

# ARCHITECTURE

<b>Graduate Program Head</b>	Ute Poerschke
<b>Program Code</b>	ARCH
<b>Campus(es)</b>	University Park (M.Arch., M.S., Ph.D.)
<b>Degrees Conferred</b>	Doctor of Philosophy (Ph.D.) Master of Science (M.S.) Master of Architecture (M.Arch.) Dual-Title M.S. and Ph.D. in Architecture and Human Dimensions of Natural Resources and the Environment Integrated B.Arch. in Architecture and M.S. in Architecture
<b>The Graduate Faculty</b>	View ( <a href="https://secure.gradsch.psu.edu/gpms/index.cfm?searchType=fac&amp;prog=ARCH">https://secure.gradsch.psu.edu/gpms/index.cfm?searchType=fac&amp;prog=ARCH</a> )

The M.Arch. program is a professional degree program focused on preparation to practice architecture for students who hold a bachelor's degree. The M.Arch. degree is accredited by the National Architectural Accrediting Board. "In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit U.S. professional degree programs in architecture, recognizes three types of degrees: the Bachelor of Architecture, the Master of Architecture, and the Doctor of Architecture. A program may be granted a 6-year, 3-year, or 2-year term of accreditation, depending on the extent of its conformance with established educational standards. Doctor of Architecture and Master of Architecture degree programs may consist of a pre-professional undergraduate degree and a professional graduate degree that, when earned sequentially, constitute an accredited professional education. However, the pre-professional degree is not, by itself, recognized as an accredited degree." (Excerpt from NAAB Conditions for Accreditation, 2009 Edition).

The M.S. in Architecture program is a research-focused degree program designed to offer students graduate level research inquiry into architecture for students who hold a professional baccalaureate or graduate degree in architecture.

The Ph.D. in Architecture program is a research-focused degree program for students with a research-focused master's degree who have previously studied the technical and professional aspects of architectural or landscape architectural practice and are primarily interested in strengthening the intellectual underpinnings of their work through significant and original theoretical inquiry.

## Admission Requirements

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

## Master of architecture (M.Arch.)

The applicant's baccalaureate degree may be in a field other than architecture or be a non-professional baccalaureate degree in architecture. This M.Arch. program culminates in a professional degree, accredited by the National Architectural Accrediting Board (NAAB).

A minimum grade-point average [GPA] of 3.0 on a 4.0 scale is required.

All applicants for admission to the M.Arch. degree program must submit the following:

- a completed Graduate School application (<http://www.gradschool.psu.edu/prospective-students/how-to-apply>), and payment of the non-refundable application fee
- official transcripts from all post-secondary institutions attended (<http://www.gradschool.psu.edu/prospective-students/how-to-apply/new-applicants/requirements-for-graduate-admission>)
- Graduate Record Exam [GRE] scores
- names of three faculty members or professionals acquainted with the applicant's academic history who can be contacted and invited to provide reference letters
- a statement of intent, which should be primarily a description of the applicant's professional goals, subjects of study, and the area(s) of anticipated architectural inquiry
- a portfolio of creative and design work executed at the undergraduate level, under professional guidance or independently, provided that such work can be evidenced as executed by the applicant, is an important part of the graduate application. A minimum portfolio representation of one project for each year of academic undergraduate study, or its equivalent, is required
- other evidence of academic excellence, such as awards, design and scholarly achievements, and other recognitions that the applicant wishes to have considered by the admissions committee

## Master of Science (M.S.)

All applicants must hold either (1) a professionally accredited baccalaureate degree in architecture or related field from a regionally accredited U.S. institution or (2) a tertiary (postsecondary) degree that is deemed comparable to a professionally accredited bachelor's degree in architecture or related field from a regionally accredited U.S. institution; this degree must be from an officially recognized degree-granting institution in the country in which it operates. Alternatively, the applicant can hold (3) a baccalaureate degree from a regionally accredited U.S. institution plus a professionally accredited master's degree in architecture or related field or (4) a tertiary (postsecondary) degree that is deemed comparable to a bachelor's degree from a regionally accredited U.S. institution plus a professionally accredited master's degree in architecture or related field. These degrees must be from officially recognized degree-granting institutions in the country in which they operate.

A minimum grade-point average [GPA] of 3.0 on a 4.0 scale is required.

All applicants for admission to the M.S. in Architecture degree program must submit the following:

- a completed Graduate School application (<http://www.gradschool.psu.edu/prospective-students/how-to-apply>), and payment of the non-refundable application fee

- official transcripts from all post-secondary institutions attended (<http://www.gradschool.psu.edu/prospective-students/how-to-apply/new-applicants/requirements-for-graduate-admission>).
- Graduate Record Exam [GRE] scores
- names of three faculty members or professionals acquainted with the applicant's academic history who can be contacted and invited to provide reference letters
- a statement of intent, which should be primarily a description of the applicant's professional goals, subjects of study, and the area(s) of anticipated architectural inquiry
- a portfolio of creative and design work executed at the undergraduate level, under professional guidance or independently, provided that such work can be evidenced as executed by the applicant, is an important part of the graduate application. A minimum portfolio representation of one project for each year of academic undergraduate study, or its equivalent, is required
- other evidence of academic excellence, such as awards, design and scholarly achievements, and other recognitions that the applicant wishes to have considered by the admissions committee
- names of three faculty members or professionals acquainted with the applicant's academic history who can be contacted and invited to provide reference letters
- a Ph.D. Essay that (1) articulates the reasons for pursuing graduate training; (2) demonstrates that the Ph.D. program has been carefully considered and a relevant faculty member has been identified; (3) presents a clear research focus; and (4) highlights how previous education, academic background, and/or professional experience provide a foundation for pursuing graduate training in this research field
- a Curriculum Vitae

## Doctor of Philosophy (Ph.D.)

All applicants must hold either (1) a professionally accredited baccalaureate degree in architecture or landscape architecture from a regionally accredited U.S. institution and a master's degree in architecture or landscape architecture or related field or (2) a tertiary (postsecondary) degree that is deemed comparable to a professionally accredited bachelor's degree in architecture or landscape architecture from a regionally accredited U.S. institution and a master's degree in architecture or landscape architecture or related field; both degrees must be from an officially recognized degree-granting institution in the country in which they operate. Alternatively, the applicant can hold (3) a baccalaureate degree from a regionally accredited U.S. institution plus a professionally accredited master's degree in architecture or landscape architecture or (4) a tertiary (postsecondary) degree that is deemed comparable to a bachelor's degree from a regionally accredited U.S. institution plus a professionally accredited master's degree in architecture or landscape architecture; these degrees must be from officially recognized degree-granting institutions in the country in which they operate. Outstanding candidates who do not hold a professional architecture or landscape architecture degree but who satisfy all other entrance requirements may be admitted at the discretion of the program.

Scores from the Graduate Record Examination (GRE) will be required for admission. An overall minimum grade-point average of 3.20 for graduate and undergraduate degrees is required for admission. Exceptions to the minimum 3.20 grade-point average may be made for students with special backgrounds, abilities, and interests at the discretion of the program.

All applicants for admission to the Ph.D. degree program must submit the following:

- a completed Graduate School application (<http://www.gradschool.psu.edu/prospective-students/how-to-apply>) and payment of the application fee
- official transcripts from all post-secondary institutions attended (<http://www.gradschool.psu.edu/prospective-students/how-to-apply/new-applicants/requirements-for-graduate-admission>)
- Graduate Record Exam [GRE] scores

## Degree Requirements

### Master of Architecture (M.Arch.)

Requirements listed here are in addition to Graduate Council policies listed under GCAC-700 Professional Degree Requirements (<http://gradschool.psu.edu/graduate-education-policies>).

The professional M.Arch. may be completed in three years (seven semesters, with the fifth semester being a summer semester) of course work. The M.Arch. degree requires 40 credits of preparatory course work, plus 57 credits of core graduate course work for a total of 97 credits. Some or all of the preparatory course work may have been completed previously, in which case the total credits required for the degree may be reduced in an equivalent manner to a minimum of 57 credits of core courses. At least 36 credits must be at the 500 level, and at least 57 credits must be taken in residence at University Park. There will be a review of transcripts to assess the completion of materials covered in preparatory course work. Faculty will assess each accepted applicant's transcripts for possible course equivalents. If courses have been fulfilled with equivalent undergraduate or graduate course work, students will be eligible for advancement. Accordingly, time to complete degree requirements may be reduced.

The culminating experience of the M.Arch. degree is a master's design project, requiring the student to identify and formulate an area of inquiry and then to complete a research-intensive design project, documented in a volume that includes the design and the research. The capstone course ARCH 536 Design Inquiry is associated with this culminating experience, and students are required to complete two semesters of ARCH 536 for six credits each, for a total of 12 credits.

Code	Title	Credits
<b>Preparatory Course Work</b>		
AE 211	Introduction to Environmental Control Systems	3
AE 421	Architectural Structural Systems I	3
AE 422	Architectural Structural Systems II	3
AE 424	Environmental Control Systems I	3
ARCH 501	Analysis of Architectural Precedents: Ancient Industrial Revolution	3
ARCH 502	Analysis of Architectural Precedents: Modernism	3
ARCH 503	Materials and Building Construction I	3
ARCH 504	Materials and Building Construction II	3
ARCH 521	Visual Communications I	2
ARCH 522	Visual Communications II	2
ARCH 531	Architectural Design I	6
ARCH 532	Architecture Design II	6
<b>Required Courses</b>		

ARCH 451	Architectural Professional Practice	3
ARCH 480	Technical Systems Integration	3
Select 6 credits from the following:		6
ARCH 495	Advanced Architectural and Related Design/ Construction Work Experience II	
ARCH 496	Independent Studies	
ARCH 499	Foreign Studies	
ARCH 510	Contemporary Architecture and Planning Theories	3
ARCH 511	Theoretical Perspectives in Architecture	3
ARCH 520	Methods of Inquiry in Architecture and Urban Design	3
ARCH 533	Architectural Design III	6
ARCH 534	Architectural Design IV	6
ARCH 550	Ethics in the Built Environment	3
<b>Electives</b>		
Select 9 credits		9
<b>Culminating Experience</b>		
ARCH 536	Design-Inquiry	12
Total Credits		97

### Master of Science (M.S.)

Requirements listed here are in addition to Graduate Council policies listed under GCAC-600 Research Degree Requirements. (<http://gradschool.psu.edu/graduate-education-policies>)

The culminating experience of the post-professional M.S. in Architecture program is a Master's Thesis, which requires the student to identify and formulate an area of inquiry within which he or she will be expected to do original research that tests a hypothesis, and to complete a written thesis that presents that research. The master's thesis committee must be composed of a minimum of three Graduate Faculty members, not less than two of whom shall be members of the Architecture Graduate Faculty. One of these two Graduate Faculty members shall serve as the chair of the committee and thesis adviser. One or more members of the committee may be members from another department.

At the master's thesis defense, the student presents a summary of her/his thesis. This presentation and part of the following discussion are open to the public. The thesis may only pass with a unanimous affirmative decision of the thesis committee. The graduate officer or department head must attend the thesis defense and sign off on the thesis; if the graduate officer is the adviser or a committee member then the department head must attend the defense and sign off on the thesis, and vice versa.

The M.S. in Architecture is a 30-credit program that requires 24 credits of course work and 6 credits of thesis. At least 18 credits must be at the 500 or 600 levels, and at least 20 credits must be taken in residence at University Park.

Code	Title	Credits
<b>Required Courses</b>		
ARCH 511	Theoretical Perspectives in Architecture	3
ARCH 520	Methods of Inquiry in Architecture and Urban Design	3
ARCH 536	Design-Inquiry	6
ARCH 550	Ethics in the Built Environment	3
<b>Electives</b>		

Select 9 credits		9
<b>Culminating Experience</b>		
ARCH 600	Thesis Research	6
Total Credits		30

### Doctor of Philosophy (Ph.D.)

Requirements listed here are in addition to Graduate Council policies listed under GCAC-600 Research Degree Requirements. (<http://gradschool.psu.edu/graduate-education-policies>)

For the Ph.D. degree, students must conduct significant original research that demonstrates mastery of the field. The student's program of courses is developed in cooperation with the student's Ph.D. committee. It is recommended that it consist of approximately 30 credits of course work. This includes 12 credits of course work for students without a research-focused master's degree in architecture or landscape architecture or related field (a research-focused master's degree is typically an M.S. in Architecture or Landscape Architecture degree, but can also be a post-professional M.Arch. or M.L.A. degree). There will be a review of transcripts to assess completion of materials covered in course work. A faculty review committee will assess each accepted applicant's transcripts for possible course equivalents.

At the conclusion of the student's course work, the Ph.D. student must pass a comprehensive examination that is developed and administered by the student's Ph.D. committee. To earn the Ph.D. degree, doctoral students must also write a dissertation that is accepted by the Ph.D. committee, the head of the graduate program, and the Graduate School.

### Dual-Titles

#### Dual-Title M.S. and Ph.D. in Architecture and Human Dimensions of Natural Resources and the Environment

Requirements listed here are in addition to requirements listed in GCAC-208 Dual-Title Graduate Degree Programs (<http://gradschool.psu.edu/graduate-education-policies/gcac/gcac-200/gcac-208-dual-title-graduate-degree-programs>).

The dual-title M.S. and Ph.D. in Architecture and Human Dimensions of Natural Resources and the Environment is a research-focused degree program that enables students from Architecture to acquire the knowledge and skills of their major area of specialization in Architecture, while at the same time gaining the perspective and methods of Human Dimensions of Natural Resources and the Environment.

#### Admission Requirements

For admission to the dual-title degree under this program, a student must first apply and be admitted to Penn State's Graduate School as well as to the Architecture graduate program. Once accepted into the Architecture program, the student can apply to the Admissions Committee of HDNRE. The HDNRE admissions committee reviews applications and recommends students for admission to the dual-title degree program to The Graduate School. In addition to the admission requirements for the in Architecture degree program, the HDNRE program also requires a minimum baccalaureate Jr./Sr grade-point average of 3.0 on a 4.0 scale. Refer to the Admission Requirements section of the HDNRE Bulletin page (<http://bulletins.psu.edu/graduate/programs/majors/human-dimensions-natural-resources-environment>). Doctoral students must be admitted into the dual-title degree program in HDNRE prior to taking the qualifying examination in their primary graduate program.

### **Degree Requirements for the Dual-title M.S.**

To qualify for a dual-title degree, students must satisfy the requirements of the Architecture program in which they are primarily enrolled.

In addition, they must satisfy the the degree requirements for the dual-title M.S. in HDNRE, listed on the HDNRE Bulletin page (<http://bulletins.psu.edu/graduate/programs/majors/human-dimensions-natural-resources-environment>). Within this framework, final course selection is determined by the student, the HDNRE adviser, and the Architecture program adviser.

Upon a student's acceptance by the HDNRE admissions committee, the student will be assigned a HDNRE academic adviser in consultation with the HDNRE chair. As students develop specific scholarly interests, they may request that a different HDNRE faculty member serve as their adviser. The student and adviser will discuss a program of study that is appropriate for the student's professional objectives and that is in accord with the policies of Graduate Council, the Architecture program and the HDNRE Program.

Some courses may satisfy both the graduate major program requirements and those of the dual-title program. Final course selection is determined by the students in consultation with their dual-title program advisers and their major program advisers.

A thesis committee for the dual-title M.S. degree will consist of two Graduate Faculty members from Architecture and one Graduate Faculty member from the HDNRE Program. The thesis topic itself will be an integration of both Architecture and HDNRE.

Candidates for the dual-title Master of Science degree in Architecture and HDNRE will also be required to pass a final defense covering the general field of Architecture and HDNRE Program, with emphasis on the student's area of specialization. The defense is to be administered by the student's thesis committee. The thesis may only pass with a unanimous affirmative decision of the thesis committee.

### **Degree Requirements for the Dual-title Ph.D.**

To qualify for a dual-title degree, students must satisfy the requirements of the Architecture program in which they are primarily enrolled. In addition, they must satisfy the degree requirements for the dual-title Ph.D. in HDNRE, listed on the HDNRE Bulletin page (<http://bulletins.psu.edu/graduate/programs/majors/human-dimensions-natural-resources-environment>). Within this framework, final course selection is determined by the student, the HDNRE adviser, and the Architecture program adviser.

Upon a student's acceptance by the HDNRE admissions committee, the student will be assigned an HDNRE academic adviser in consultation with the HDNRE chair. As students develop specific scholarly interests, they may request that a different HDNRE faculty member serve as their adviser. The student and adviser will discuss a program of study that is appropriate for the student's professional objectives and that is in accord with the policies of Graduate Council, the Architecture program and the HDNRE Program.

Particular courses may satisfy both the graduate major program requirements and those of the HDNRE program. If an HDNRE M.S. student continues into the HDNRE Ph.D. program, 15 credits of interdisciplinary course work must be selected, with the approval of the student's Ph.D. committee.

Some courses may satisfy both the graduate major program requirements and those of the dual-title program. Final course selection

is determined by the students in consultation with their dual-title program advisers and their major program advisers.

There will be a single qualifying examination, containing elements of both Architecture and HDNRE. Dual-title graduate degree students may require an additional semester to fulfill requirements for both areas of study and, therefore, the candidacy examination may be delayed one semester beyond the normal period allowable.

The qualifying examination committee and the Ph.D. committee must include at least one Graduate Faculty member from HDNRE. Faculty members who hold appointments in both programs' Graduate Faculty may serve in a combined role. The HDNRE representative on the qualifying examination committee will participate in constructing and evaluating the qualifying examination, and the HDNRE representative on the Ph.D. committee will participate in constructing and evaluating the comprehensive examination. If the chair of the Ph.D. committee is not also a member of the Graduate Faculty in HDNRE, the member of the committee representing HDNRE must be appointed as co-chair.

All Ph.D. students will be required to complete, present, and defend a dissertation that incorporates a topic related to both Architecture and HDNRE. Candidates for the dual-title Ph.D. degree in Architecture and HDNRE will be required to pass a final oral examination (the dissertation defense) covering the general field of Architecture and HDNRE, with emphasis on the student's area of specialization. The defense is to be administered by the student's Ph.D. committee. A favorable vote of a two-thirds majority is necessary for passing. To earn the Ph.D. degree, doctoral students must also write a dissertation that is accepted by the Ph.D. committee, the head of the graduate program, and the Graduate School.

## **Integrated Undergrad-Grad Programs**

### **Integrated B.Arch. in Architecture and M.S. in Architecture**

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

The Integrated B.Arch./M.S. in Architecture program permits students to integrate the fifth year of the professional B.Arch. degree, pursued at Penn State, with the M.S. research degree into a continuous program of study culminating in the awarding of both degrees.

### **Admission Requirements**

The Department of Architecture offers a limited number of academically superior students enrolled in the fourth year of the Bachelor of Architecture degree program the opportunity to enroll in an integrated program leading to both the B.Arch. and the M.S. in Architecture degrees. The ability to coordinate as well as concurrently pursue the two degree programs enables the student to achieve greater depth and comprehensiveness than if the degrees are pursued sequentially, and to earn the two degrees in a shorter period of time. In particular, the program encourages the student to integrate the undergraduate thesis design project with the master's thesis, thereby achieving a greater depth of inquiry. The number of openings to this special program is limited; admission is by invitation of the faculty and is extremely selective.

Students must apply to and meet the admission requirements of the Graduate School, as well as the graduate program in which they intend to receive their master's degree. Applicants to the integrated program

must be enrolled in the fourth year of a B.Arch. program or otherwise qualified to apply for admission to the fifth year of the B.Arch. program at Penn State. To be admitted, applicants must have a minimum 3.20 junior/senior overall grade-point average (on a 4.0 scale) as well as (1) a minimum 3.20 GPA in architectural design courses (studio), and (2) a minimum 3.20 GPA in all course work except architectural design courses (studio). Students must be admitted to the IUG program no later than the end of the second week of the semester preceding the semester of expected conferral of the undergraduate degree.

All applicants for admission to the Integrated B.Arch./M.S. in Architecture degree program must submit the following:

- a completed Graduate School application (<http://www.gradschool.psu.edu/prospective-students/how-to-apply>) and payment of the application fee
- names of three faculty members or professionals acquainted with the applicant's academic history who can be contacted and invited to provide reference letters
- a statement of intent/plan of study, which should be primarily a description of the applicant's professional goals. The statement/plan shall clearly describe the student's proposed general thesis topic and a strategy for pursuing it, including a list of proposed courses and a list of faculty whom the student foresees as contributing to the course of study. The plan should be reviewed periodically with an adviser as the student advances through the program.
- a portfolio of creative and design work executed at the undergraduate level, under professional guidance or independently, provided that such work can be evidenced as executed by the applicant. A minimum portfolio representation of one project for each year of academic undergraduate study, or its equivalent, is required

The best-qualified students will be accepted up to the number of spaces available for new students.

### Degree Requirements

Students must complete the requirements for both the B.Arch. and the M.S. in Architecture degrees with the exception that not more than 12 credits earned in either degree program may be used to meet the requirements of both degrees. A minimum of 50 percent of the courses proposed to count for both degrees must be at the 500 or 800 level.

Code	Title	Credits
<b>Courses Eligible to Double Count for Both Degrees</b>		
ARCH 451	Architectural Professional Practice	3
ARCH 492	Architectural Design Studio	6
ARCH 511	Theoretical Perspectives in Architecture	3
ARCH 520	Methods of Inquiry in Architecture and Urban Design	3
ARCH 536	Design-Inquiry	1-12
ARCH 550	Ethics in the Built Environment	3

A minimum total of 180 credits are required to complete the Integrated B.Arch./M.S. in Architecture program and earn both degrees. The student must maintain a minimum 3.2 overall GPA and shall achieve no less than a B grade in each required course.

If students accepted into the IUG program are unable to complete the M.S. degree, they are still eligible to receive their undergraduate degree if all the undergraduate degree requirements have been satisfied.

## Student Aid

Graduate assistantships available to students in this program and other forms of student aid are described in the Tuition & Funding (<http://gradschool.psu.edu/graduate-funding>) section of The Graduate School's website. Students on graduate assistantships must adhere to the course load limits (<http://gradschool.psu.edu/graduate-education-policies/gsad/gsad-900/gsad-901-graduate-assistants>) set by The Graduate School.

All applicants who are accepted are considered for departmental financial aid.

## Courses

Graduate courses carry numbers from 500 to 699 and 800 to 899. Advanced undergraduate courses numbered between 400 and 499 may be used to meet some graduate degree requirements when taken by graduate students. Courses below the 400 level may not. A graduate student may register for or audit these courses in order to make up deficiencies or to fill in gaps in previous education but not to meet requirements for an advanced degree.

Architecture (ARCH) Course List (<https://bulletins.psu.edu/university-course-descriptions/graduate/arch>)

## Contact

<b>Campus</b>	University Park
<b>Graduate Program Head</b>	Ute Poerschke
<b>Director of Graduate Studies (DGS) or Professor-in-Charge (PIC)</b>	Rebecca Lynn Henn
<b>Program Contact</b>	Nina Diez Bumgarner 121 Stuckeman Family Building University Park PA 16802 ndb2@psu.edu (814) 865-0991
<b>Program Website</b>	View ( <a href="http://stuckeman.psu.edu/arch">http://stuckeman.psu.edu/arch</a> )