

Architectural Engineer



What They Do

An architectural engineer is an on-site engineer who applies their knowledge and expertise of building designs and specifications in managing and supervising construction projects.

Job Duties

- Study and evaluate construction designs and blueprints to guarantee a workable plan
- Ensure the structural integrity and safety of a proposed structure
- Validate the structural and mechanical integrity of buildings in anticipation of wind loads, vibrations and earthquakes
- Coordinate with construction professionals like engineers and contractors to monitor and direct construction operations
- Maintain updated information on safe designs, building codes and material features in order to establish an environmentally friendly and stable building

Job Earnings

For engineers in general, the national average salary is approximately \$87,995 per year.

In **New York State**, the average annual wage for an Architectural Engineer Manager is **\$109,140** for entry level workers and **\$ 186,610** for experienced workers.

Education/Training

To become an architectural engineer, earning a bachelor's degree in architecture is mandatory. The architecture degree programs generally last five years and may be accompanied by a Master of Architectural Engineering.

Job Outlook

In **New York State** based on the total number of annual openings and its growth rate, employment prospects for this occupation are described as **Favorable**, with 80 new jobs per year for Managers and 260 new jobs per year for Engineers.

Career Title - Career Pathway

Ways to start preparing for you future career TODAY!

1

Middle/High School Classes to Take:

- Science – Chemistry, Physics Biology
- Math – Algebra, Geometry, Trigonometry, Pre-Calculus, Calculus
- Design and Drawing for Production (DDP)
- Computer-Aided Design (CAD)
- Computer classes covering programming languages in HTML, CCS, and JAVA

2

Clubs/Extracurricular Activities:

- Project Lead the Way
- Engineering Club
- Math Club
- Physics Club
- Robotics Team
- Chemistry Club
- Coding Club
- STEM-related competitions
- National Technical Honor Society (NTHS)
- SkillsUSA
- Camp Hard Hat

3

Local BOCES/Career & Technical Education Programs:

- Orleans-Niagara BOCES; Building Maintenance and Management, Building Trades, Computer Technology
- Monroe 2-Orleans BOCES; Intro to Construction Trades, Building Trades, Construction Career Cluster, Computer Technology
- Genesee Valley BOCES; Building Trades, Computer Information Systems

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Volunteer Opportunities:

- Habitat for Humanity of Genesee County
- United Way of Genesee County
- Habitat for Humanity of Livingston County
- United Way of Orleans County
- Orleans County Cornell Cooperative Extension
- Habitat for Humanity of Wyoming County

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Local Colleges/Training:

- Iroquois Job Corps
- Alfred State College; Architectural Technology, Building Trades, Construction Engineering Technology, Construction Management
- SUNY Erie; Civil Engineering Technology; Construction Management Engineering Technology; Architecture Technology
- SUNY Buffalo; School of Engineering and Applied Science
- Rochester Institute of Technology; Kate Gleason College of Engineering
- Syracuse University; Civil Engineering