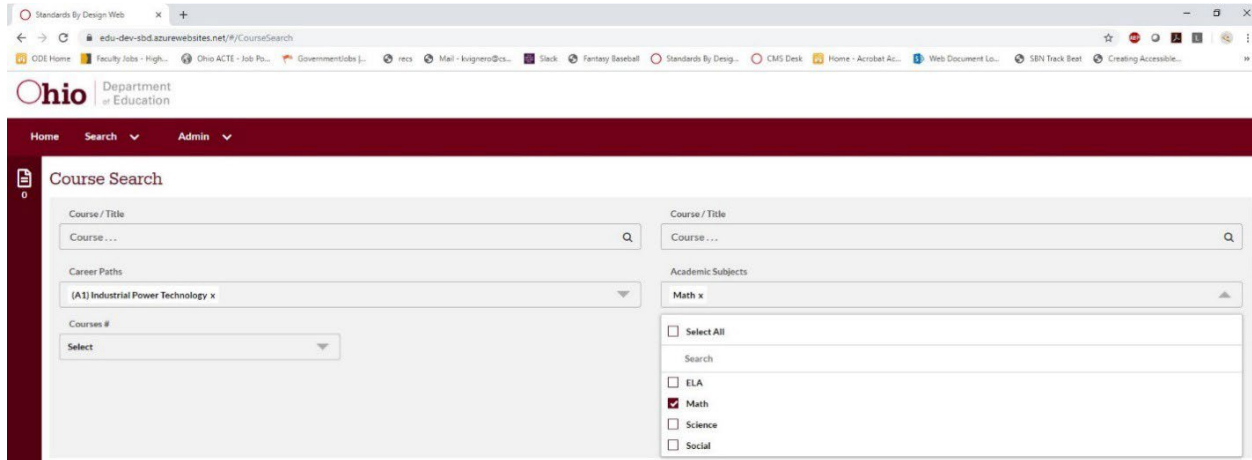
To begin using the function, click the Search tab at the **top left** of the Standards by Design Quick Search page, as pictured here.

From the Search page, pictured below, users can search for alignments in two different ways. One way is to fill in the name of a course in the Course/Title search bar, at top left, to find all alignments for that course. Another is to search for alignments between a known career-technical education course and an academic content area.
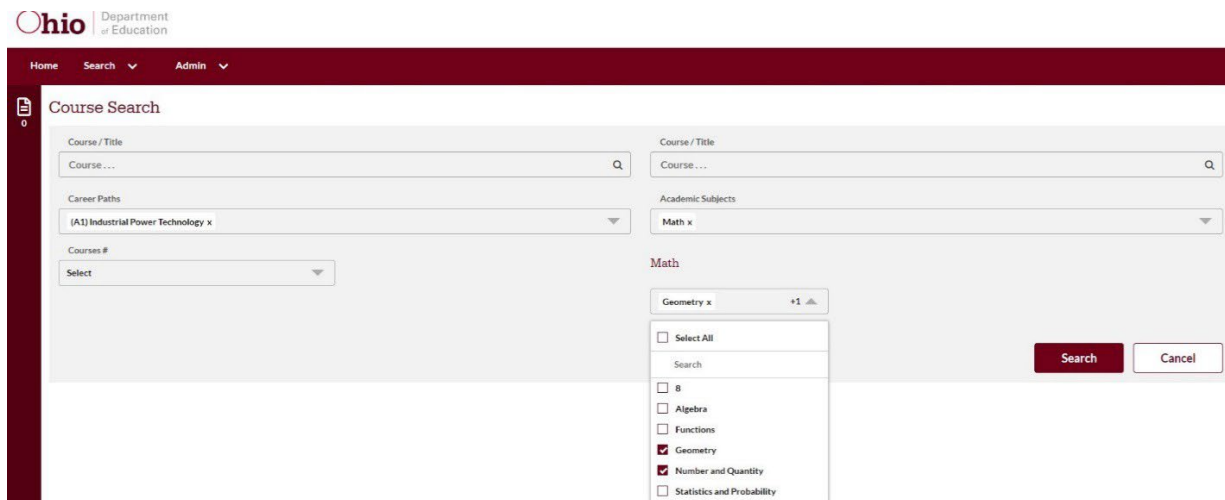
Or, click on the Career Paths selection box to produce a list of Ohio's career-technical education career pathways, listed in order of their alphanumeric EMIS designations. For example, explore the alignments between the Industrial Power Technology career pathway and the Geometry and Number and Quantity strands in math. To do so, click the Career Paths box, pictured below, and select (A1) Industrial Power Technology.

In the Academic Subjects search box, pictured below, select Math.

This action will generate a search box directly under the Academic Subjects search box for strands within Math. In this newly generated search box, pictured below, select the Geometry and Number and Quantity strands.

In the Courses # search box, pictured below, select the Hydraulics and Pneumatics and Outdoor Power and Technology courses. With all required fields filled, click the Search button at the bottom.

The resulting page displays the search results. The column on the left shows the career-tech pathway. The middle column displays the academic subject. The column on the right shows the number of aligned competencies.

Click the down arrow to the right of the Alignment column to expand the alignments box and display the career-technical courses on the left. Then, click the number of alignments to expand the list of the individual career-technical competencies aligned to the academic subject.

To view the academic subject competencies rather than career-technical competencies, click the Toggle Alignments button.

Once you have selected the competency alignments you want to highlight, click the Generate button to produce the alignments document. Then, either save the results to your profile or download them as a PDF.
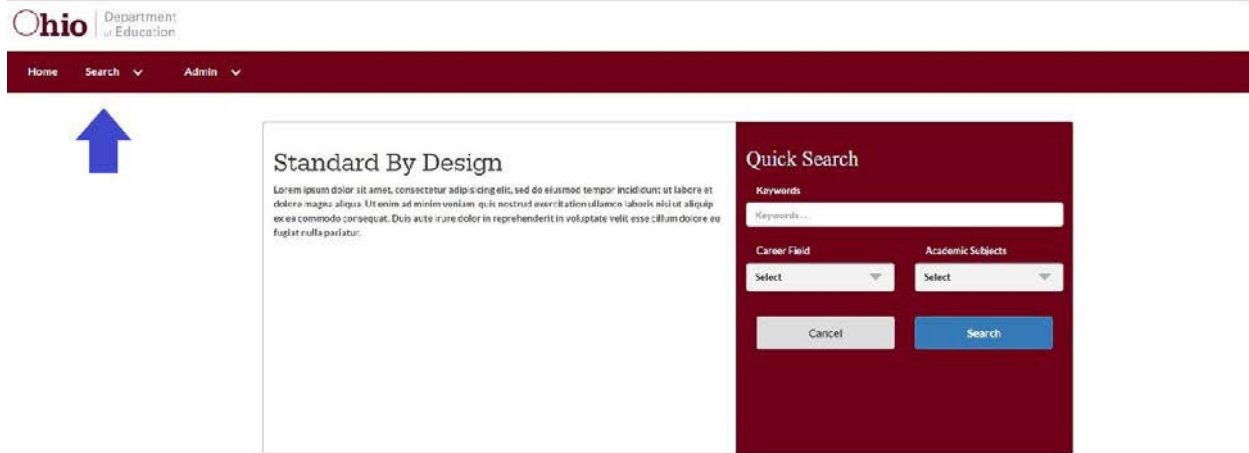
Report Results

Hydraulics and Pneumatics ↔ Number and Quantity

CTE Courses	Academic Course
Hydraulics and Pneumatics	Number and Quantity
Competencies:	**Standards:**
Test, diagnose and repair or replace fluid conveyance components (e.g., hoses, lines, fittings).	**A** 1.7.RP.1.Analyze proportional relationships and use them to solve real-world and mathematical problems.7.RP.1 Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. For example, if a person walks 1/2 mile in each 1/4 hour, compute the unit rate as the complex fractionG (1/2) /(1/4) miles per hour, equivalently 2 miles per hour. **A** 1.N.Q.1.Reason quantitatively and use units to solve problems.N.Q.1 Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.

Non-Aligned Competencies

Formulate and prepare rations and diets for production, specialty markets and special diets

Select and implement feeding and watering practices and systems, based on the animal population and purpose

Simulate the administration of drug treatments and vaccines, following quality assurance guidelines, and monitor common adverse effects and potential problems associated with administration

Contrast formal/symmetrical, informal/asymmetrical and radial balance.

Recognize the use of proportion/scale.

Differentiate between raster- and vector-based layouts.

Research and analyze trends and local markets for opportunities.

Non-Aligned Standards

2.7.SP.2.Broaden understanding of statistical problem solving.7.SP.2 Broaden statistical reasoning by using the GAISE model. a. Formulate Questions: Recognize and formulate a statistical question as one that anticipates variability and can be answered with quantitative data. For example, ΓÇ£How do the heights of seventh graders compare to the heights of eighth graders?ΓÇ¥ (GAISE Model, step 1)b. Collect Data:┬áDesign and use a plan to collect appropriate data to answer a statistical question. (GAISE Model, step 2)c. Analyze Data: Select appropriate graphical methods and numerical measures to analyze data by displaying variability within a group, comparing individual to individual, and comparing individual to group. (GAISE Model, step 3)d. Interpret Results: Draw logical conclusions and make generalizations from the data based on the original question. (GAISE Model, step 4)

1.N.Q.1.Reason quantitatively and use units to solve

HOW TO: Alignment Search

The alignment search function helps educators discover and use alignments for specific career-technical education competencies and academic subject standards.
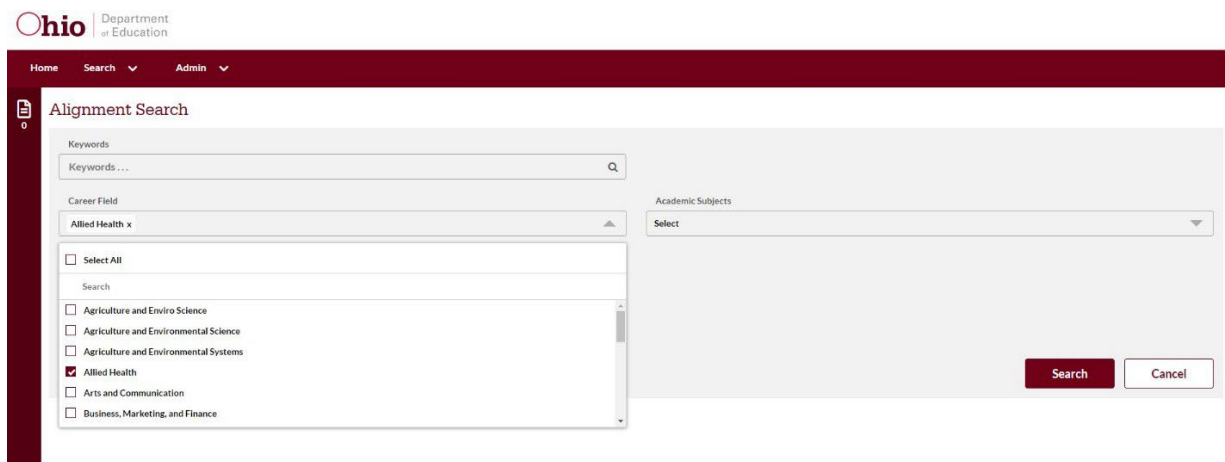
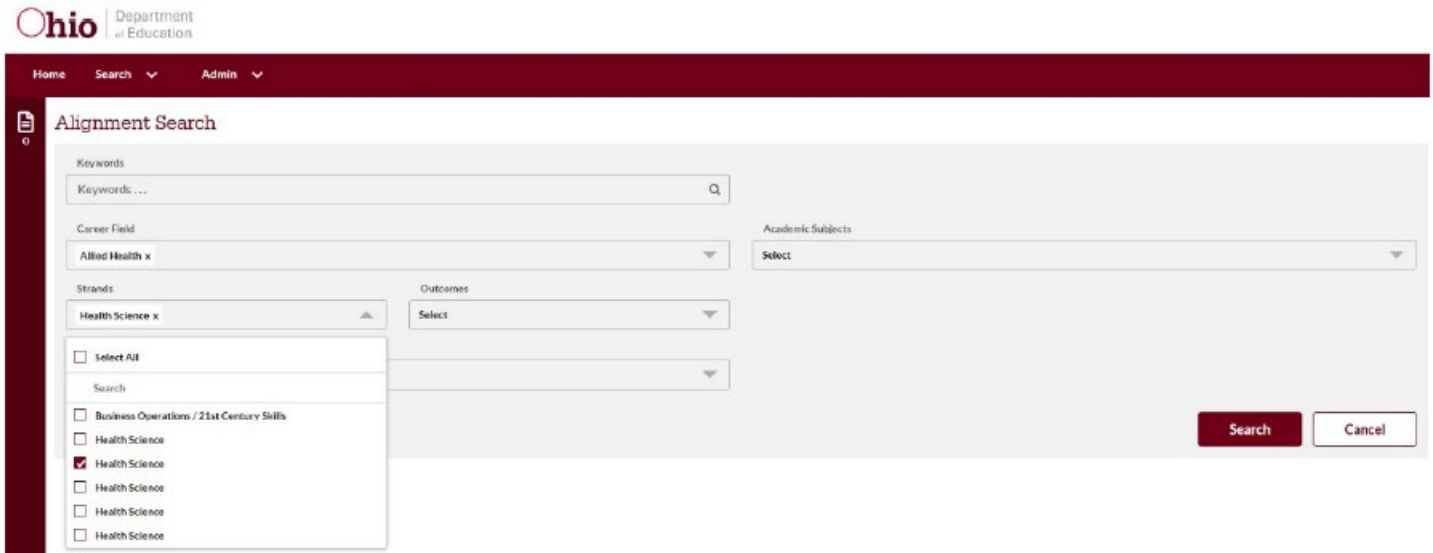Click the Search tab at the top left of the page, as pictured below.

From the Alignment Search page, pictured below, you can execute a variety of searches to find alignments. Fill in the Keywords search bar or search for alignments between chosen career-tech competencies and academic subject standards.

Click on the Career Field selection box to produce an alphabetical list of various career-technical pathways. The example below explores the alignments between the Disorders of the Skin, Glands, Hair and Scalp outcome in the Health Science strand of the Allied Health career pathway and English language arts.

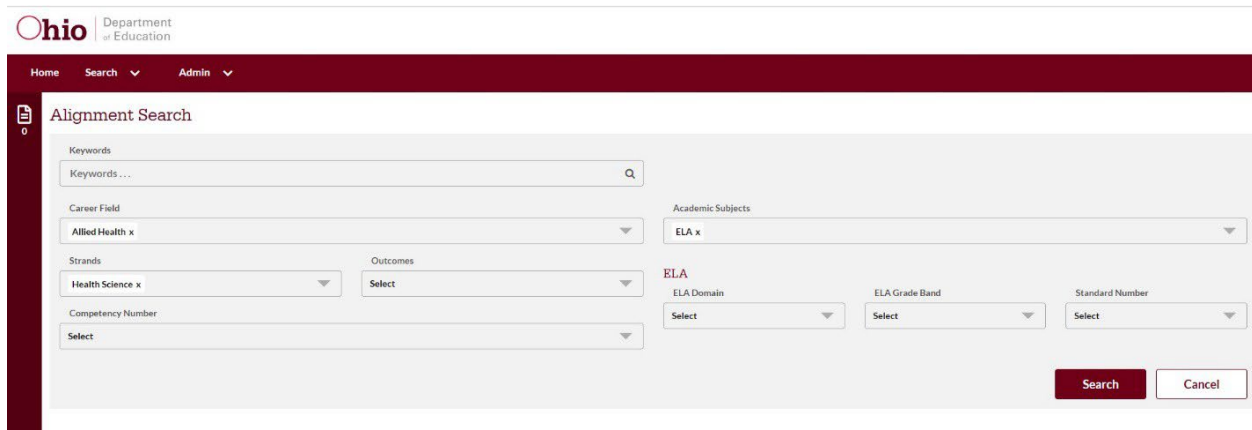In the Career Field selection box, choose Allied Health.

In the Strands selection box, pictured next, select Health Science.

In the Academic Subjects selection box, pictured below, select ELA.

You can refine the search by selecting specific career-technical competencies and academic standards, but in this example, we will search for alignments between the entire career-technical education outcome and all of English language arts.

When you have filled in all desired search parameters, click the Search button. The resulting page, pictured below, will display the career-technical career field in the left column, the academic subject in the middle column, and the number of alignments in the right column.

To view the academic subject competencies rather than the career-technical competencies, click the Toggle Alignments button.

Once you have selected the alignments you want to highlight, click the Generate button to generate the alignments document. Then, either save the results to your profile or download them as PDFs.