

SaGES Abstract Submission
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Is the lack of surveying in a civil engineering program a problem?

There has been a significant decline of surveying education in civil engineering programs across the nation. Based on a study by Gillins, Olsen, and Schultz (2016), which evaluated 239 accredited bachelor's programs in civil engineering in the United States, 35.5% of the bachelor's programs in civil engineering do not require students to take any courses in surveying. This study also found 27.6% of those civil engineering programs do not even list surveying as an elective for civil engineering students. In addition, it was stated that the average number of required semester credits in surveying required within civil engineering curricula in the United States has significantly decreased, as shown in the figure below:

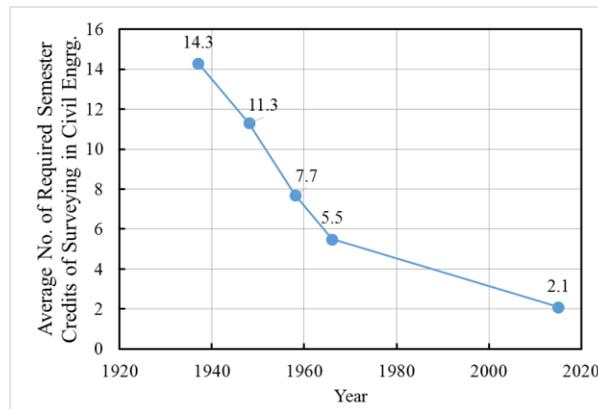


Figure. Decline in the average number of required semester credits of surveying in civil engineering curricula in the United States.

The topic of surveying is important to the engineering licensing process since it is one of the specified topics covered on the Fundamental of Engineering (FE) exam. The National Council of Examiners for Engineering and Surveying (NCEES) is responsible for the development and administration of the FE exam. For this exam, NCEES completes a Professional Activities and Knowledge Study (PAKS) every six to eight years. The study invites numerous professional engineers to complete an online survey about the professional activities and knowledge/skills required of a graduate engineer. The results of this study are used to update the examination specified topics for the exam and to help NCEES ensure its licensing exams remain relevant to current professional practice.

The American Society of Civil Engineers, Utility Engineering & Surveying Institute, Surveying & Geomatics Division, Education Committee wants to bring attention to the consequences of this trend and suggest some possible remedies for consideration by the civil engineering community. This paper will discuss the possible remedies and consequences of surveying losing its prominence in civil engineering education.