

## Editorial Note on Architectural Engineering

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### Editorial

Mechanical, electrical, structural, plumbing, lighting, acoustics, and other engineering specialties are among them. Architectural engineers concentrate on all of these areas in order to construct structures that are completely compliant with all parameters, including building structural integrity, design and analysis of heating, ventilation, and air conditioning systems, efficiency and design of plumbing, fire protection, and electrical systems, acoustic planning and lighting, and energy conservation issues. The design of buildings and the continuous management of extremely intricate construction projects are two of an architect's key tasks. The educational qualifications for this position are higher than those for architectural engineering jobs. Although a bachelor's degree in architecture is required, most businesses prefer candidates who have earned a master's degree. In the United States, institutions with architecture programmes provide students the opportunity to enrol in a five-year Bachelor of Architecture programme with a strong emphasis on design, technology, and architecture history. Students are entitled to take the Architect Registration Examination to get licenced as a professional architect after completing all academic prerequisites.

Architectural engineers design structures and building systems using both practical and theoretical knowledge. The goal is to design high-performance buildings that are environmentally friendly, robust, and economically viable while also ensuring occupant safety, health, comfort, and productivity. Architectural engineers apply their discipline-specific expertise to conceptualise, design, construct, operate, and maintain built environments in interdisciplinary team environments, combining scientific principles from structural, mechanical, electrical, lighting, acoustical, and construction engineering. Architectural engineering graduates are commonly regarded as creative systems engineers, as they have received formal instruction in creativity and design through architectural design studios, in addition to a strong technical background. An architectural engineer designs and develops structurally sound structures that give value to a community using the most up-to-date scientific knowledge and technologies. They take into account important issues such as comfort, sustainability, and safety in their job. You can decide if architectural engineering is the perfect job for you by learning about the roles and responsibilities of an architectural engineer. We'll go over what an architect engineer is, how they differ from architects, how much they make, what kinds of jobs they may get, and how to get started in architectural engineering in this post.

An architect engineer is a person who combines the disciplines of architecture and engineering to design, develop, and maintain buildings that are structurally sound and energy efficient. To create healthy, productive, and economically viable communities, they apply sustainable architectural solutions, scientific building methods, and green energy systems. Architectural engineering is a new job field that is heavily reliant on technology. Architect engineers use advanced computer tools and abilities for the majority of their design and planning work. The impact of architectural engineers on society is long-lasting. Because individuals spend 86 percent of their time indoors, architects focus on creating indoor settings that value the human condition and society's well-being. They also promote sustainable practises by reducing

energy usage and the carbon footprint of residents, to the point that architectural engineering has been named the profession with the greatest potential to combat climate change. Architectural engineers have a plethora of job choices available to them. Architects, consulting engineers, real estate developers, building equipment designers, manufacturers, designers and producers of building materials and products, facilities engineering and management groups, building owners, specialty contractors, forensic engineering consultants, building technology consultants, software developers, contractors, and construction managers are all common employers for graduates. Finance, outer space building, governance and policymaking, code development, and many other non-traditional career categories for architectural engineers exist. Many Penn State AE graduates have senior positions in their companies or even run their own companies.

The focus of architecture is on the spatial design of the structure and whether it serves the needs of the users. Other areas of building, such as structural, safety, electrical design, and acoustic design, are not given much consideration. Following the initial planning phase, a group of recognised professionals in these fields gives their help. Landscape, healthcare, government, residential, commercial and educational architecture are only a few examples of different forms of architecture.

### The important distinction

Architectural engineering can be thought of as a natural progression from architecture. An impartial team of licenced architectural engineering professionals evaluates the drawings (floor plans, sections, and elevations) produced by the architecture using spatial planning. Architectural engineering can be thought of as an extension of architecture. The architecture use spatial planning to create drawings (floor plans, sections, and elevations) that are reviewed by a team of licenced architectural engineers. Because the two streams differ, some architecture firms are also architectural engineering firms, which mean they don't have to outsource their projects and may keep complete control of a project from start to completion. The creative experience vs the method required are the major distinction between architecture and architectural engineering.

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Received December 10, 2021; Accepted December 15, 2021; Published December 20, 2021

Citation: Tian S (2021) Editorial Note on Architectural Engineering. Int J Adv Innovat Thoughts Ideas 10:163.

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