



U.S. Department of Labor O*NET and Industry Model Competency Frameworks in the Credential Registry

Now more than ever, workers, employers, and educators need to clearly understand the connections between credentials, competencies, and occupations. As millions of people seek education and training programs that will help them re-skill for opportunities in rapidly changing economic circumstances, it's critical for them to know what skills they will gain from these programs and how they are aligned to jobs. The U.S. Department of Labor's [O*NET](#) and [Industry Model](#) competency frameworks available in the Credential Registry provide unprecedented opportunities for aligning education and training competencies to job skills.

Connections between education programs and occupations have typically been defined broadly, for example by aligning programs via the U.S. Department of Education's Classification of Instructional Programs ([CIP](#)) to the U.S. Department of Labor's Standard Occupational Classifications ([SOC](#)). This type of alignment is included in the Credential Registry. But today we all need much more granular alignments between educational competencies and job skills, both because work roles are changing rapidly and because people need to be able to understand and communicate the specific skills they already have in relation to what employers seek.

Credential Engine's linked open data schemas play a critical role in defining the full spectrum of connections among credentials, courses, programs, assessments, competencies, occupations, and job skills. The [Credential Transparency Description Language](#) specifications (CTDL, CTDL-ASN, and Quantitative Data) provide over 500 terms for describing credentials, competencies, and related data, including importantly occupational alignments and job skills.

The Credential Registry provides open tools to publish competency and skill data in CTDL-ASN. There are currently over 425 competency frameworks in the Registry containing over 44,500 competencies, growing rapidly as more organizations publish their competencies and skills. The Registry provides vital infrastructure for competency frameworks by making them publicly available as linked open data-- which is both human readable and machine actionable-- enabling systems to read the structured data and connect it with other data. For example, related credentials and/or occupations can be presented to users as part of an array of data linked to competencies. So as changes occur in credentials and competencies offered and in jobs and skills in the marketplace, linked open data allows these changes to be signaled in real time back to learners and workers to adjust their pathways and plans as necessary, like alternate routes on a map.

In the Registry, competencies from multiple organizations can be aligned to competencies from the U.S. Department of Labor (DOL) O*NET and the Competency Model Clearinghouse Industry Models. The DOL competency models provide nationally recognized grounding for defining the knowledge, skills, abilities, tasks, and work activities in specific occupations and work roles, as well as cross-functional skills and foundational competencies mapped to multiple occupations. They have been developed and are continuously maintained in collaboration with employers and industry experts. They provide an extremely robust, long-term representation of taxonomy for occupations and work roles. As the world of work rapidly changes, real-time in-demand skills information is also critically important, but this information needs context to be most useful. U.S. DOL models provide grounding and contextualization for mapping and aligning all different types of competencies and skills from various sources, including education and training providers as well as dynamic skills data collected from the web.

Any organization can increase the relevance of their credential offerings by using the Credential Registry to publish competency frameworks and create linked open data alignments to DOL competencies, as well as alignments to any other competencies in the Registry. For example, [Education Design Lab](#) aligns the [competencies](#) in their 21st Century Skills Badges to [O*NET cross-functional skills](#). This adds meaning and specificity to the learning represented by these digital micro-credentials, making it easier to understand how they are valuable for multiple occupations.

Linked open data competency to job skill alignments have many benefits, including:

- Digital credentials such as interoperable learning records and badges can include competency achievements that signal job readiness.
- Education and training providers can communicate that the competencies included in their programs are aligned to job requirements.
- State agencies can evaluate the value of education and training programs for re-skilling workers.
- Career services and pathway tools can help people match skills and training to jobs.

Now more than ever these are important reasons for using linked open data to communicate the value of competencies to all stakeholders.

To learn more about O*NET data published as CTDL-ASN, go to the [O*NET machine-readable data page](#). To publish your competency frameworks to the Credential Registry, go to our “[Publish](#)” page, refer to the [technical guide](#), or contact us at info@credentialengine.org.



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