

Council of American Structural Engineers
Position Statement on
Minimum Education Requirements for Structural Engineering

Approved by the CASE Executive Committee on August 21, 2009

Position

The Council of American Structural Engineers (CASE) supports requiring a Bachelor's Degree plus a qualified Master's Degree or equivalent as the minimum education prerequisite for licensure as a Structural Engineer of Record.

Rationale

CASE is a Coalition of the American Council of Engineering Companies (ACEC) that represents the interests of Structural Engineering; one of the numerous specialties within Civil Engineering focusing on creating efficient structural design solutions that also assure public safety under all conditions.

The governing codes and processes related to Structural Engineering are becoming increasingly complex and based in advanced analysis techniques. The typical program leading to a Bachelor Degree in Civil Engineering encompasses a broad spectrum of engineering concepts from traffic and surveying, water and wastewater treatment, and municipal utility engineering to building and bridge design. While this provides a good introduction to the profession, it does not provide sufficient training to the wide variety of principles, codes, standards, and advanced analysis techniques involved in structural design. It is actually possible to obtain a Bachelor's Degree in Civil Engineering without taking any courses in structural design.

Engineering specialties directly involve public safety and must be supported by sufficient educational requirements. In the case of structural engineering, such training is best provided to new engineers by a qualified master's degree, or at least 30 additional hours of course work of equal academic quality beyond the Bachelors Degree. The American Society of Civil Engineers Policy on the Academic prerequisites for Licensure and Professional Practice (ASCE Policy Statement 465) concurs and cites the need for a Body of Knowledge that includes the fundamentals of math, science, humanities, social science as well as specific technical training in the specialty and in professional practice.

This position statement does not suggest that experienced and licensed Structural Engineers with only a Bachelors Degree are not sufficiently trained or qualified to practice. It only recognizes that the additional on the job training that they received during the course of their careers has provided them with the needed basis and understanding of the current design processes and requirements. This position is intended to apply to new engineers who are entering the profession and seeking licensure.

This position is consistent with the CASE support for separate licensure for structural engineers and the encouragement that all appropriately qualified civil engineers practicing structural engineering obtain a structural engineering license. Refer to the CASE Position Statement on Separate Structural Engineering Licensure for details.

This position is not endorsed for application throughout all engineering disciplines represented by ACEC.