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U.S. moving to require master's degree for engineers

The American Society of Civil Engineers (ASCE) is pushing to raise the bar for engineers who want to qualify for a licence to practice.

On February 19, ASCE released a new edition of a report originally released in 2004, entitled "Civil Engineering Body of Knowledge for the 21st Century: Preparing the Civil Engineer for the Future."

The report outlines the body of knowledge that future engineers will need, and includes 24 specific goals for levels of achievement. Among these, it recommends that the engineering undergraduate degree be restructured, and that the prospective licensee should take the equivalent of 30 additional credits or a master's degree and practice experience in order to qualify for licensure.

In announcing the publication, ASCE noted that many other professions today, everyone from accountants to teachers to occupational therapists, have increased their requirements, with "the master's degree now replacing the bachelor's as the required degree for professional practice."

In contrast, the engineering degree has remained an undergraduate degree. At the same time the projects that engineers tackle are much greater and more complex now.

In the U.S. the State of Nebraska became the first state to introduce legislation to change the licensing requirement for engineers to meet a master's degree equivalent by 2015. The National Council for Examiners for engineering and Surveying (NCEES) voted to modify its model law to require that by 2015 admission to the professional licensure exam to require among other requirements, "an additional 30 credits of acceptable upper level undergraduate or graduate level coursework."

Marie Carter, P.Eng., acting chief executive officer and director of professional and international affairs at Engineers Canada in Ottawa, says there are no plans to move to a master's degree requirement for potential licensees in Canada. Still her organization is "reviewing the situation." She says that since this seems to be a worldwide movement, they don't want Canadian engineers to be left at a disadvantage.