

# Call for Graduate Student Applications in Architectural Engineering



ARCHITECTURAL  
ENGINEERING

The Department of Architectural Engineering in the College of Engineering at The Pennsylvania State University, University Park, PA invites applications for Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degree programs.

Students who are self-funded and those who seek graduate assistantships are both encouraged to apply. The Department of Architectural Engineering offers several graduate research and teaching assistantships for students pursuing the M.S. and Ph.D. degree programs every year.

The renowned faculty of Penn State's Department of Architectural Engineering conduct research in building mechanical, lighting and electrical, and structural systems, architectural acoustics, construction engineering and management, and other disciplines related to building infrastructure. Current research topics of interest include the following:

- design, construction, operation, and maintenance of connected buildings
- communities supported by renewable energy sources and by distributed energy networks
- smart buildings embedded with sensors and supported with artificial intelligence
- dynamic relationships between buildings and their occupants, stakeholders, and design participants
- integration of advanced computational and/or experimental technologies into building and concrete materials
- design of sustainable building envelopes and development of engineering and performance diagnostics
- construction automation and future construction workforce and job site safety
- computer-aided parametric design paradigms and modularization of buildings
- human health, comfort, and productivity implications of indoor environments
- multidisciplinary building research (e.g., smart grids and community microgrids)
- integration of renewable energy sources into buildings and design of smart energy sources for buildings
- security and resilience of smart grids and connected communities
- building technologies and designs that enable sustainable zero-carbon buildings
- indoor particle and gas dynamics and their impacts on building occupants
- hazard-resistant evaluation, design, and construction of resilient building structural and nonstructural systems
- additive manufacturing and automated construction of buildings and infrastructure systems
- full-scale, experimental load-bearing characterization of structural and architectural components
- experimental performance evaluation of building enclosure systems
- development, characterization, performance, and evaluation of innovative, renewable, and energy-efficient construction materials and systems for high-performance, sustainable buildings

Review of applications will begin immediately and continue until the positions are filled. The anticipated start dates are January 2024 and August 2024.

Applications should include detailed C.V., transcripts from previous degrees, a statement of intent, contact information for three references, and TOEFL/IELTS scores (for international applicants). Please choose one or more of the specializations noted above and designate it in your statement of intent. For more information about the department and to apply, please visit <https://www.ae.psu.edu/academics/graduate/how-to-apply.aspx>.

Diversity is at the core of our vision, mission, and values. Penn State is an equal education/employment opportunity institution dedicated to building a diverse community. Applicants from diverse backgrounds are strongly encouraged to apply.

Direct inquiries to Dr. Jim Freihaut ([jdf11@psu.edu](mailto:jdf11@psu.edu)), Interim Department Head, or Dr. Julian Wang ([jqw5965@psu.edu](mailto:jqw5965@psu.edu)), Graduate Program Officer, Department of Architectural Engineering, 104 Engineering Unit A, University Park, PA 16802. Process inquiries can be directed to Scarlet Tobin, Graduate Program and Placement Coordinator, Department of Architectural Engineering, at [smw5742@psu.edu](mailto:smw5742@psu.edu).