

Architectural Engineering

STARTING SALARY (FOR CIVIL ENGINEERING): \$51,793

MEDIAN INCOME (FOR CIVIL ENGINEERING): \$79,340



Architectural engineering, according to the National Society of Architectural Engineers (NSAE), is “the application of engineering principles to the design of technical systems of buildings.”

Do you have the ability to be analytical as well as creative? Can you think systematically and pragmatically, and then turn around and be creative and spontaneous? If so, architectural engineering may be for you. Architectural engineers need to be aesthetic as well as technical, creative as well as rational. They need to know if what looks good on paper is also technically possible.

Architectural engineers have four major areas of specialization or emphasis:

1. **Structural Engineering** - They consider the forces of hurricane winds, snow, or earthquakes in building design.
2. **Mechanical Systems** - Are concerned with regulating interior air flow; determining wall thickness; choosing materials; and designing interior and exterior heat sources, plumbing, heating, and air conditioning.
3. **Electrical and lighting systems** - Are responsible for distributing electricity throughout the building.
4. **Construction Management** - Are responsible for managing construction projects; they focus on safety, cost, and construction methods.

Currently, there are only seventeen accredited architectural engineering programs in the United States. Check out the Architectural Engineering Institute (AEI) of the American Society for Civil Engineering at www.aeoinstitute.org for more information on this exciting branch of engineering.

Job Outlook

Employment of architectural engineers, similar to civil engineers, is expected to grow 20 percent from 2012 to 2022, about as fast as the average for all occupations. Job openings for civil engineers are expected to be numerous through 2022.

Employment of architects is projected to grow 17 percent from 2012 to 2022, faster than the average for all occupations. Competition for jobs will be strong as the number of applicants continues to outnumber available positions.

Industries with the highest levels of employment in this occupation:

1. Architectural, Engineering, and Related Services. 50%
2. State Government (OES Designation)
3. Local Government (OES Designation)
4. Nonresidential Building Construction
5. Federal Executive Branch (OES Designation)

Source: US Bureau of Labor Statistics

Glossary of Terms

Analytical - relating to or using analysis or logical reasoning (google.com)

Accredited – to give official authorization to or approval of (merriam-webster.com)

Aesthetic - of or relating to art or beauty (merriam-webster.com)

Distribute - to spread out so as to cover something (merriam-webster.com)

Pragmatic - dealing with the problems that exist in a specific situation in a reasonable and logical way instead of depending on ideas and theories (merriam-webster.com)

Rational - based on facts or reason and not on emotions or feelings (merriam-webster.com)

Spontaneous - done or said in a natural and often sudden way and without a lot of thought or planning (merriam-webster.com)

Systematic Thinking - the process of understanding how systems behave, interact with their environment and influence each other (Wikipedia, 16 January 2014 at 03:01)

ABET Accredited Programs in Architectural Engineering

School Name	Location	Website	Program and Degree Name
California Polytechnic State University, San Luis Obispo	San Luis Obispo, CA, US	www.calpoly.edu	Architectural Engineering, BS
Drexel University	Philadelphia, PA, US	www.drexel.edu	Architectural Engineering, BS
Illinois Institute of Technology	Chicago, IL, US	www.iit.edu	Architectural Engineering, BS
Kansas State University	Manhattan, KS, US	www.k-state.edu	Architectural Engineering, BS
Milwaukee School of Engineering	Milwaukee, WI, US	www.msos.edu	Architectural Engineering, BS
Missouri University of Science and Technology	Rolla, MO, US	www.mst.edu	Architectural Engineering, BS
North Carolina Agricultural and Technical State University	Greensboro, NC, US	www.ncat.edu	Architectural Engineering, BS
Oklahoma State University	Stillwater, OK, US	www.osu.okstate.edu	Architectural Engineering, BARCHE
Pennsylvania State University	University Park, PA, US	www.psu.edu	Architectural Engineering, B.A.E.
Tennessee State University	Nashville, TN, US	www.tnstate.edu	Architectural Engineering, BS
Texas A&M University - Kingsville	Kingsville, TX, US	www.tamuk.edu	Architectural Engineering, B.S.
The University of Kansas	Lawrence, KS, US	www.ku.edu	Architectural Engineering, BS
University of Colorado at Boulder	Boulder, CO, US	www.colorado.edu	Architectural Engineering, BS
University of Miami	Coral Gables, FL, US	www.miami.edu	Architectural Engineering, BSAE
University of Oklahoma	Norman, OK, US	www.ou.edu	Architectural Engineering, B.S.
University of Texas at Austin	Austin, TX, US	www.utexas.edu	Architectural Engineering, BS
University of Wyoming	Laramie, WY, US	www.uwyo.edu	Architectural Engineering, BS