

ARCHITECTURAL ENGINEERING

Integrated Undergrad-Grad Programs

Integrated Bachelor of Architectural Engineering (B.A.E.) and Master of Architectural Engineering (M.A.E.) or Master of Science (M.S.) in Architectural Engineering

Requirements listed here are in addition to requirements listed in GCAC-210 Integrated Undergraduate-Graduate (IUG) Degree Programs (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-200/gcac-210-integrated-undergraduate-graduate-degree-programs/>).

Admission Requirements

Applicants apply for admission to the program via the Graduate School application for admission (<https://gradschool.psu.edu/graduate-admissions/how-to-apply/>). Requirements listed here are in addition to Graduate Council policies listed under GCAC-300 Admissions Policies (<https://gradschool.psu.edu/graduate-education-policies/>).

A limited number of undergraduate students in the B.A.E. program will be considered for admission to one of two integrated undergraduate-graduate degree programs. The first leads to the student earning both the B.A.E. and M.A.E. degrees and involves a graduate-level component in the capstone senior project. The second provides the student with the opportunity to earn both the B.A.E. and M.S. degrees and involves a research-oriented thesis in addition to the capstone undergraduate senior project.

Students must apply to and meet admission requirements of the Graduate School, as well as the graduate program in which they intend to receive their master's degree. Before applying to the Graduate School, students must have completed entrance to their undergraduate major and have completed no less than 60 credits. Students must be admitted no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree. Transfer students must have completed at least 15 credits at Penn State to enroll in an IUG.

Application materials for both programs are available on the AE Department website. To be considered for admission to either program, students must have attained a GPA of at least 3.0 and a grade of C or better in all classes listed as AE. A commitment from an AE Graduate Faculty member to serve as the student's M.S. thesis adviser is necessary for admission to the B.A.E./M.S. program. In consultation with an adviser, students must prepare a plan of study appropriate to this integrated program. Students must present their plan of study to the head of the graduate program or the appropriate committee overseeing the integrated program prior to being admitted to the program. The plan should cover the entire time period of the integrated program, and it should be reviewed periodically with an adviser as the student advances through the program.

Degree Requirements

Students admitted to an integrated program (B.A.E./M.A.E. or B.A.E./M.S.) must maintain a GPA in all classes used toward the M.A.E. or M.S. degree of at least 3.0. For both the integrated B.A.E./M.A.E. and B.A.E./M.S. degree programs, 30 credits of the 172 total credits required to

receive both degrees are applied toward the master's degree (up to 12 credits count toward both degrees). For the B.A.E./M.S. a minimum of 18 credits is required at the 500 and 600 level combined. For the B.A.E./M.A.E., a minimum of 18 credits is required at the 500 or 800 levels, with at least 6 credits at the 500 level. For the B.A.E./M.A.E. degree program, all of graduate credits are course credits. For the B.A.E./M.S. degree program, a thesis is required and six credits of thesis research (AE 600 or AE 610) must be included in the candidate's academic course plan. Approved integrated program course sequences are available for each of the four undergraduate option areas. These sequences specifically identify the 12 credits of courses that count toward both degrees. The courses that can double-count for the B.A.E./M.A.E. are as follows:

Code	Title	Credits
Courses Eligible to Double Count for Both Degrees: B.A.E./M.A.E.		
AE 457	HVAC Control Systems	3
AE 461	Architectural Illumination Systems & Design	3
AE 467	Advanced Building Electrical System Design	3
AE 475	Building Construction Engineering I	3
AE 476	Building Construction Engineering II	3
AE 570	Production Management in Construction	3
AE 557	Centralized Cooling Production and Distribution Systems	3
AE 565	Daylighting	3

The courses that can be double-counted for the B.A.E./M.S. are as follows:

Code	Title	Credits
Courses Eligible to Double Count for Both Degrees: B.A.E./M.S.		
AE 430	Indeterminate Structures	3
AE 457	HVAC Control Systems	3
AE 461	Architectural Illumination Systems & Design	3
AE 467	Advanced Building Electrical System Design	3
AE 475	Building Construction Engineering I	3
AE 476	Building Construction Engineering II	3
AE 530	Computer Modeling of Building Structures	3
AE 557	Centralized Cooling Production and Distribution Systems	3
AE 558	Centralized Heating Production and Distribution Systems	3
AE 562	Advanced Lighting System Modeling	3
AE 565	Daylighting	3
AE 570	Production Management in Construction	3

At least 6 of the double-counted credits must be at the 500- or 800-level. Independent study courses and credits associated with the culminating experience for the graduate degree cannot be double-counted.

Each student must submit a course plan detailing the graduate component for approval when applying to this program and must request approval from the Graduate Program Officer for any proposed modifications to this plan following admission to the program. Students must sequence their courses so all undergraduate degree requirements are fulfilled before taking courses to count solely towards the graduate degree. Students are expected to complete the undergraduate degree requirements within the typical time to degree for the undergraduate major. In the semester in which the undergraduate degree requirements will be completed, IUG students must apply to graduate, and the

undergraduate degree should be conferred at the next appropriate Commencement. If students accepted into the IUG program are unable to complete the M.A.E. or the M.S. degree, they are still eligible to receive their undergraduate degree if all the undergraduate degree requirements have been satisfied.