Industrial engineers

Design, develop, test, and evaluate integrated systems for managing industrial production processes, including human work factors, quality control, inventory control, logistics and material flow, cost analysis, and production coordination.

Cognitive and mental requirements

The qualifications that workers need to use judgment, make decisions, interact with others, and adapt to changes in jobs.

In 2022, work was controlled by people for 33.3 percent of industrial engineers, and work was self-paced for 58.5 percent.

Table 1. Percentage of industrial engineers with cognitive and mental requirements, 2022

Requirement	Yes	No
Interaction with general public	58.2	41.8
Working around crowds	-	100.0
Telework	10.4	89.6
Work review: Supervising others	9.4	90.6
Work review: Presence of supervisor	79.5	20.5

Source: U.S. Bureau of Labor Statistics, Occupational Requirements Survey

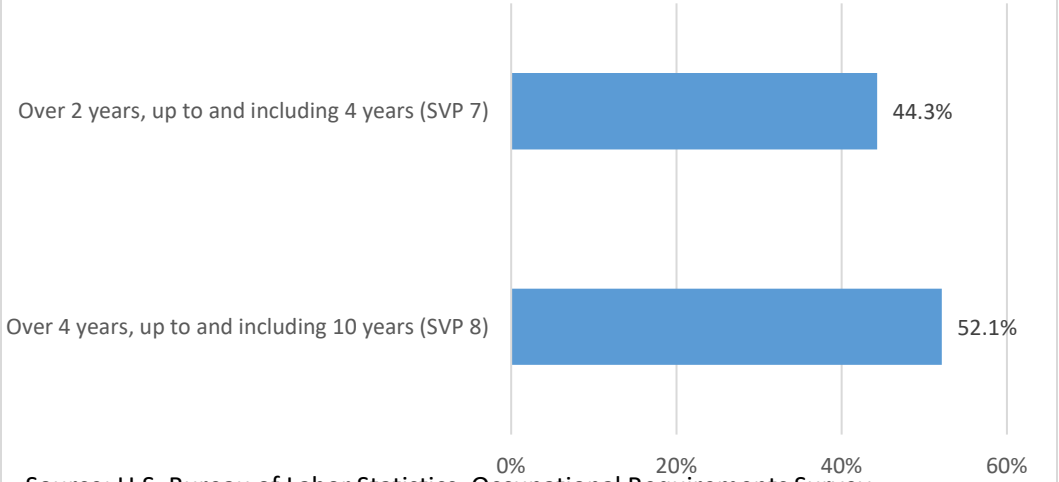
Education, training, and experience requirements

The minimum level of formal education required, credentials necessary, on-the-job training, and prior work experience necessary for average performance in jobs.

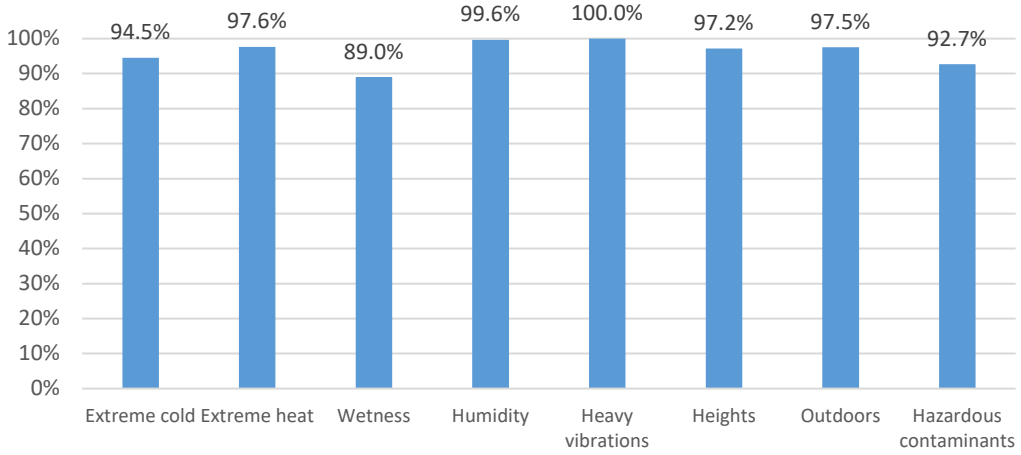
In 2022, credentials were required for 9.1 percent of industrial engineers. Prior work experience was required for 68.2 percent and on-the-job training was required for 73.9 percent.

A bachelor's degree was required for 94.9 percent of industrial engineers.

Chart 1. Percentage of industrial engineers by specific preparation time (SVP) level, 2022



Source: U.S. Bureau of Labor Statistics, Occupational Requirements Survey



Source: U.S. Bureau of Labor Statistics, Occupational Requirements Survey

Environmental conditions

The various tangible or concrete hazards or difficulties that are in the vicinity of where jobs' critical tasks are performed.

In 2022, a quiet noise exposure was present for 10.4 percent of industrial engineers, and 84.0 percent were exposed to moderate noise. Personal protective equipment (PPE) was used by 24.4 percent of workers to mitigate noise exposure and was not used by 75.6 percent.

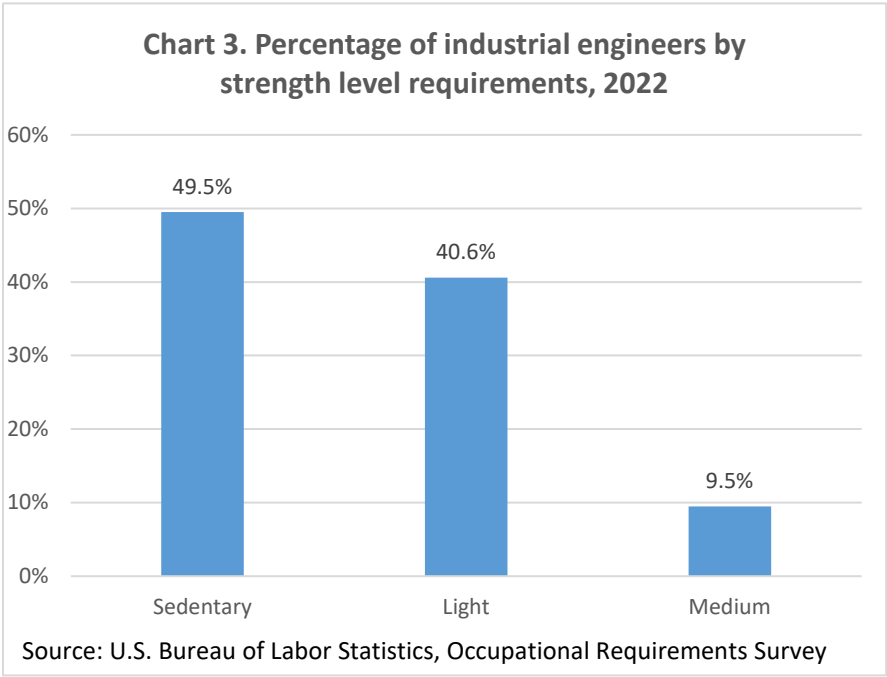
Physical demands

Refer to the physical activities required to perform tasks in jobs. The presence and, in some cases, duration of these activities are published.

In 2022, reaching at or below the shoulder was required for 47.1 percent of industrial engineers and was not required for 52.9 percent. For 10.9 percent of workers, reaching at or below the shoulder was seldom performed, and for 36.1 percent reaching at or below the shoulder occurred occasionally.

Performing work in low postures was required for 36.3 percent of industrial engineers and was not required for 63.7 percent.

The choice to sit or stand when performing critical tasks was available to 86.6 percent of industrial engineers. On average, workers spent 70.2 percent of the workday sitting and 29.8 percent of the workday standing.



Source: U.S. Bureau of Labor Statistics, Occupational Requirements Survey

Table 2. Percentage of industrial engineers with physical demands, 2022

Requirement	Yes	No
Choice of sitting or standing	86.6	13.4
Driving	8.6	91.4
Climbing structure-related ramps or stairs	22.7	77.3

Source: U.S. Bureau of Labor Statistics, Occupational Requirements Survey