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by B J

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Graduate and Continuing Education in Engineering Technology

Name

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Course

Instructor

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Graduate and Continuing Education in Engineering Technology

According to the US Bureau of Labor Statistics (BLS), most technicians need at least a bachelor's degree in their area to obtain work. Some engineers may require graduate degrees to improve their careers, get licenses, or support research. According to the BLS, engineers who give services directly to the people must be licensed; mechanical, civil, and environmental engineering are among the disciplines that frequently need licenses. Most states require experts to undergo continuing education to keep their licenses. To become a licensed engineer, one must pass two examinations and have the necessary job experience. The Fundamentals of Engineering (FE) test is available to students nearing graduation. Therefore, engineers should complete four years of professional experience after completing the FE to sit for the Principles and Practice of Engineering test and become licensed. Accredited engineers may need ongoing education to stay eligible, and professional certifications can help them grow in their careers.

In addition, many states demand Continuing Professional Competency (CPC) criteria to keep their licenses active. CPCs might be in professional development hours (PDHs), which have different criteria depending on the state. Most states have an hour threshold that must be satisfied once a year or twice a year. A PDH is a one-hour session of training or presentation that satisfies specific criteria. Similarly, the national criteria for what comprises a PDH and the number of hours they are worth have been set by the National Council of Examiners for Engineering and Surveying (NCEES). PDH assignments might vary based on the duration of an event and the level of effort required. A single PDH is awarded for studying or presenting at a workshop, whereas a semester-long course at an approved college is granted 45 PDHs, according to NCEES (n.d). This group also determines what actions are not included as PDHs.

One of the career options in this field is becoming a mechanical engineer. As one of the most diverse engineering disciplines, analyze and solve issues by developing and fabricating thermal or mechanical devices. As they evaluate various issues, mechanical engineers perform extensive study and testing and build several prototypes to test their answers. Another career option is civil engineering. Engineering techniques are used to plan, construct, and design buildings, bridges, roads, airports, and other significant construction projects by these professions. Civil engineers are in charge of these operations. Their responsibilities may include performing analysis and research of each construction site, confirming the structural integrity of construction materials, evaluating construction tools, and presenting their results to the public. The final career option is being an environmental engineer. Engineers of this sort utilize engineering sciences to find answers to environmental issues. Some environmental engineers work on worldwide issues like deforestation, global climate change, and ocean pollution. In contrast, others work on more local matters like recycling, public health, and garbage disposal.

Consequently, most professional engineering firms provide well-recognized credentials. These qualifications may demonstrate professional proficiency or allow a person to specialize in a particular engineering sector. Some engineering organizations issue certificates to businesses that allow them to conduct inspections or work with specialized equipment. Organizational certifications, like professional licensing, may require a passing score on an exam as well as ongoing education requirements to retain. The American Society for Quality offers the Quality Engineer Certification to engineers from various disciplines with expertise in quality control (ASQ) (ASQ, n.d). To be eligible for this certificate, candidates must have several years of work experience in a judicial position. ASQ also provides certificates in Reliability Engineer, Quality Software Engineer, and Six Sigma. Continuing with studies, whether one is a mechanical,

environmental, civil, or another type of engineer, may help them advance their profession and reach new heights. They can choose the path that best suits their career objectives from various graduate degrees, licensing and other professional qualifications.

References

ASQ. (n.d.). Certified Quality Engineer - ASQ Certification for Engineers. https://asq.org/cert/quality-engineer

NCEES. (n.d.). History. https://ncees.org/about/history/

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