

Studying Architecture in the United States: Undergraduate and Graduate Degree Options

By Kristina Stulic

Feature

Within the field of architecture there are a variety of degree offerings available to students at both the undergraduate and graduate levels. This article will identify the various study options, specific requirements and objectives for each, program accreditation, the importance of the studio component, and other information on the application process to architecture programs in the U.S.

Architecture has become a particularly diverse field of study in the U.S., requiring a good amount of research to ensure students identify programs best matching their needs and goals. The study of architecture is concerned not only with the exterior and interior of a particular structure, but also the environment as a whole, with a recent trend of developing environmentally conscious design techniques. Across all programs, an essential component in the study of architecture is the design studio, which provides opportunities for students to learn through practical experience.

Undergraduate Degree Study

Undergraduate degree programs in architecture provide students the necessary knowledge for advanced study and practice in the field. Those interested in pursuing an undergraduate degree in architecture should begin planning in high school as many programs require a strong background in trigonometry, calculus, and physics. If deficient, many bachelor programs may require students to complete prerequisite classes in these areas during the first years of study before offering formal admission into the architecture program.

Bachelor of Architecture (BArch)

The Bachelor of Architecture (BArch) is the traditional first degree in architecture. The BArch is normally completed in five years. The coursework is designed to fulfill the academic requirements of the professional accreditation body, which is known as the National Architectural Accrediting Board (NAAB). Generally, a NAAB accredited curriculum includes general studies, professional studies, and elective coursework. It also offers practical preparation through a design studio where students develop the skills needed to create appropriate architectural designs. Upon completion of the accredited BArch program, students must also gain appropriate internships or practical training.

Bachelor of Science in Architectural Studies/Bachelor of Science in Architecture (BS Arch)/Bachelor of Arts in Architectural Studies (BA Arch)

In slight contrast to the BArch degree, these alternative degree options in architecture are shorter in length; they normally can be completed in four years. However, they are generally not NAAB accredited. Frequently, they are viewed as pre-professional degrees because, in order to complete an accredited program that will lead to licensure, students are required to complete the Master of Architecture degree (MArch).

Program Spotlight: Sustainable Design

As the world becomes more urbanized, many schools of architecture have developed coursework to help promote solutions to mass urbanization and environmental challenges through sustainability. This focus area has gained tremendous popularity over the last few years. Some good options for those interested in pursuing this route include but are not limited to:

University of Minnesota, College of Design, School of Architecture, MS Architecture-Sustainable Design Track

The School of Architecture at the University of Minnesota's College of Design (CDes) has developed an MS in Architecture-Sustainable Design Track (MS-SD). Bringing together a rich group of multidisciplinary courses, projects, and research opportunities, students can customize the program to meet their individual needs. <http://arch.design.umn.edu/programs/mssd/>

University of Texas, School of Architecture, MS Sustainable Design (MSSD)

The MSSD, or Master of Science in Sustainable Design program, is designed for students who wish to prepare for the Ph.D. or for employment in research, activism, or public policy. The program as a whole integrates three areas of inquiry related to the built environment—natural systems, building systems, and cultural systems. The Sustainable Design program is practical, technical, and philosophical in scope. <http://soa.utexas.edu/sustainabledesign/>

Program descriptions are courtesy of university websites.

Notes on Applying to Bachelor's Degree Programs

Application requirements vary by institution and by program. That said, most Bachelor of Architecture programs look for applicants with strong high school grade point averages (GPA) or class rank, appropriate prerequisite coursework, SAT section scores, TOEFL or IELTS scores, and a portfolio of their creative endeavors. The content of the portfolio needs to include an essay that talks about what has inspired the applicant to pursue the study of architecture along with an example of his or her creative work. Most programs prefer to see the design intent in a drafting sample. Portfolios are generally submitted in a bound paper format of approximately 10-20 pages.

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Did you know?

The University of Hawaii at Manoa offers the only NAAB accredited Doctorate of Architecture (DArch) program in the United States.

In recent years some programs have begun requiring students to upload electronic portfolios to a specific link.

Graduate Degree Study

Graduate degree programs in architecture offer many tracks depending on one's previous study, current degree objectives, and area of focus or specialization. At the master's level, there are two main degree options: Master of Architecture (MArch) and Master of Science in Architecture (MS Arch). In addition, those interested in landscape architecture may pursue a professional Master of Landscape Architecture (MLA). Graduate level study frequently includes specific focus areas such as design, building technology, design computing, architectural history, sustainable design, environmental design, landscape architecture, or historic preservation.

Master of Architecture (MArch)

The Master of Architecture is a terminal, professional degree that normally requires a studio component. It is not intended to lead to further study at the doctoral level. Those who have not completed a professional degree in architecture or a five-year bachelor of architecture program (the BArch or its equivalent) are required to complete a three-year MArch I program. Students who hold a professional degree in architecture or have completed a five-year Bachelor of Architecture degree frequently qualify to enter a two-year MArch II program. In some cases, those with advanced standing may be eligible to complete the MArch degree in one year.

Master of Science in Architecture (MS Architecture)

The MS in Architecture is a nonprofessional, nonterminal degree that is normally completed in less than two years. It is appropriate for those looking to strengthen knowledge in a particular aspect of the field or for those interested in eventually pursuing a doctoral degree. In addition, there are a variety of other popular specialized master's degrees, including the MS in Historic Preservation and the Master of Urban Design (MUD).

Doctor of Philosophy (Ph.D.), Doctorate in Architecture (DArch), and Doctorate in Design (DDes)

The three research architecture doctorates include the Ph.D., the DArch, and the DDes, representing the highest degrees awarded in field. The Ph.D. is designed for students interested in pursu-

ing careers in teaching or advanced research. The Doctorate of Architecture (DArch) offers the opportunity to pursue advanced study in a particular area while also including one or two semesters of professional studio experimentation. The Doctorate of Design (DDes) is appropriate for those interested in a more practical and applied approach to architecture or pursuing advanced study and research in a particular design discipline. In most cases, the DArch and DDes are intended for those who have already mastered their professional skills in architecture.

Notes on Applying to Graduate Programs

Similar to the undergraduate process, graduate application procedures vary from school to school and the specific program to which a student is applying. Advanced MArch degree options that allow students to complete the MArch degree in less than three years will require a five-year Bachelor's in Architecture, strong GRE General scores, especially in the verbal and analytical writing sections, TOEFL or IELTS (minimum depends on programs to which one is applying), and a strong portfolio.

The Portfolio

The portfolio is an extremely important component of admission at the graduate level. Most programs in the U.S. require a hard bound portfolio with dimensions of 8 x 11 inches. The submitted portfolio work should demonstrate the applicant's development and include complete projects that are relevant to the proposed study focus and/or specialization. When presenting collaborative work, the applicant's role needs to be clearly identified. Unlike many fine arts programs in the U.S. where portfolio requirements and formats can vary dramatically, architecture applicants can generally prepare one portfolio that can be reproduced for each program to which they are applying. Frequently portfolios can be returned if the request is

About NAAB

The National Architectural Accrediting Board (NAAB) is the sole professional body authorized to accredit architecture professional degree programs. Successfully completing an NAAB accredited program is required by most U.S.-based architectural licensing boards. Please note the guidelines set by NAAB may differ from those established in other countries. For international students, it is important to review the program curricula carefully to determine whether the program offerings will be acceptable to obtain licensure in other countries.

(About the NAAB. National Architectural Accrediting Board.

Retrieved June 20, 2011 from www.naab.org/about/)

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made in advance and the cost for postage is incurred by the applicant. It's important to review the individual program's portfolio requirements as many have begun to require students to submit electronic portfolios.

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Online Architecture Resources

The National Association of Architecture Accrediting Board
www.naab.org

American Institute of Architecture
www.aia.org

American Institute of Architecture Students
www.aias.org

Some of the information provided in this article has been drawn from the following sites. Undergraduate Admissions: University of Southern California School of Architecture, <http://arch.usc.edu/Admissions/UndergraduateAdmissions>

Graduate Admissions: Harvard University Graduate School of Design, www.gsd.harvard.edu/admissions/info_applicants

Program-related: University of Hawaii Manoa School of Architecture, www.arch.hawaii.edu

Program Spotlight: Totalization Studios at Rice University

A central aspect of architecture programs in the United States is the studio component, which is design focused and draws on knowledge of program, form, and technology. Studio components vary from institution to institution. For example, some institutions focus on doing more pragmatic design projects, solving problems or doing projects that might actually be built, called "design build" studios. Other institutions have studios that are more theoretical in ambition, working on big idea problems that often overlap with larger issues, such as globalization, customized mass production, or digital possibilities. Students considering studying architecture in the United States should closely research the studio component at the institutions they are interested in and think carefully about the type of experience that best matches their academic goals.

At Rice University, we developed "Totalization Studios," which ask students to rigorously weigh all aspects of building design, including historical, political, economic, and physical dimensions. Each fall, Rice offers four Totalization Studios, each with a distinct focus. The four areas of focus for the fall 2010 semester included: Framework (researching "numbers," that is, how architecture, economic feasibility, and finance integrate), Softwork (looking at mechanical systems and their relation with program and form), Groundwork (looking at questions of urban density, site, and type), and Formwork (analyzing skins and envelopes). The ambition of the Totalization Studios is to teach our students that *architecture equals innovation plus practice*.

Innovation within the Totalization Studio comes not from simply mastering a set of core competencies at the center of established building practice, but from understanding how an architect's formulation of

a total project can challenge these practices, setting them in motion and expanding their current definitions. To support this process, the Totalization Studios engage a set of consultants who are at the forefront of new

technical and informational practices in the building industry. All of the consultants visit the School of Architecture at Rice to give a public lecture and review the Totalization Studios' work in progress, as well as to attend the students' final review. To extend the consultant collaborations and broaden the students' engagement with practice, all four studios participate in a sponsored trip to New York City for a four-day tour of projects, office visits with the individual consultants, and general explorations of the city.

Speculation and practice: the Totalization Studio will be considered total only when the distinction between these terms becomes indistinguishable in each student's final project.



Totalization Studios ask students to weigh all aspects of building design.

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