

# ARCHITECTURE, MARCH: REAL ESTATE DEVELOPMENT

The Master of Architecture, the first professional degree offered by the Department of Architecture, is accredited by the National Architectural Accrediting Board (NAAB). The degree program requires two to three years of graduate study, depending on the applicant's previous academic background and qualifications. It offers a wide range of courses, with particular strengths in the areas of architectural design and integrated practice, ecological/sustainable design, digital design and fabrication, preservation, urban design, and design as a response to the physical, cultural, and social environment.

The Master of Architecture curriculum emphasizes design studio courses. Each of these studios is taught by faculty members who also offer courses in selective subjects.

A study abroad program allows students to combine international travel and study under the tutelage of a departmental faculty member for program credit. The location of the program may vary from year to year. Additional costs of travel, lodging, etc., must be borne by the student.

In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. 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. Accreditation of architectural programs takes place on a cycle that may range from every few years to as many as eight years.

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.

The University of Wisconsin-Milwaukee, School of Architecture and Urban Planning, Department of Architecture, offers the following NAAB-accredited degree programs:

MArch (pre-professional degree + 60 graduate credits)

MArch (non-pre-professional degree + 90 credits)

## STEM-DESIGNATED DEGREE PROGRAM

The Master of Architecture is an approved field of study within the U.S. government's official STEM fields list.

## Master of Science in Architecture (MS)

This 30-credit non-professional degree program is appropriate for students who want to develop a personalized and specialized program of architectural studies centered on scholarly studies and research. Graduates will bring specialized knowledge to diverse professional settings that involve collaboration, interaction and communication with other professionals. Students propose their own course of study, to be reviewed and approved by faculty in accordance with the program requirements. Students may use the degree to explore their chosen field of research prior to continuation with PhD studies or, if they are mid-career professionals, may shape or extend their expertise in a particular field relevant to their area of practice.

## PhD Program

The PhD Program in Architecture is a community of scholars, practitioners, activists, and educators who are committed to advancing the discipline and practice of architecture. Situated within a professional school of architecture, the program is both curiosity-driven and action-oriented. The faculty and students at the School of Architecture and Urban Planning seek to advance architectural discourse and knowledge at multiple levels of inquiry. They embrace intellectual inclusiveness and critical examinations of society, culture, ecology and technology, while pursuing questions related to architectural history, theory, and criticism, human experience, social justice, and environmental advocacy.

## MArch/MUP Program

In cooperation with the Department of Urban Planning, the Department of Architecture offers a Master of Architecture/Master of Urban Planning program that prepares students for careers requiring preparation in both fields. Both the MArch and MUP degrees are awarded simultaneously upon completion of this program. For more detailed information on this program see Credits and Courses section below.

## Additional Notes

Individuals seeking to use the School's Shop must first provide evidence of personal accident and health insurance to the Dean's office. Since no accident or health insurance is provided to any user by the University, access to this resource will be prohibited to uninsured individuals.

## Admission Requirements

### Application Deadlines

Application deadlines vary by program, please review the application deadline chart (<http://uwm.edu/graduateschool/program-deadlines/>) for specific programs. Other important dates and deadlines can be found by using the One Stop calendars (<https://uwm.edu/onestop/dates-and-deadlines/>).

### Admission to 1-Year Program

An applicant with an undergraduate major in architecture from UWM or a school with an accredited program in architecture equivalent to the Bachelor of Architecture (BArch) at UWM with 150 credits must meet Graduate School requirements (<http://uwm.edu/graduateschool/admission/>) plus these Department of Architecture requirements to be considered for admission to the program:

- Undergraduate cumulative grade point average in architectural studies of at least 3.0 (4.0 scale).
- Completion of at least eight undergraduate design studios.
- Three letters of recommendation from three previous faculty and/or members of the profession.
- Portfolio of architectural studies work.
- For international applicants whose first language is not English, a minimum TOEFL score of 100 iBT, or a score of 7.0 on the International English Language Testing System (IELTS) exam is required. Applicants with TOEFL scores from 79-99 iBT, or an IELTS score of 6.5 may be considered for admission with the stipulation that further coursework in English be taken.

### Admission to 2-Year Program

An applicant with an undergraduate major in architecture from UWM or a school with an accredited program in architecture similar to the BS in Architectural Studies at UWM must meet Graduate School requirements

(<http://uwm.edu/graduateschool/admission/>) plus these Department of Architecture requirements to be considered for admission to the program:

- Undergraduate cumulative grade point average in architectural studies of at least 3.0 (4.0 scale).
- Completion of at least five undergraduate design studios.
- Three letters of recommendation from three previous faculty and/or members of the profession.
- Portfolio of architectural studies work.
- For international applicants whose first language is not English, a minimum TOEFL score of 100 iBT, or a score of 7.0 on the International English Language Testing System (IELTS) exam is required. Applicants with TOEFL scores from 79-99 iBT, or an IELTS score of 6.5 may be considered for admission with the stipulation that further coursework in English be taken.

### Admission to 3-Year Program

An applicant with an undergraduate degree in any field other than architecture is normally admitted with two semesters of foundation courses (30 credits) required, must meet Graduate School requirements (<http://uwm.edu/graduateschool/admission/>), and the following Department of Architecture requirements to be considered for admission to the program:

- Undergraduate cumulative grade point average of at least 3.0 (4.0 scale).
- Three letters of recommendation.
- Portfolio of written and/or visual work.
- For international applicants whose first language is not English, a minimum TOEFL score of 100 iBT, or a score of 7.0 on the International English Language Testing System (IELTS) exam is required. Applicants with TOEFL scores from 79-99 iBT, or an IELTS score of 6.5 may be considered for admission with the stipulation that further coursework in English be taken.

### Admission to MArch/MUP Program

Candidates seeking admission to the MArch/MUP program must apply to and be admitted to both programs. The requirements for admission to the Urban Planning Master's degree program are detailed in the Urban Planning section of this Catalog.

## Credits and Courses

### 1-Year Program

The minimum degree requirement is 30 graduate credits, all of which must be in architecture.

Code	Title	Credits
<i>Design</i> <sup>1</sup>		
ARCH 800	Design Elective:	6
ARCH 800	Design Elective:	6
<i>Professional Practice</i> <sup>2</sup>		
ARCH 718	Topics in Professional Practice	3
<i>History/Theory: Select one course from the following list:</i>		
ARCH 860	Topics in Architectural History & Theory:	3
ARCH 534G	Field Study:	3
<i>Electives: Complete 12 cr of electives in Arch 500-level or above from the following list:</i> <sup>3,4</sup>		12

ARCH 521G	Environmental Systems: Resources-Fluid Distribution Systems
ARCH 522G	Environmental Systems: Lighting and Acoustical Design
ARCH 550G	Seminar in Building Types and Settings
ARCH 560G	Introduction to Historic Preservation
ARCH 561G	Measured Drawing for Architects
ARCH 562G	Preservation Technology Laboratory
ARCH 580G	Graphic Techniques for Architects
ARCH 583G	Emerging Digital Technology:
ARCH 584G	Urban Landscape Architecture
ARCH 716	Art of Detailing
ARCH 723	Fundamentals of Ecological Architecture
ARCH 741	Professional Practice I
ARCH 743	Professional Practice III
ARCH 749	Urban Design as Public Policy
ARCH 760	History of Building Technology
ARCH 780	The Built Environment and Real Estate Development
ARCH 788	Green Building Seminar
ARCH 791	Master's Level Directed Research
ARCH 801	Special Topics:
ARCH 821	Building Technology III
ARCH 822	Building Technology IV
ARCH 823	Building Technology V
ARCH 985	Advanced Research Methods in Architecture

**Total Credits** **30**

- <sup>1</sup> A minimum grade of "B" (3.00) is required in each design studio.
- <sup>2</sup> If there are too few MArch I students to offer this course, students can take an additional 500-level or above Architecture elective course instead.
- <sup>3</sup> Students may not retake for credit any course already completed in the UWM Bachelor of Architecture Program.
- <sup>4</sup> When choosing electives students must remember that at least half of the credits need to be numbered 700 and above.

### 2-Year Program

The minimum degree requirement is 60 graduate credits, 48 of which must be in architecture.

Code	Title	Credits
<i>Design</i> <sup>1</sup>		
ARCH 812	Graduate Design III:	6
ARCH 800	Design Elective:	6
ARCH 800	Design Elective:	6
<i>Practice</i>		
ARCH 741	Professional Practice I	3
ARCH 743	Professional Practice III	3
<i>Select one additional course</i> <sup>2</sup>		
<i>Technology</i>		
ARCH 821	Building Technology III	3
ARCH 822	Building Technology IV	3

ARCH 823	Building Technology V	3
<i>Theory</i>		
ARCH 860	Topics in Architectural History & Theory:	3
Select one additional course <sup>2</sup>		
<i>Graduate Electives (M.Arch 3 students must take at least 6 credits in architecture)</i>		12
<i>Capstone Requirement</i>		
A 500-level or higher architecture elective		3
ARCH 800	Design Elective:	6
or ARCH 812	Graduate Design III:	
<b>Total Credits</b>		<b>63</b>

<sup>1</sup> A minimum grade of "B" (3.00) is required in each design studio.

<sup>2</sup> For list of qualifying courses, contact Student Advising Office, AUP 225 (414-229-4015), sarup-grad@uwm.edu. Students who have completed any of the required courses or their equivalents as undergraduates may substitute architectural electives.

### 3-Year Program

Consult the Student Advising Office for sequencing of courses, (414) 229-4015.

An applicant with an undergraduate degree in a field other than architecture is normally admitted with 30 credits of foundation courses required.

The first-year requirements totaling 30 credits are as follows:

Code	Title	Credits
<i>Foundation Courses</i>		
ARCH 321	Building Technology I	3
ARCH 322	Building Technology II	3
ARCH 351	Survey of Architectural History & Theory	3
ARCH 352	History & Theory III	3
ARCH 711	Graduate Design I	6
ARCH 712	Graduate Design II	6
ARCH 771	Representation I	3
ARCH 772	Representation II	3
<b>Total Credits</b>		<b>30</b>

Some of these requirements may be waived by the M.Arch Committee upon an applicant's acceptance to the program or upon appeal, based on equivalent work. The requirements in the remaining two years include 60 graduate credits, 54 of which must be in architecture.

### Transcript-Designated Concentration in Real Estate Development

Students wishing to pursue this concentration must be enrolled in the Master of Architecture program and complete a minimum of 21 credits from the following groups of courses:

Code	Title	Credits
<b>Real Estate Required Core</b>		
ARCH 780	The Built Environment and Real Estate Development	3

BUS ADM 481	Real Estate Finance & Asset Management	3
or BUS ADM 483	Property Development and Management	
<b>Real Estate Electives <sup>1</sup></b>		<b>6</b>
<b>Capstone Requirement <sup>2</sup></b>		
500-level or higher architecture elective		3
Select one of the following:		6
ARCH 800	Design Elective:	
ARCH 812	Graduate Design III:	
ARCH 891	Master's Project	
<b>Total Credits</b>		<b>21</b>

<sup>1</sup> For list of qualifying courses, contact Student Advising Office, AUP 225 (414-229-4015), sarup-grad@uwm.edu.

<sup>2</sup> Real estate focus.

## Additional Requirements

### Major Professor as Advisor

The student must have a professor to advise and supervise the student's studies as specified in Graduate School regulations.

## Architecture MArch Learning Outcomes

Students graduating from the Master of Architecture (MArch) program will be able to:

- **Navigate** the paths to becoming licensed as an architect in the United States and the range of available career opportunities that utilize the discipline's skills and knowledge.
- **Describe** the role of the design process in shaping the built environment and the methods by which design processes integrate multiple factors, in different settings and scales of development, from buildings to cities.
- **Explore** the dynamic between built and natural environments, and **leverage** ecological, advanced building performance, adaptation, and resilience principles, in their work and advocacy activities to mitigate climate change.
- **Explain** the histories and theories of architecture and urbanism, framed by diverse social, cultural, economic, and political forces, nationally and globally.
- **Engage and participate** in architectural research to test and evaluate innovations in the field.
- **Exhibit** leadership in multidisciplinary teams, diverse stakeholder constituents, and dynamic physical and social contexts, and **apply** effective collaboration skills to solve complex problems.
- **Explore and understand** diverse cultural and social contexts, and **design** built environments that equitably support and include people of different backgrounds, resources, and abilities.
- **Analyze** the impact of the built environment on human health, safety, and welfare at multiple scales, from buildings to cities.
- **Apply and navigate** the professional ethics, regulatory requirements, and fundamental business processes relevant to architecture practice in the United States, and the forces influencing change in these subjects.
- **Apply** the fundamental principles of life safety, land use, and compliance with current laws and regulations that apply to buildings and sites in the United States, and engage in the evaluative process

architects use to comply with those laws and regulations as part of a project.

- Effectively **use** established and emerging systems, technologies, and assemblies of building construction, and apply methods and criteria to **assess** those technologies against the design, economics, and performance objectives of projects.
- **Make** design decisions within architectural projects while demonstrating synthesis of user requirements, regulatory requirements, site conditions, and accessible design, and consideration of the measurable environmental impacts of their design decisions.
- **Make** design decisions within architectural projects while demonstrating integration of building envelope systems and assemblies, structural systems, environmental control systems, life safety systems, and the measurable outcomes of building performance.