

UNIVERSITY OF MICHIGAN
ARCHITECTURE
PROGRAMS AND COURSE DESCRIPTIONS

2009–2010

This bulletin provides an overview of policies, procedures, degree options, and courses for the UM architecture program. This document is available for download from the Taubman College website at <http://www.TaubmanCollege.umich.edu/architecture/bulletin/>. If you are planning to visit campus, tour the facilities, and meet with faculty, we encourage you to contact the college in advance of your visit.

The University of Michigan
A. Alfred Taubman College of
Architecture and Urban Planning
2150 Art and Architecture Building
2000 Bonisteel Boulevard
Ann Arbor, MI 48109-2069

Phone: (734) 764-1300

Fax: (734) 763-2322

Email: TaubmanCollege@umich.edu

Web: <http://TaubmanCollege.umich.edu/>



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The University of Michigan, as an equal opportunity/affirmative action employer, complies with all applicable federal and state laws regarding nondiscrimination and affirmative action, including Title IX of the Education Amendments of 1972 and Section 504 of the Rehabilitation Act of 1973. The University of Michigan is committed to a policy of nondiscrimination and equal opportunity for all persons regardless of race, sex*, color, religion, creed, national origin or ancestry, age, marital status, sexual orientation, disability, or Vietnam-era veteran status in employment, educational programs and activities, and admissions. Inquiries or complaints may be addressed to the Senior Director for Institutional Equity and Title IX/Section 504 Coordinator, Office of Institutional Equity, 2072 Administrative Services Building, Ann Arbor, Michigan 48109-1432, (734) 763-0235, TTY (734) 647-1388. For other University of Michigan information call (734) 764-1817.

*Includes gender identity and gender expression

A. ALFRED TAUBMAN COLLEGE OF ARCHITECTURE AND URBAN PLANNING POLICY STATEMENT FOR STUDENTS WITH IMPAIRMENTS

The college desires to meet the educational needs of all persons, including those with physical or perceptual limitations, who are interested in the study of architecture, urban planning, and urban design. The college will

~~plan with Taylor, Grosse Pointe Park, and~~
Katherine E. White, Ann Arbor
Mary Sue Coleman (ex officio)

CAMPUS SAFETY

Each year, the University of Michigan prepares an "Annual Security Report" and publishes it in the Campus Safety Handbook. The report, which is issued each October 1, contains detailed information on campus safety and security policies, procedures, and programs, including information on: emergency services, security telephone numbers, sexual assault policy, stalking laws, handling obscene phone calls, sexual harassment policy, dealing with workplace violence and threats, police agencies, health services, counseling services, safe transportation after dark, safety tips, and alcohol and drug policies and programs. The report also includes statistics concerning crimes on campus. If you would like to receive a complete copy, visit the University of Michigan Department of Public Safety website at <http://www.umich.edu/~safety/> or call (734) 763-3434.

A. Alfred Taubman College of Architecture and Urban Planning strives for accuracy in this Bulletin, all policies, procedures, programs, and courses are subject to change without notice.

THE REGENTS OF THE UNIVERSITY OF MICHIGAN

David A. Brandon, Ann Arbor
Laurence B. Deitch, Bingham Farms
Olivia P. Maynard, Goodrich
Rebecca McGowan, Ann Arbor
Andrea Fischer Newman, Ann Arbor
Andrew C. Richner, Grosse Pointe Park

MESSAGE FROM THE PRESIDENT

We are a University rich in history, academic excellence and leadership. The heart of Michigan's success resides in our dedicated staff, robust student body, and outstanding faculty members, including distinguished composers, novelists, and poets, scientists, engineers, physicians, social scientists, artists, and filmmakers. The quality, breadth, and depth of this University's intellectual resources create a remarkable community of scholars—from our national leadership in the social sciences, medicine, engineering, law, and business to our community's robust cultural offerings. This is the Michigan Difference.

I am particularly enthusiastic about our campus-wide work in the life sciences, including the Life Sciences Institute, the Michigan Nanotechnology Institute for Medicine and the Biological Sciences, our cross-disciplinary research programs and our premier Medical School. As in so many fields, the benefits of Michigan's work in health care and life sciences research are felt across the state and around the world—fulfilling the mission and role of a great public university dedicated to advancing the public good.

Ours is a campus of remarkably wide-ranging experiences, cultures and opportunities. In the coming academic year, we will welcome the Royal Shakespeare Company for a campus residency, and celebrate creativity with the Year of Global Arts. The year will also see the University break ground on the new C.S. Mott Children's and Women's Hospital, as well as open the doors of the Walgreen Drama Center, a new building for the School of Public Health, and Joan and Sanford Weill Hall, home of the Gerald R. Ford School of Public Policy. Of course we will continue our many efforts to make the University's educational and research programs ever stronger and more meaningful.

The University of Michigan family shares a deep tradition. It is a tradition known to the new student who walks into her first history class, to the student-athlete who takes the field, and to our dedicated alumni around the world. We are called upon to be leaders, and to do our very best. I am grateful to work closely with the thousands of people who are part of this tradition and welcome those of you who want to learn more about it.

A. ALFRED TAUBMAN COLLEGE OF ARCHITECTURE AND URBAN PLANNING

TAUBMAN COLLEGE INTRODUCTION

The condition of humanity is intimately connected to the environment in which we live. The primary mission at A. Alfred Taubman College of Architecture and Urban Planning is to prepare students for positions of responsibility within a wide spectrum of organizations and institutions whose goals are to improve the quality of our lives and environment.

In pursuit of the ideal, the college offers a complement of programs, ranging from pre-professional to post-professional education.

Taubman College at the University of Michigan has a long educational tradition that combines design and technology. Today, it continues to foster a broad view of architecture and urban and regional planning in the context of a major research university where interdisciplinary initiatives are encouraged and supported.

The programs of our college are distinct but united by concern for the physical, constructed aspects of our environment. Industrial production, respect for craft, and the desire to serve are deeply rooted in the region. The Architecture Program emphasizes the physical realization of ideas, where priority is placed not upon theory or practice in isolation, but in concrete and poetic possibilities of their integration. The hallmarks of a Taubman College education in architecture are integrated and comprehensive courses that value material sensibility and the process of building, as well as the history and theory of architecture and urbanism. The Doctoral Program in Architecture, one of the first established in the nation, develops these values and ideas at a more scholarly level, while fostering research.

Both the Urban and Regional Planning Program and the Urban Design Program give students the opportunity to do significant interdisciplinary work that emphasizes collaboration with local communities. This collegial community of inquiry is generously supported by the resources of the University of Michigan. Studying urban planning and urban design at Michigan prepares students for positions of leadership

and management in public, private, and non-profit policy and planning organizations, as well as for careers in research and teaching.

The University of Michigan has one of the largest alumni groups in the world. A. Alfred Taubman College of Architecture and Urban Planning maintains close contact with over 6,000 graduates in 60 countries throughout the world. These close connections provide the college with opportunities for applied research and provide students with opportunities for internships and jobs.

The University of Michigan is one of the world's most distinguished universities and is widely recognized as an international resources for learning, teaching, research, and service. The university established its position as a leader in higher education over a century ago by laying the foundation for the modern research university. With more than 7,600 faculty and 54,000 students at three campuses, it is one of two public institutions consistently ranked among the nation's best universities.

TAUBMAN COLLEGE DEGREES

A. Alfred Taubman College of Architecture and Urban Planning offers the following degrees:

- Bachelor of Science in Architecture
- Master of Architecture (2 year program for students entering with a B.S. in architecture or equivalent degree)
- Master of Architecture (3 year program for students entering with a non-architectural baccalaureate degree)
- Master of Urban Planning (2 year program)
- Master of Urban Design (1 year program)
- Master of Science in Architecture (2-1/2 term program)
- Joint/Dual Master's degrees in:
 - Architecture/Urban Planning
 - Architecture/Urban Design
 - Architecture/Business Administration
 - Architecture/Engineering
 - Architecture/Master of Science in Architecture
 - Urban Planning/Business Administration
 - Urban Planning/Law
- Ph.D. in Architecture
- Ph.D. in Urban and Regional Planning
- Graduate Certificate in Real Estate Development

TAUBMAN COLLEGE HISTORY

Courses in architecture were first offered at the University of Michigan in 1876 by William Le Baron Jenney. Architecture was recognized as a formal course of study in 1906 when a program was established in the Department of Engineering with Emil Lorch as chair.

Under his leadership, the program grew steadily in size and stature and, in 1913, the University granted the program departmental status and full control of its curriculum. Lorch continued to shape the program and, in 1923, was instrumental in bringing Eiel Saarinen from Finland to teach at Michigan. In 1931, the college of architecture was established as a separate entity with 370 students and 27 faculty members.

Wells Bennett succeeded Emil Lorch as director of the college in 1937 and became dean a year later. In 1939, the college's name was changed to the college of architecture and design, the program in architecture was expanded to a five-year curriculum and landscape architecture was added. In the mid-1940s, Michigan was one of the few schools that considered research to be a necessary element of architectural education. By founding the Architecture Research Laboratory in 1948, the college took a pioneering step in integrating design, construction, technology, planning and research. A graduate program in urban planning—which awarded a master of city planning degree—was introduced in 1946. This program was one of the first of its kind in the country.

Visual arts courses, originally offered to advance the training of architects, began attracting students from other fields, leading to the creation of separate departments of art and architecture in 1954. The college housed these two departments, along with the smaller department of landscape architecture, for the next decade. In 1965, landscape architecture was moved to the School of Natural Resources as a result of its growing relationship to the earth sciences.

The five-year architecture program was modified to a two+two+two year program in 1967 and, in 1968, a department of urban planning was created within the college of architecture and design. That same year, a university-wide Ph.D. program in urban and regional planning was established in the Office of the Vice President for Academic

Affairs with faculty from 12 schools and colleges. In addition, Michigan became the first American school to offer a doctorate of architecture degree the following year. The introduction of the doctoral program was a natural development due to the history of architectural research at the college.

As the college continued to grow, proposals were developed to provide new facilities and, as part of the planning process, the educational and administrative structure of the college was reassessed. This led to the reorganization of the college of Architecture and Design into a College of Architecture and Urban Planning and a School of Art in 1974. Two new programs, architecture and urban planning, replaced the former departments. At the same time, the research mission of the college was broadened and the Architecture Research Laboratory was reconstituted into the Architecture and Planning Research Laboratory. The new Art and Architecture Building, housing the college of Architecture and Urban Planning together with the School of Art and Design, opened for classes in 1974 on U-M's north campus.

Although the college has remained in the same physical location since 1974, it continues to evolve. In 1982, a sociotechnical focus was added to the doctoral program in urban and regional planning which then became the Ph.D. Program in Urban, Technological, and Environmental Planning (UTEP) and by 1989 the program was from Rackham Graduate School to the college. The Doctoral Program in Architecture was also modified in 1989 and the degree designation changed to a Ph.D., giving the college a more comprehensive program of professional and doctoral education in both architecture and urban planning. In 1992, the two individual programs in urban planning and UTEP were merged to form the Urban and Regional Planning Program (URP), which is now under a single chair with a coordinator of doctoral studies. In 2009, the Doctoral Program in Architecture was merged into the Architecture Program, residing there as Doctoral Studies in Architecture with its own coordinator.

Since the mid-twentieth century, the college has been headed by Deans Philip N. Youtz (1957–1964), Reginald F. Malcolmson (1964–1974), Robert C. Metcalf (1974–1986), Robert M. Beckley (1987–1997), James C. Snyder (interim 1997–1998), Douglas S. Kelbaugh (1998–2008), and Monica Ponce de Leon was appointed in 2008.

The college has developed an ambitious program of lectures, exhibitions, publications, and conferences for the enrichment of students and local professionals. This includes the following annual events:

RAOUL WALLENBERG LECTURE

Raoul Wallenberg, a 1935 graduate of the University of Michigan College of Architecture and Urban Planning, has been called one of this century's most outstanding heroes. In 1944, as First Secretary of the Swedish delegation in Budapest, he is credited with saving more than 100,000 Jews from death at the hands of the Nazis. The following year, Wallenberg was captured by the Russians. Although his fate is unknown, rumors persist that he is held in Russia even today.

To honor and remember this outstanding alumnus, Sol King, a former classmate of Wallenberg's, initiated the Wallenberg Lecture Series in 1971. In 1976, an endowment was established to ensure that an annual lecture be offered in Wallenberg's honor focusing on architecture as a humane social art. The lecture annually honors an individual whose legendary acts of compassion exemplify the power of an individual to make a difference.

JOHN DINKELOO MEMORIAL LECTURE

John Dinkeloo graduated from the college in 1942 and became one of its most distinguished alumni. He was a gifted architect, an outstanding designer and an enthusiastic student of materials. He was also an inventor, who in the course of designing, developed the neoprene gasket, several different types of glass and cladding systems as well as pioneering the use of Corten and exposed steel. In many ways he epitomizes a spirit of inspired invention and design of which the college is extraordinarily proud.

As a partner of Eero Saarinen, he helped design a number of significant projects, including the Jefferson Memorial Arch in St. Louis, the Morse and Stiles Colleges at Yale University, and the TWA Terminal at Kennedy Airport and the Dulles International Airport in Washington D.C. In 1961, he formed a partnership with Kevin Roche and

went on to build a reputation of international standing with the design of projects such as the Oakland Museum, the headquarters for John Deere and the Ford Foundation Building in New York.

The first Memorial Lecture was given in 1984 with the generous support of an endowment created by faculty and friends and through the help of John's widow, Thelma Dinkeloo. She has encouraged the college to look across the wide field of architecture and to search out designers who are working internationally to develop ideas and concepts with the same fervor that her late husband demonstrated.

GUIDO A. BINDA EXHIBIT AND LECTURE

The Guido A. Binda Lecture Series was established at the college in 1997 to bring special lecturers to campus on an annual basis for the benefit of students, faculty and the public. Alumnus Guido Binda, BSAA'31, maintained a distinguished architectural practice in western Michigan specializing in the design of public school buildings.

CHARLES and RAY EAMES LECTURE

The Charles and Ray Eames Lecture Series is an annual event at the college which celebrates design and the Eames legacy. It is sponsored by Herman Miller, Inc. of Zeeland, Michigan, manufacturer of Eames furniture designs for almost 50 years. Nearly everyone has sat in a chair designed by the Eames but their influence goes far beyond the "potato chip" chair. Charles Eames came to the Cranbrook Academy of Art at the invitation of the famous Finnish architect Eliel Saarinen, who taught at U-M before his Cranbrook design responsibilities. At Cranbrook, where Charles and Ray met and married, Eames set up a department of experimental design in the late 1930s and early 1940s. Not only did the Eames influence furniture design, but they researched practical methods for molding plywood, aluminum, and wire chairs for mass production. They also created the first wave of multimedia presentations using multiple images and multi-sensory stimuli.

Internationally renowned architects, planners, designers, critics, and scholars who have recently lectured and exhibited at the college include:

- Milton Curry, Associate Professor of Architecture Director, Cornell Council for the Arts (CCA)
- Catherine Seavitt + Guy Nordenson, Guy Nordenson & Associates
- Jonathan Hill, Professor, Bartlett School of Architecture

- Liu Yuyang, Architect, Boston
- Mimi Hoang, nARCHITECTS
- David Zach, Futurist
- Kadambari Baxi, Martin/Baxi Architects
- Giovanna Borasi, Curator
- Coy Howard, Architect, Los Angeles, Professor, Sci-ARC
- Reinhold Martin, Martin/Baxi Architects
- William McKibben, Author, Educator, and Environmentalist
- Majora Carter, Executive Director/Founder, Sustainable South Bronx
- Joseph M. Valerio, FAIA, Principal, Valerio Dewalt Train Associates, Chicago
- Teddy Cruz, Architect, San Diego
- Robert Yaro, President, Regional Plan Association
- Steven Moore, Steven Moore Designs, Bellingham, WA

Exhibits of work from distinguished professionals rotate in our College galleries. In addition, there are exhibits of student and faculty work. The student exhibit is an annual event in keeping with the tradition established by former College Architecture Professor Eliel Saarinen. Work from the pre-architecture, undergraduate, and graduate design studios is exhibited. There is no better indicator of the quality of a program than the work of its students. Fundamental to the architectural design studio today, as well as during Saarinen's time, is the emphasis on critical discourse in the design process. Innumerable conversations and debates help form the final studio product, a process vital in detail and precision to the teaching of design. This annual exhibit represents a faculty and student body dedicated to the highest standards of excellence.

College publications encompass a diverse array of both faculty and student work. The college sponsors the *Michigan Architecture Papers*, a series of books that records the work of important practicing architects and events at the University of Michigan. Each year, a group of students under the direction of a faculty member produce *Dimensions*. This journal offers a reflection of what the students and faculty at Taubman College are thinking, and its effect on their production. It's a sideways glance into their collective activities of design, criticism, and research. *Portico*, the college's alumni newsletter, is published three times annually and reports college news and events, as well as alumni updates. Other college publications include a book about the Urban and Regional Research Collaborative's (URRC's) *Working Paper Series*.

Faculty and students also plan and organize educational conferences, symposia, and meetings that draw regional, national, and international audiences. Professionals and scholars from around the world regularly visit the college serving as critics, jurors, and seminar leaders. Individual faculty members conduct field trips to major urban centers and other notable sites and buildings as part of our instructional programs.

TAUBMAN COLLEGE BUILDING DESIGN WORKSHOP

Since 1994, a series of design and build projects in the Architecture Program has helped to integrate the skills needed for successful design, construction, and professional practice. These projects are “real” in the sense that they require students to meet with clients and building officials internal and external to the University, understand the codes and laws that apply to their projects, generate alternatives based upon cost estimates and budgets, and monitor the process and timing of delivery. Often, the students are involved hands-on in the fabrication of projects from the initial generative conceptualization of the design. Recent projects have included “The Eraser Room,” a small conference room in Taubman College with walls, floor, and conference table clad entirely in dry-erase board, Urban and Regional Planning Lounge, the Architecture Lounge, and the Art and Architecture Building Faculty/Staff Lounge, Media Center, and IT Space.

TAUBMAN COLLEGE OUTREACH

The Community Partnership Center gives students in Taubman College opportunities to provide planning and design assistance to nonprofit organizations in Detroit, Ann Arbor, and other Michigan communities. Through the outreach opportunities, students gain valuable experience while assisting neighborhoods in areas such as community development, physical planning, strategic planning, geographic information systems, parks planning, housing planning and design, economic development, and transportation projects.

There are several ways for students to get involved, gain hands-on experience, and contribute to community-building efforts underway at the University:

- Register for a capstone course in urban planning or take a community-based studio in architecture or urban design
- Work on a community-based professional project or planning thesis
- Apply for membership in the Michigan Neighborhood AmeriCorps Program
- Apply for the HUD Community Development Work Study Program (reserved for incoming M.U.P. students only)

- Serve as an intern at a community-based organization
- Join a research project that produces findings useful for planning and design practice

U-M DETROIT CENTER AND **TAUBMAN COLLEGE** COMMUNITY DESIGN CENTER

The University of Michigan is playing an active and visible role in the redevelopment of the American city by establishing its Detroit Center in the heart of that major city.

The 12,000 square-foot U-M Detroit Center occupies the ground floor of Orchestra Place on Woodward Avenue near downtown. Taubman College's former dean Douglas Kelbaugh spearheaded the project, providing the vision and initiative to make it a reality. The new facility opened in September 2005 and provides a home for dozens of longstanding programs and research projects while also offering space for an increasing number of university programs involving Detroit citizens and organizations. The facility provides offices and space for classes, meetings, exhibitions, lectures, and collaborative work while serving as a home base for students and faculty working on projects in Detroit.

At the northern end of the facility, Taubman College occupies 1,000 square feet of high bay studio space with its Community Design Center. The center is equipped with desks/workstations and a faculty office. This community workshop will offer low and no-cost planning and design services to community and neighborhood groups and organizations.

TAUBMAN COLLEGE RESEARCH

Research at Taubman College of Architecture and Urban Planning has a rich and diverse history. Since the 1940s, when faculty conducted research on pre-fabricated housing, sponsored research activity has been an important part of the college's mission. Each of the academic programs encourages and supports the research and scholarly activities of its faculty and students. General areas of inquiry conducted in the college have included work in design research and building, environmental planning, building technology, facility and energy management, human behavior and the environment, computer aided design, post-occupancy evaluation, policy planning, security planning, housing and facilities for special populations, geographic information systems, transportation studies, economic development, planning processes, international urban development, the study of built form and land use, and city and neighborhood design.

The Urban and Regional Research Collaborative (URRC) is an umbrella organization for urban and regional research within Taubman College. The URRC provides a forum for research synergy and exchange, as well as enhanced visibility for the college's urban and regional research.

In addition, the URRC provides collaborative space in the building for students and faculty working on research projects. Research under URRC concerns a wide range of topics. These include clusters of projects in environmental design and security as part of the Studies in Urban Security Group, transportation studies, urban economic development, urban design, urban and regional transformation in the U.S. and elsewhere in the world, and assessment of the quality of urban life.

Support for the research activities of the college comes from public agencies, business and industry, foundations, the university, special user groups, alumni, and corporations. Other partnerships with professional architects and planners are established for specific research endeavors.

TAUBMAN COLLEGE FACILITIES AND RESOURCES

The Art and Architecture Building provides nearly 240,000 square feet of space equally divided between two academic units of the university: A. Alfred Taubman College of Architecture and Urban Planning and the School of Art and Design. The building, opened in 1974, includes a range of excellent facilities including generous studio space, galleries, classrooms, well-equipped laboratories, a 150-seat lecture hall, conference and seminar rooms, faculty and administrative offices, and extensive workshops arranged around a central courtyard. The design studio, three-fourths of an acre in area, is the largest in the country. The building conforms to all barrier-free design regulations and handicap parking is available.

Computer access is widely available and distributed throughout the building. The adjacent Duderstadt Center provides additional advanced technology and communications and houses the library collections for art, architecture, urban

planning, and engineering; state-of-the-art laboratories for visualization, virtual reality, video, music, and dance; and an exhibit gallery.

TAUBMAN COLLEGE ARCHITECTURE/PLANNING STUDIO

The architecture/planning studio, located on the third floor, offers 30,000 square feet of continuous workspace and is the largest academic studio in the world. The large, open plan is configured with modular workplaces for each student electing a studio course. All tables and storage units are movable in order to permit easy adaptation to a variety of class sizes, projects, and methods of instruction. Seminar rooms and flexible design review spaces are located at each end of the studio.

TAUBMAN COLLEGE COMPUTING

Teaching and research computing resources are available for student use in various locations within the Art and Architecture Building:

- The Art and Architecture Building supports wireless computing, allowing network and internet access from most points in the building for students, faculty, and staff
- The studio's network also allows students to bring their personal computers and access the college's shared resources from individual studio desks
- Faculty-designed, student-built computing clusters occupy each end of the design studio and are available to students 24 hours a day
- The university-supported public computing site on the second floor has additional computers that can be reserved for classroom use as well as on a drop-in basis for independent graphic and computer-aided design studies
- Additional computing labs support specialized functions and/or programs in the building. These facilities include building and environmental technology instruction and applications, Geographic Information Systems (GIS) research and instruction, and doctoral program research and instruction
- Students may also access other public computer sites on campus, including the Duderstadt Center across the street

DUDERSTADT CENTER/LIBRARY

The Duderstadt Center, provides students with access on a drop-in basis to 360 computers running Solaris, dual-boot Windows XP/Linux, and Mac OS X. The Duderstadt Center also provides an incubator environment for faculty and students involved in projects exploring existing or emerging digital technology. The

Duderstadt Center Programs staff, working with faculty and students, provides an array of resources in specialized facilities including the:

- 3D Lab, for creating multi-dimensional images using computer modeling and resources such as the GeoWall, 3D printer, render farm, and an Onyx-driven CAVE environment;
- Learning Technology Lab, for support with CourseTools and usability/accessibility testing for software and website development;
- Collaborative Technology Lab, which is developing the next generation of web-based instructional and research tools;
- Digital Media Tools Lab, which includes the Digital Asset Management System (DAMS) Living Lab, for exploring existing and emerging digital asset management technologies;
- Smart Studios—a group of video, audio, and electronic music recording studios, a media conversion facility, and digital video editing suites.

In addition, there are four sophisticated computer instruction classrooms and several meeting rooms, including two that are equipped for videoconferencing.

The Duderstadt Center houses the core library collections for Taubman College of Architecture and Urban Planning, the School of Art and Design and the college of Engineering. Located directly across Bonisteel Boulevard from the Art and Architecture Building, the library contains approximately 80,000 volumes relating to art, architecture, design, and urban planning alone. In addition the library collects over 400 journals in architecture, urban planning, and art. It is a place to meet with students from other colleges, explore new ideas, and find information addressing both the aesthetic and technical aspects of design. The facility includes a rare book collection with rare and limited-edition books and photographs and a visual resource collection with over 100,00 35mm slides, videos, and blueprints. The library provides access to an extensive array of online resources including catalogs, full-text journals, image databases, and the World Wide Web. Subject area librarians are happy to assist students in their research. For help with resources related to architecture and urban planning contact Rebecca Price (rpw@umich.edu or (734) 647-5274) or visit the library webpage at <http://www.lib.umich.edu/ummu/>.

The library at the Duderstadt Center is part of the University of Michigan's extensive library system, one of the largest research libraries in the world. The Harlan Hatcher Graduate Library is the University's primary research collection for the humanities and

social sciences. The Graduate Library collection numbers approximately 2.5 million volumes including 10,000 journals and periodical subscriptions written in several hundred languages and covering a broad array of subject specialties. In addition, these collections are supported by strong holdings in U.S. and foreign government publications, an outstanding collection of maps and related materials, manuscripts and special collections, over 1.5 million items in microformat, and a strong collection of reference and bibliographic sources in print and machine-readable formats. More information on the University's library system is available at <http://www.lib.umich.edu/>.

During the academic year, the Duderstadt Center is open 24 hours a day, 7 days a week. For more information visit the website at <http://www.ummu.umich.edu/>.

ART AND ARCHITECTURE SHOP

The shop is a 6,000 square foot facility located on the first floor, in the southwest wing of the Art and Architecture Building. A fully equipped wood shop with several stations of the most common machines, the shop also has a good complement of plastics and metal working equipment and four CAD-driven laser cutters for wood, paper, and plastics. The shop staff of professional model makers oversee and guide all work in the shop and they conduct annual training programs for students. Shop hours extend into the evenings and part of the weekend for the convenience of students.

TAUBMAN COLLEGE MEDIA CENTER

Located on the second floor of the Art and Architecture Building, the Media Center is a full-service retail digital printing, plotting, and copy center specially-equipped to cater to the needs of the college's architecture and planning students, faculty, and staff as well as clients from around the University.

The Media Center services include color copying and digital color printing, large format digital output up to 42 inches wide, and black and white copying and digital printing. The Media Center also provides a wide array of handwork services such as collating, folding, cutting, stapling, binding, and laminating.

Media Center staff assists customers with UPS, DHL, and other carriers for ground and overnight shipments and can assist with copyright clearance. Students and faculty may also reserve and check out audiovisual equipment at the Media Center.

The Media Center produces and sell course packs, college publications, copy cards, postage, and a large selection of office, art, drafting, mailing, and computer supplies as well as beverages and snack foods.

All major credit cards, cash, checks, and university accounts are accepted and Media Center hours extend into evenings and weekends for the convenience of students and faculty. Learn more at: <http://www.TaubmanCollege.umich.edu/mediacenter/>.

TAUBMAN COLLEGE BUILDING TECHNOLOGY LABORATORY

The 7,000 square foot Building Technology Laboratory is a unique resource for class use in group assignments or demonstrations, individual investigation by students or faculty and research in teaching methods in the area of building technology. Within the BTL are specialized laboratories and areas:

ACOUSTICS LABORATORY

Supports classroom demonstrations, technical measurements and research in architectural acoustics.

BUILDING THERMAL UNIT SIMULATORS (BTUS)

The BTUS has test chambers with identical single zone building systems for heating and cooling. The computer-controlled environments allow for full-scale investigations of thermodynamic processes in areas such as heat transfer, mass thermal storage and comfort control. The system is also used for facility planning and design decision making.

SKY SIMULATOR

A 30' diameter hemispherical dome structure, representing an artificial sky, is used to perform daylighting studies under simulated clear and cloudy conditions in all building types and computer validation.

SUN AND SOLAR ANGLE SIMULATOR

The simulator is used to demonstrate the correlation between the time of year and solar exposure of a building for a given location on the earth.

MAPPING TABLE FOR WIND FLOW SIMULATION

The fluid mapping table uses water to simulate wind motion.

WEATHER STATION

Fully equipped and located on the roof of the laboratory, it consists of photometric and radiation sensors for measuring horizontal, global and diffuse illuminances, and irradiances of the four cardinal orientations and zenith.

FULL-SCALE PHOTOVOLTAIC SYSTEM

A 2.4 kW photovoltaic system on the roof demonstrates the technology, studies all aspects of roof integration and evaluates the utilization of generated electricity in the building to research potential technological implications, especially with regard to existing structures.

FULL-SCALE SIMULATION LABORATORY

This simulation facility is used for the photometric study and evaluation of office and industrial lighting systems for design applications. It provides quantitative photometric information on how different lighting systems and design approaches affect the visual quality and comfort of typical work environments. The 40' x 50' facility is capable of controlling ceiling height, floor area and window size, allowing for the controlled simulation and study of ceiling integrated lighting, furniture, integrated task lighting, and window aperture daylighting systems. It is also used for lighting and daylighting computer algorithm validation.

DIGITAL FABRICATION LAB (FABLAB)

The fablab aids in the crossover between computer-aided design and advanced fabrication techniques. An extensive suite of software along with computer-driven hardware tools helps introduce basic concepts of manufacturing and construction for studio hands-on labs, small design projects, and research projects.

Hardware includes:

- CNC router: Mills 3D surfaces out of solid materials and cuts 2D profiles out of flat stock materials
- 3D digitizer: Digitally captures points and curves from physical artifacts
- Rapid prototyping 3D printer: Prints 3D models from digital files
- Laser cutters: The college shares four laser cutting machines with the School of Art & Design for cutting flat stock materials such as cardboard, wood, plastic, and more

METALS LAB

The Metals Lab provides tools, equipment, training, and workspace for small and large scale projects involving sheet metals and steel structural sections. MIG welding stations, metal shears, and brakes as well as cutting and bending equipment are available. The Metals Lab allows for a range of fabrication as well as exploratory work in support of studio and thesis work, research, and design-build projects.

Introductory tutorials in MIG welding and metals fabrication can be scheduled through the lab coordinator. Assistance is available for fabrication projects as well as for exploratory design work.

STRUCTURAL TESTING EQUIPMENT

A test floor is available for structural analysis. A complete set of test fixtures is available to conduct property investigations in wood, metals, concrete, and mortar.

COMPUTER LAB

Classroom instruction is supported with the latest hardware and software for acoustic, daylighting, and visualization of the luminous environment, thermal energy analysis, and structural and CAD applications.

TAUBMAN COLLEGE GEOGRAPHIC INFORMATION SYSTEMS (GIS) LABORATORY

Since its inception in 1989, the Geographic Information Systems (GIS) Laboratory has developed into an integrated network of GIS hardware, software and data. The geographic focus of this effort is on the State of Michigan. The laboratory maintains statewide electronic data sets on streets, city, hydrography and demography. The lab is a teaching facility as well, serving up to 40 students per semester. This lab facility is part of the larger university-wide system for support of spatial analysis, including the Map Library at the Harlan Hatcher Graduate Library. A recent multi-disciplinary

initiative has been funded that will make GIS even stronger at the University of Michigan.

TAUBMAN COLLEGE STUDENT ORGANIZATIONS

There are several student organizations within the college. Each of these organizations has a mailbox near the faculty/staff lounge on the Art and Architecture building's second floor. APX, AIAS, and OAP have offices in the North Campus Commons.

ALPHA RHO CHI (APX)

Alpha Rho Chi is a national professional architectural fraternity. The chapter has set as its goals: increasing members' awareness of different aspects of the profession, increasing contact with alumni, and sponsoring events in keeping with the chapter's goals.

AMERICAN INSTITUTE OF ARCHITECTURE STUDENTS (AIAS)

The organization is composed of a national office and member chapters from all of the architecture colleges in the United States and one in Canada. The purpose of AIAS is to organize architecture students and combine their efforts to advance the science and art of architecture. The mission of AIAS is to promote excellence in architectural education, training, and practice, and to foster an appreciation of architecture and related disciplines among all persons.

AIAS undertakes a variety of programs and services each year to achieve these goals by providing students with the opportunities to communicate and interact with each other about topics concerning education and professional design.

The main AIAS event of each academic year is "Forum." This event is a national convention held the week of Thanksgiving vacation in a host city. Representatives from every AIAS chapter in the United States are present for a week of education, lectures, sightseeing, and fun.

ARCHITECTURAL REPRESENTATIVE COMMITTEE (ARC)

Through active participation in the architecture community at the University of Michigan, this independent student advisory board:

- Empowers students to determine the direction of their education
- Creates a recognizable channel through which students can express and act upon their academic, social, and global interests

- Fosters an open network of thought exchange within the architecture program, respecting every voice as equal
- Inspires every student to diversify, enrich, and strengthen his/her academic experience in the architecture program

Elected members of this student organization earn (1) course credit and can take a role on one of ARC's 11 different committees.

NATIONAL ORGANIZATION OF MINORITY ARCHITECTURE STUDENTS (NOMAS)

NOMAS is dedicated to racial and cultural pluralism in the architecture profession.

NOMAS is an academic, professional, and service organization that seeks to provide the collective voice of minority architecture students within the school by building a sense of community based on shared experiences unique to minority students. Through strong leadership, service, and networking with minority professionals, NOMAS serves as an anchor for the accomplishment of minority students.

PLANNING ARCHITECTURE RESEARCH GROUP (PARG)

The purpose of PARF is to facilitate a collegial environment between the architecture and planning doctoral programs and to increase student opportunities for academic service and research.

TAUBMAN COLLEGE CAREER PLACEMENT

The college assists current and graduating students in their job searches by posting job openings, maintaining files of job announcements, sending out a résumé book and scheduling on-campus interview sessions. The college has a solid reputation for producing well-trained, educated graduates and works closely with alumni and other professionals to assist them in meeting their personnel needs. The college also

sponsors events to aid students in the development of a career strategy which will assist them throughout their professional lives. These events bring students together with alumni, professionals and recruiters from various firms.

In addition, the university has a Career Planning and Placement Office which has an extensive library of related materials. Professional staff provide career counseling, placement counseling, referral services and information on student employment. Seminars are offered in résumé writing, the job search process, and interviewing skills.

TAUBMAN COLLEGE MATERIALS AND EQUIPMENT

The College provides drawing tables, lockers, stools, and other essential furniture for the operation of classes. It is assumed that students using this equipment will bear in mind that it must be available to others and consequently will leave it in good condition. The student is responsible for providing all other materials except those furnished through the payment of lab fees. Unless notified otherwise, students are advised to purchase required supplies after arrival at the University when course elections have been established and materials lists are made known for the term's work.

TAUBMAN COLLEGE RETENTION OF STUDENT WORK

The faculty reserves the right to retain examples of student work, done in conjunction with class assignments, for purposes of illustration, instruction, and exhibition.

TAUBMAN COLLEGE COLLEGE USE OF DIGITAL MEDIA

The college may record/capture video, audio, and/or images of students and student work during regular college activities (i.e. class sessions, lectures, exhibits, studio critiques, group meetings, etc.). These media may be made available in various forms to describe and/or promote college activities and programs in a variety of ways consistent with the mission of the college and university.

TAUBMAN COLLEGE STUDENT APPEAL PROCEDURE

It is the purpose of the appeal procedure to provide undergraduate and graduate students and faculty with a mechanism for review of student and faculty allegations about matters pertaining to student conduct, performance and status and/or faculty

misconduct. The appeal procedure shall be available to both student and faculty members of Taubman College for review of grievances of academic matters, including, but not limited to:

1. All aspects of the degree process involving grading, evaluation, or status
2. Unjustified denial of student access to data or misappropriation of student data
3. Professional misconduct toward students
4. Unfair, discriminatory, or intimidating treatment of students, including sexual intimidation and discrimination due to disability
5. Discipline or other action taken as a result of allegations or findings of student academic misconduct involving plagiarism, cheating, fabrication, falsification of records or official documents, intentional misuse of equipment or materials, and aiding and abetting the perpetration of such acts

TAUBMAN COLLEGE PROCEDURE FOR APPEALS

STEP 1

The first step is discussion of the grievance by the student and the faculty member. It is anticipated that most disputes can be resolved without recourse to other steps.

STEP 2

If not satisfied with the outcome of this discussion, either party may request time to discuss the problem with the appropriate program chair who will informally attempt to mediate and resolve the dispute.

STEP 3

If Step 2 fails to satisfy either party, he or she may request time to discuss the problem with the dean of the college, who will informally attempt to mediate and resolve the dispute.

STEP 4

If Step 3 fails to satisfy either party, he or she may present a written grievance to the appropriate program chair requesting review by an appeal board. In the event the program chair is personally involved in the complaint, the written grievance shall be addressed to the dean of the college.

STEP 5

RESIDENCY CLASSIFICATION GUIDELINES

The University of Michigan enrolls students from 50 states and more than 120 countries. Residency classification guidelines have been developed to ensure that decisions about whether a student pays in-state or out-of-state tuition are fair and equitable and that all applicants for admission or enrolled students, even those who believe they are Michigan residents, understand they may be asked to complete an application for resident classification and provide additional information to document their residency status.

The Residency Classification Office in the Office of the Registrar on the Ann Arbor campus administers the University's residency guidelines. If your activities and circumstances as documented to the Residency Classification Office demonstrate establishment of a permanent domicile in Michigan, you will be classified as a resident once your eligibility has been confirmed. If your presence in the state is based on activities or circumstances that are determined to be temporary or indeterminate, you will be classified as a nonresident.

For more information and complete residency guidelines, visit the Office of the Registrar

website at <http://www.umich.edu/~regoff/resreg.html> or contact the Residency Classification Office.

Residency Classification Office
Office of the Registrar
1210 LSA Building
500 South State Street
Ann Arbor, MI 48109-1382
Phone: (734) 763-5174

ACADEMIC CALENDAR FALL 2009–WINTER 2011

For the most current academic calendar information, visit the UM Office of the Registrar website at <http://www.umich.edu/~regoff/calendar/>

FALL 2009

Registration (for students not pre-registered)..... Sept 4, Fri
 Labor Day (Holiday).....Sept 7, Mon
 Classes beginSept 8, Tues
 Fall Study Break..... Oct 19–20, Mon–Tues
 Thanksgiving recess 5:00 p.m.Nov 25, Wed
 Classes resume 8:00 a.m. Nov 30, Mon
 Classes endDec 14, Mon
 Study Days Dec 15, Tues + Dec 19–20, Sat–Sun
 Examinations Dec 16-18, Wed–Fri, + Dec 21-23 Mon–Wed
 Commencement..... Dec 20, Sun

WINTER 2010

Registration (for students not pre-registered)..... Jan 5, Tues
 Classes begin Jan 6, Wed
 Martin Luther King, Jr. DayJan 18, Mon
 Vacation begins 12:00 noon.....Feb 27, Sat
 Classes resume 8:00 a.m.Mar 8, Mon
 University Honors Convocation Mar 21, Sun
 Classes end Apr 20, Tues
 Study Days Apr 21, Wed + Apr 24–25, Sat–Sun
 Examinations Apr 22–23, Thurs–Fri + Apr 26–29, Mon–Thurs
 Commencement ActivitiesApr 30-May 2, Fri–Sun

SPRING SUMMER 2010

Registration (Full and Spring Half Terms) May 3, Mon
 Classes beginMay 4, Tues
 Memorial Day (Holiday) May 31, Mon
 Classes end (Spring Half Term)June 21, Mon
 Study Days June 22-23, Tues-Wed
 Examinations June 24–25, Thur-Fri
 Spring Half Term ends..... June 25, Fri

MICHIGAN ARCHITECTURE PROGRAMS and COURSE DESCRIPTIONS 2009–2010

Registration (Summer Half Term) June 29, Tues
 Classes begin (Summer Half Term)..... June 30, Wed
 Independence Day (Holiday) July 5, Mon
 Classes end 5:00 p.m. Aug 17, Tues
 Study Day Aug 18, Wed
 Examinations Aug 19-20, Thur-Fri
 Full and Summer Half Terms end..... Aug 20, Fri

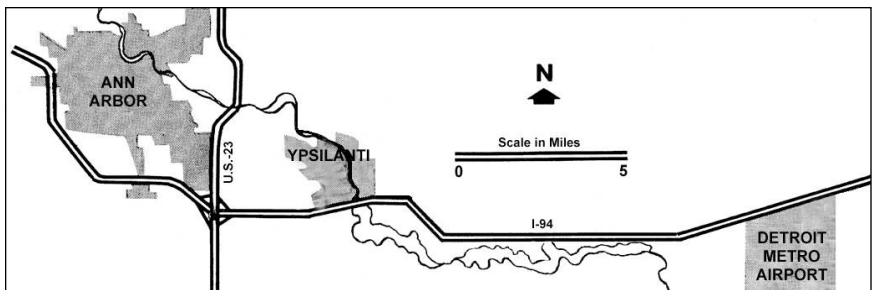
FALL 2010

Registration (for students not pre-registered)..... Sept 3, Fri
 Labor Day (Holiday) Sept 6, Mon
 Classes begin Sept 7, Tues
 Fall Study Break..... Oct 18–19, Mon–Tues
 Thanksgiving recess 5:00 p.m. Nov 24, Wed
 Classes resume 8:00 a.m. Nov 29, Mon
 Classes end Dec 13, Mon
 Study Days Dec 14, Tues & Dec 18–19, Sat–Sun
 Examinations Dec 15-17, Wed–Fri & Dec 20-22 Mon–Wed
 Commencement..... Dec 19, Sun

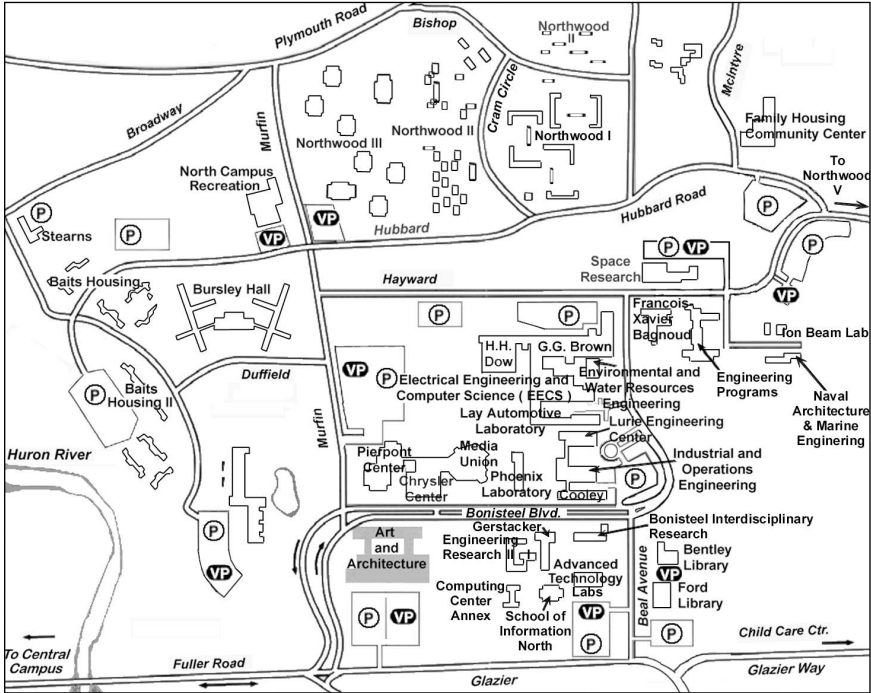
WINTER 2011

Registration (for students not pre-registered)..... Jan 4, Tues
 Classes begin Jan 5, Wed
 Martin Luther King, Jr. Day Jan 17, Mon
 Vacation begins 12:00 noon Feb 26, Sat
 Classes resume 8:00 a.m. Mar 7, Mon
 University Honors Convocation Mar 20, Sun
 Classes end Apr 19, Tues
 Study Days Apr 20, Wed & Apr 23–24, Sat–Sun
 Examinations Apr 21–22, Thurs–Fri & Apr 25–28, Mon–Thurs
 Commencement Activities Apr 29-May 1, Fri–Sun

MAPS U-M ANN ARBOR AREA



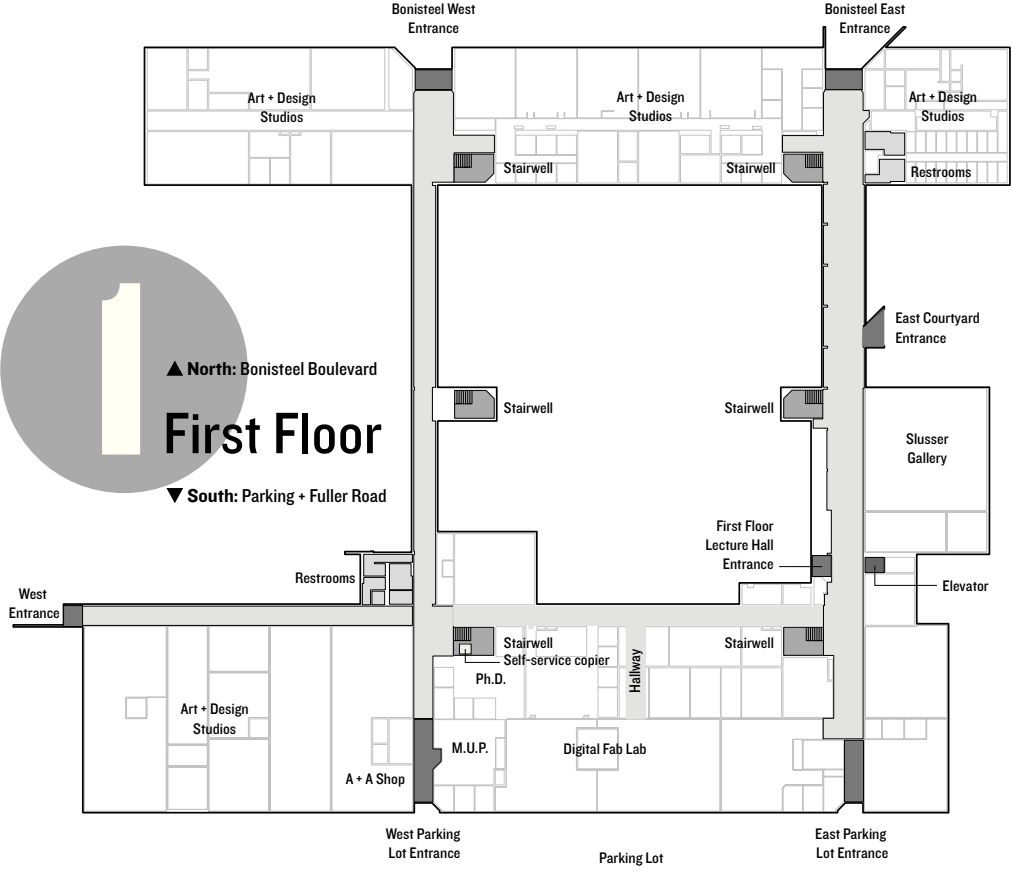
MAPS U-M NORTH CAMPUS



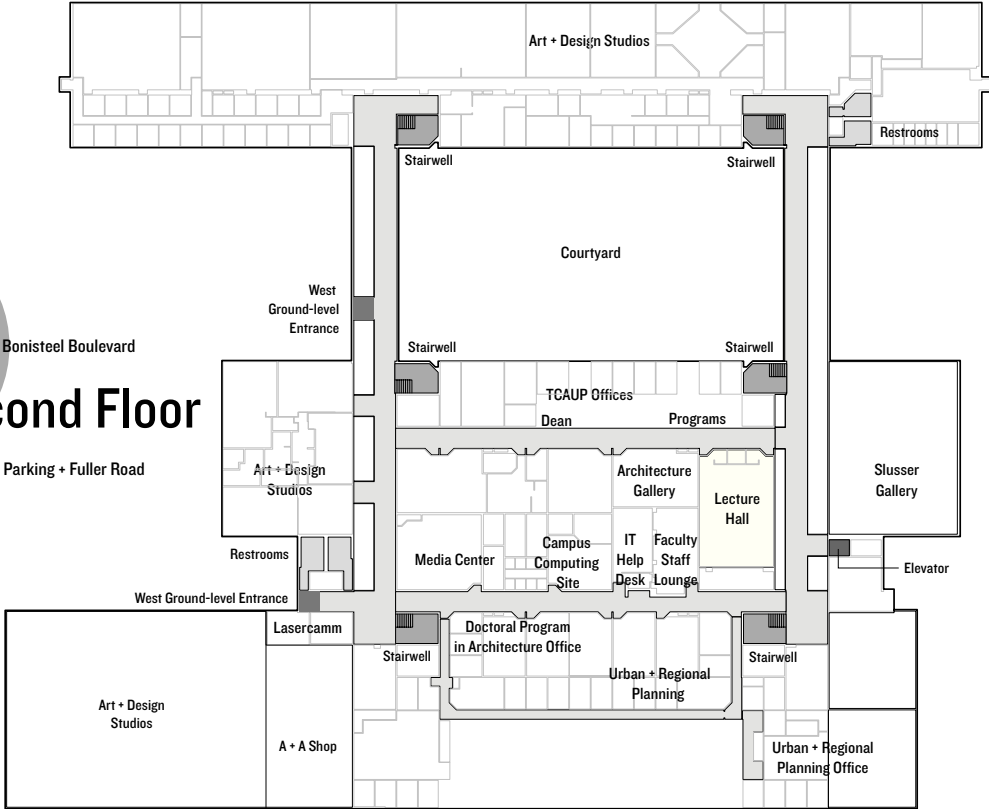
P = U-M Employee Parking **VP** = Visitor Parking

For a comprehensive set of U-M campus maps, visit the Campus Information Center website at <http://www.umich>.

MAPS THE ART AND ARCHITECTURE BUILDING,
2000 BONISTEEL BOULEVARD



MAPS THE ART AND ARCHITECTURE BUILDING,
2000 BONISTEEL BOULEVARD

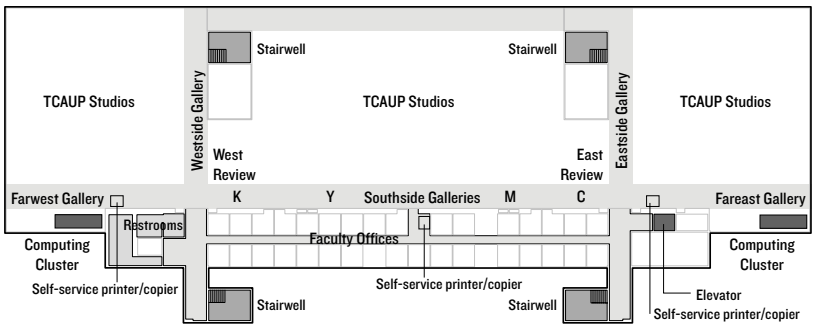


▲ North: Bonisteel Boulevard

Second Floor

▼ South: Parking + Fuller Road

MAPS THE ART AND ARCHITECTURE BUILDING,
2000 BONISTEEL BOULEVARD



3 Third Floor
▲ North: Bonisteel Boulevard
▼ South: Parking + Fuller Road

STUDENT WEB RESOURCES

http://www.umich.edu/student_res.html

ACADEMIC CALENDAR

<http://www.ro.umich.edu/calendar/>

SCHEDULE OF CLASSES

<http://www.ro.umich.edu/schedule/>

TUITION AND FEES

<http://www.umich.edu/~regoff/tuition/>

FINANCIAL AID

<http://www.ro.umich.edu/tuition/>

STUDENT FINANCIAL OPERATIONS

<http://www.finops.umich.edu/student>

WOLVERINE ACCESS

Change your address; order transcripts; and access grades, financial aid, CRISP, and class schedules.
<https://wolverineaccess.umich.edu/>

REGISTRAR

Diploma, disenrollment procedures, term grade reports, drop/add deadlines, final exam schedule, residency regulations, and more.
<http://www.ro.umich.edu/>

INTERNATIONAL CENTER

<http://www.umich.edu/~icenter>

STUDENT EMPLOYMENT

<http://www.fnaid.umich.edu/Employ/>

STUDENT SERVICES

Career programs, course information, support services, and financial aid.

http://www.umich.edu/student_serv.php

INTERNATIONAL CENTER

<http://internationalcenter.umich.edu/>

STUDENT EMPLOYMENT

https://www.studentemployment.umich.edu/cmxc_content.aspx?cpid=11

COUNSELING AND PSYCHOLOGICAL SERVICES (CAPS)

<http://www.umich.edu/~caps/>

EMERGENCY PREPAREDNESS

<http://www.umemergencymanagement.umich.edu/>

HOUSING

<http://www.housing.umich.edu/>

LIBRARIES AND ACADEMIC RESOURCES

<http://www.umich.edu/libraries.php>

COMPUTING ON CAMPUS

Where you can use a computer, how to get started using the University of Michigan Computing Environment (UMCE), and what technical assistance is available.

<http://www.umich.edu/computing.php>

UNIVERSITY HEALTH SERVICE

Primary medical care services for currently enrolled UM students, non-enrolled students, students from Flint and Dearborn campuses, alumni, faculty, staff, UM retirees, spouses, domestic partners, and guests.

<http://www.uhs.umich.edu/>

CAMPUS INFORMATION CENTERS

<http://www.umich.edu/~info/>

THE CAREER CENTER

<http://www.careercenter.umich.edu/>

GRADUATE GUIDE TO COMMENCEMENT

<http://www.umich.edu/~gradinfo/>

ANN ARBOR AREA/LIFE ON CAMPUS

Maps and directions, campus safety, and housing.

http://www.umich.edu/campus_life.php

RIDEBOARD

http://www.umich.edu/~ridebd/mainAbout_.html

TAUBMAN COLLEGE FACULTY

<http://www.tcaup.umich.edu/faculty/directory/>

TAUBMAN COLLEGE STAFF

http://www.tcaup.umich.edu/about/staff_directory/

Student Yearbook

<http://www.michiganyearbook.com/>

INFORMAL LEARNING SPACE INFORMATION

Lists and maps showing campus study resources.

<http://www.crlt.umich.edu/learningspaceguidelines/informal.php>

EXPLORE NORTH CAMPUS

Transportation and maps, schools and colleges, libraries, recreation, and more.

<http://www.umich.edu/~gonorth/>

INTRODUCTION

Architectural education at the University of Michigan prepares students to participate actively in the design of buildings and the physical environment. To effect change, an architect must understand the nature of the human problem in its environmental context, have knowledge of the techniques and technology of building, and possess the intellectual and aesthetic skills necessary for a creative synthesis of that information into meaningful and expressive design solutions.

As a result of momentous and rapid change in society, the planning, design, construction, and management of the built environment all demand an immensely varied range of skills. Design professionals, along with their associates in business, law, government, and the social and natural sciences are needed to foster a richly diverse and humane environment.

Employment opportunities for architectural graduates have increased in number and diversity. The skills and talents of the architect are required in professional practice, research, industry, education, and government. Within any of these areas, the architect's participation can range in scale from the design of building components and systems to urban design; while the specific task might include design development, materials research, administration, construction supervision, and consultation.

The architecture programs at Taubman College recognize the multiplicity and changing nature of future roles open to the architect. Whatever the exact nature of these roles might be, the programs are designed to prepare students to perceive the ordered relationship of people and their

environment and to translate this order into design for the enrichment of human experience.

ORGANIZATION OF PROGRAMS GRADUATE PROGRAM

2G option: Master of Architecture

Taubman College offers the following options in Master of Architecture

UNDERGRADUATE PROGRAM JOINT/DUAL MASTER'S DEGREE

Bachelor of Science in Architecture PROGRAMS

Architecture/Urban Planning

Architecture/Urban Design

Architecture/Business Administration

Architecture/Engineering

Architecture/Master of Science in Architecture

DOCTORAL DEGREE PROGRAMS

Master of Science

Ph.D.

UNDERGRADUATE PROGRAM

FRESHMAN and SOPHOMORE YEARS

Undergraduate Pre-Architecture

The freshman and sophomore years of undergraduate study—require the completion of 60 credit hours, covering a broad range of liberal arts courses, which may be taken at the University of Michigan or at any other accredited university or community/junior college. Students apply to the Architecture Program in the winter term of their sophomore year.

JUNIOR and SENIOR YEARS

Pre-Professional Degree

The junior and senior years consist primarily of required core courses in architecture, which the student takes while enrolled in Taubman College. The Bachelor of Science degree, a pre-professional degree, is awarded upon completion of all of the requirements of freshman through senior years. At this point, the student must apply to the 2G Master of Architecture Program to continue on to a professional degree.

GRADUATE PROGRAM

2G OPTION: MASTER OF ARCHITECTURE

Professional Degree

The 2G option is intended for those with a Bachelor of Science degree in architecture from Michigan or its equivalent and includes 60 credit hours of graduate level courses in architecture and related areas. The student has considerable freedom in electing courses. The Master of Architecture

professional degree is awarded upon successful completion of the requirements.

3G OPTION: MASTER OF ARCHITECTURE

Professional Degree

Students with prior non-architectural baccalaureate degrees may apply for admission to the Architecture Program as graduate students through the 3G option. The same application procedure applies as in admission to the 2G option.

JOINT/DUAL MASTER'S DEGREE PROGRAMS

The graduate programs below link architecture and other professions. In each program, the applicant must have completed the prerequisite undergraduate education for admission to the graduate program and to the master's program in the joint/dual field.

ARCHITECTURE/URBAN PLANNING

This program combines the final two years of the graduate program and the two-year Master of Urban Planning Program into a three-year/84-credit-hour program leading to the two degrees of Master of Architecture and Master of Urban Planning.

ARCHITECTURE/URBAN DESIGN

This program combines the final two years of the graduate program and the Master of Urban Design Program into a two and one-half year program leading to the two degrees of Master of Architecture and Master of Urban Design.

ARCHITECTURE/BUSINESS ADMINISTRATION

This program combines the final two years of the graduate program and the two-year master's program in business administration into a three-year/90-credit-hour program, leading to the two degrees of Master of Architecture and Master of Business Administration.

ARCHITECTURE/ENGINEERING

This program combines the final two years of the graduate program and the one-year civil and environmental engineering graduate program in construction engineering and management into a two and one-half year/75-credit-hour program leading to the two degrees of Master of Architecture and Master of Engineering.

ARCHITECTURE/MASTER OF SCIENCE

This program combines the M.Arch. and the two and one-half term Master of Science in Architecture into a three-year/four-year program leading to the two degrees of Master of Architecture and Master of Science in Architecture.

DOCTORAL DEGREE PROGRAMS

The degrees below, awarded by Rackham Graduate School, are administered by Doctoral Studies in Architecture.

MASTER OF SCIENCE IN ARCHITECTURE

The Master of Science (M.Sc.) degree is an advanced degree in architectural research. It is a two and one-half term, 30 credit hour, intensive program, culminating in an independent research-based master's thesis. In contrast to the professional Master of Architecture, the Master of Science is a non-professional, non-terminal degree.

PH.D. IN ARCHITECTURE

The Doctor of Philosophy (Ph.D.) in Architecture degree is the highest degree offered in architectural research. The program requires coursework of 40 credit hours during the first four terms of enrollment, followed by preliminary examinations, and culminating in dissertation research and writing, all typically completed at the end of five years.

BACHELOR OF SCIENCE

The Bachelor of Science program provides an opportunity for developing skills, knowledge, and perceptions in areas related to the built environment. The program consists of two years of pre-architecture and general education course work, and two years of intensive architecture course work.

During the first two years (freshman/sophomore), students pursue studies in the liberal arts, either at the University of Michigan or another accredited university or community college. At the beginning of the third (junior) year, they enroll into Taubman College of Architecture and Urban Planning for the required core courses in architecture. Upon graduation, they receive the Bachelor of Science, a non-professional degree. Many students choose to continue their graduate studies in architecture or a related field. Others work for a year or two in preparation for future graduate study.

FRESHMAN AND SOPHOMORE YEARS

The course work in the freshman and sophomore years may be taken either at the University of Michigan or at any other accredited university or community/junior college offering the required courses.

The objectives of the freshman and sophomore years are:

1. To increase the students' ability to understand, evaluate, and communicate ideas
2. To prepare students to make informed decisions regarding their academic and career goals
3. To provide a broad academic foundation of principles in subject areas considered essential to subsequent study in architecture

Please review the B.S. pre-requisite course list to ensure you are on track to apply to the Bachelors of Science program. Students transferring from another university or college should review the transfer guide/course equivalences available for their institution. Please note, not all courses will be listed on the transfer guide. If you have a question about whether or not a course will satisfy a prerequisite, please contact the Architecture Admissions Office.

Once the required pre-requisites courses have been completed, students will apply to transfer into Taubman College, typically during the winter term of the sophomore year. During junior and senior years they will complete of a series of required sequential architecture courses.

JUNIOR AND SENIOR YEARS

Junior and senior years consist of a series of required sequential architecture courses at the undergraduate level elected during enrollment in Taubman College.

The objectives of the junior and senior years are:

1. To provide a firm foundation in the vocabularies, principles, and interrelationships of a broad range of environmental design determinants essential to professional work in architecture

2. To provide opportunities for the students to develop their basic skills, knowledge, perceptions, and insights in areas related to the built environment

B.S. DEGREE

The Bachelor of Science (B.S.) degree, a non-professional baccalaureate degree, is awarded upon completion of all requirements.

At this point students may choose:

1. To continue their architectural education by applying to the 2G Option: Master of Architecture at Michigan, or by applying to a corresponding program in another accredited school of architecture
2. To continue graduate education in a related field of study
3. To gain professional work experience prior to returning to graduate studies
4. To conclude their academic education with a view toward employment in a capacity in which architectural licensing is not required

The B.S. program is a transfer program, meaning that course work in the freshman and sophomore years may be taken either at the University of Michigan (usually in the college of Literature, Science, and the Arts) or at any other accredited university or community/junior college offering the required courses. The objectives of the freshman and sophomore year curriculum are:

- To increase the students' ability to understand, evaluate, and communicate ideas
- To prepare students to make informed decisions regarding their academic and career goals
- To provide a broad academic foundation of principles in subject areas considered essential to subsequent study in architecture

B.S. RANKINGS, ACCREDITATION, LICENSING, AND IDP

RANKINGS

Taubman College's graduate and undergraduate programs in architecture consistently rank among the most prestigious and most admired in the country. Most recently, the Master of Architecture program was ranked 9th the nation by DesignIntelligence in their 2009 survey.

ACCREDITATION

The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit US professional degree programs in architecture, recognizes two types of degrees: the Bachelor of Architecture (5 Year) and the Master of Architecture (2 or 3 Year). The accreditation process provides periodic independent evaluation of the quality of the professional program as assessed from a national perspective. It provides assurance that graduates of the program are competent in architectural design, have a grasp of technical systems and requirements, are able to incorporate considerations of health and safety into design, understand the historical, human, and environmental contexts of architecture, and are adequately prepared for internship in professional practice.

In order to obtain an architectural license in the United States, all state registration boards (except Arizona) require a degree from an accredited professional degree program and a designated amount of work experience in the form of Intern Development Program requirements (IDP).

Students are advised that the Bachelor of Science in Architecture program at Taubman College is a pre-professional degree program. When combined with a professional two-year Master of Architecture degree, comprises an accredited professional education. However, the pre-professional Bachelor of Science degree is not, by itself, recognized as an accredited degree.

IDP

The IDP program is administered by The National Council of Architectural Registration Boards (NCARB) and the experience required for Michigan is currently 5600 hours of training experience.

LICENSING

Typically, a minimum of three years of experience and a professional degree in architecture are required before one can take the licensing exam. In the United States, licensing of architects is the legal prerogative of individual state governments. Each jurisdiction sets its own requirements for initial registration, examination, and corporate practice. Due largely to the efforts of the National Council of Architectural Registration Boards (NCARB), guidelines for license examination eligibility and the exam itself are fairly uniform from state to state. However, it is always advisable to check with the individual board to verify registration and practice requirements, as each jurisdiction may change its rules, statutes, and regulations at any time. A license is not required in order to work in an architectural firm; but to have ownership in a firm or to use the title Architect legally, licensing is mandatory.

B.S. ADVISING FOR PRE-ARCHITECTURE STUDENTS

Taubman College provides academic advising to current students at the University of Michigan and at other schools and colleges that are thinking about transferring into the architecture program.

Please call Anne Schoen at (734) 615-0431 to make an advising appointment. Appointments are held Monday through Friday from 8:30 a.m. to 4:00 p.m. All appointments are held at the Art and Architecture Building (suite 2150) on the University of Michigan North Campus, so please take bus/driving time into consideration when scheduling your appointment. Please allow at least three business days lead time to make all arrangements. Because we are a very small office, we cannot guarantee that staff will be available to help walk-ins. We will do our best to assist all students, but those who have scheduled an appointment will be served first. All walk-ins will only be assisted on an “as an advisor is available” basis.

For questions about the Architecture Program or advising for pre-architecture contact:

Anne Schoen

Admissions Counselor
Phone (734) 615-0431
Email: aburghdo@umich.edu
Web: <http://arch.umich.edu>

B.S. PREREQUISITE COURSES

A student must complete a minimum of 60 credit hours in the freshman and sophomore years including the following courses.

REQUIRED COURSES

Pre-Architecture/Studio Art

Two studio courses (6 credit hours) in basic freehand drawing and design or studio art which provide students with drawing and visual design skills primarily used in architecture and related fields. Students should elect at least one course that includes orthographic, axonometric, and perspective drawing. Studio courses UM Arch 201, Arch 202, and Arch 218.

English

One course (4 credit hours) in English composition. UM English 124, 125, Complit 122, Gtbooks 191, History 195, LHSP 125, RCCore 100.

Mathematics

One course (4 credit hours) in analytic geometry and calculus—functions and graphs, limits, derivatives, differentiation of algebraic and trigonometric functions. UM Math 115.

Physics

Two terms of physics, lecture plus lab, (8 credit hours minimum)—laws of motion, force, energy and power, gas laws, heat, wave motion, sound, electricity and magnetism, and light and optics. UM Physics 125/127 and 126/128, or 140/141 and 240/241.

HIGHLY RECOMMENDED COURSES

In addition to the courses required for admission to the junior year, a student must complete the following liberal arts distribution requirements in order to receive the B.S. degree. Each student is strongly encouraged to complete as many of the prerequisites as possible during freshman and sophomore years. Classification of a course as Humanities, Natural Science, or Social Science is consistent with LSA policy, except that foreign language courses are considered as humanities and mathematics courses are considered as natural science.

Architectural History

A two course sequence (UM Arch 313 and 323) that surveys the history of architecture from antiquity to the present. Arch 313 is only offered in fall term and 323 only in winter term. Sophomore standing is required for these two courses.

Digital Media Arts

One course (3 credit hours) in geometric modeling, programming, or interactive media. Arch 211, Arch 421, and Arch 551.

Humanities

Two courses (6 credit hours) usually selected from classical studies, English, foreign language, history of art, linguistics, musicology, philosophy, religion or speech.

Natural Sciences

One course (3 credit hours) usually selected from biological anthropology, astronomy, biology, chemistry, ecology, geological science, mathematics (above Math 115), or physiology. Students who have not taken a chemistry course in high school must elect chemistry.

Social Sciences

Two courses (6 credit hours) usually selected from cultural anthropology,

communication, economics, geography, history, linguistics, political science, psychology, or sociology.

Courses taken to fulfill junior year admissions and Bachelor of Science degree requirements may not be taken pass/fail.

Beyond the course and distribution requirements specified above, a student may take other courses as open electives to earn a total of at least 60 credit hours. Since emphasis in the freshman and sophomore years is on liberal arts, not more than 7 credits in non-academic or technical areas can be applied toward the 60 credit hour requirement.

B.S. TRANSFER GUIDES

Students transferring from another university or college should review the pre-requisite course list for UM and refer to the transfer guide/course equivalencies available for their institution to find comparable courses.

Incoming transfer students must have completed a minimum of 60 credit hours and we will accept up to a maximum of 70 credit hours. Please note: UM will only accept 7 technical credits from another institution to be applied toward the 60 credit hour requirement. Technical courses could include subjects such as CAD, drafting, automotive repair, etc. Not all courses will be listed on the transfer guide. If you have a question about whether or not a course will satisfy a pre-requisite, please contact the Architecture Admissions Office. Please be aware though that the Architecture staff can only provide an unofficial estimate of transfer credits. The University's Credit Evaluation Office will officially evaluate a student's transcripts once the student is admitted.

Note: In order for course credits from external (non-UM) institutions to be eligible for transfer to the architecture program, transfer students must achieve a grade of C or better in those courses.

B.S. HOW TO APPLY (CROSS CAMPUS/NEW TRANSFER)

The Bachelor of Science program is a transfer program. Students apply during the winter term of their sophomore year to transfer into Taubman College for their junior and senior years.

To be eligible for admission to junior year, a student must have completed two years of college and completed 60 credit hours by the end of the spring term (June) preceding the intended term of entrance. Students with more than two years of college level work are also eligible for admission to the junior year. The college does not admit students at the senior year level. Students transferring from another institution will be admitted in the summer half-term only (end of June). Cross campus transfer students (currently enrolled at the University of Michigan) will be admitted in the fall term only. Students may apply to the program two different ways:

- 1) Students interested in pursuing architecture that apply to the to the University of Michigan as freshman (right out of high school) are advised to apply to the college of Literature, Science, and the Arts (LS&A), where they will be able to complete all of the prerequisite courses. Students may also be enrolled in other schools such as the School of Art & Design, College of Engineering, School of Music, Theatre, and Dance, etc. and transfer into the Architecture Program, but it is usually more difficult to complete the pre-requisites when enrolled in those programs. After

completing two years, students will apply to transfer from LS&A into the Architecture Program. Freshman applicants that meet the qualifications may also apply for architecture preferred admission status when applying to LS&A, which would guarantee them a space in the Architecture Program for junior year, if the preferred admission conditions are met.

- 2) Students may complete their first two years at any other university, school, or college and complete the prerequisite courses and apply to transfer into Taubman College at the end of their sophomore year.

The Office of Undergraduate Admissions handles both application procedures (incoming freshman and incoming transfer students). Students are encouraged to apply online. The application deadline for both freshman and transfer students is February 1 annually.

B.S. APPLICANT EVALUATION

Eligible applicants are considered for admission on the basis of the following criteria:

1. Quality and content of all previous academic education
2. Other data, which indicates professional growth and motivation toward architecture—written statement of career goals, employment, record, letters of recommendation, portfolio, etc.

Students who have completed freshman/sophomore studies at other universities or community colleges are evaluated on the same basis as those who have completed their studies at the University of Michigan.

B.S. APPLICATION DEADLINE/ADMISSIONS TIMELINE

The completion and submission of all application materials is solely the responsibility of the applicant. Failure to submit any of the required materials (for any reason) will result in a less than thorough review of your application. Incomplete applications are considered only after all complete applications have been reviewed.

February 1All paperwork and application materials due at the
Office of Undergraduate Admissions
March 10.....Portfolio due to Taubman College
Mid-April.....Admissions decisions reached and applicants notified
May 1.....Applicant response form due at Taubman College. All
admitted
students who are new to the University must pay an
enrollment
deposit fee to the Office of Undergraduate Admissions

B.S. APPLICATION CHECKLISTS

Send the following materials
by February 1, 2010 to:
University of Michigan
Office of Undergraduate Admissions
515 East Jefferson Street (1220 SAB)
Ann Arbor, MI 48109-1316

Send the following materials
by March 10, 2010 to:
University of Michigan
Taubman College of Architecture
Attention: B.S. Admissions
2000 Bonisteel Boulevard
Ann Arbor, MI 48109-2069

CROSS CAMPUS TRANSFER (CURRENT U-M STUDENTS)

Completed application form
Complete one essay. Longer
responses are encouraged.

Transcripts
From schools other than UM if
not previously submitted to UM

Portfolio of work

- Two letters of recommendation
 - One must be from a non-architecture professor.

NEW TRANSFER (STUDENTS NEW TO UM)

- | | |
|--|--|
| <ul style="list-style-type: none"><input type="checkbox"/> Completed application form<ul style="list-style-type: none">Complete all 3 essays. Longer responses are encouraged.<input type="checkbox"/> Application fee<input type="checkbox"/> Transcripts<ul style="list-style-type: none">High school and all colleges attended.<input type="checkbox"/> Two letters of recommendation<ul style="list-style-type: none">At least one from a college instructor.<input type="checkbox"/> TOEFL/IBT scores<ul style="list-style-type: none">Reported from ETS (non-native English speakers only)<input type="checkbox"/> Financial certification<ul style="list-style-type: none">(International applicants only) | <ul style="list-style-type: none"><input type="checkbox"/> Portfolio of work |
|--|--|

- Copy of passport
And copies for any family
members
accompanying the student to
the
U.S. (International applicants
only)

B.S. PORTFOLIO GUIDELINES

Applicants to the junior year are required to submit evidence of their graphic and design abilities. Applicants should carefully select representative work, which illustrates their ability to think and communicate visually, and which demonstrates the range and depth of their familiarity with various graphic media and techniques.

Portfolios must comply with the following requirements.

CONTENT

Work may include, but need not be limited to, examples of:

- architectural design or building
- drawing—freehand, with tools or digital
- photography
- interior, industrial, and graphic design
- painting, printmaking, sculpture, and ceramics

Work submitted may include class assignments, independent projects, or examples from professional employment. The applicant shall have executed all such work. If professional or group projects are submitted, the applicant must indicate the extent of his/her role in the work.

FORMAT

The collection of samples submitted must be securely bound or fastened together in a durable folder, binder, or box whose overall dimensions do not exceed 8-1/2" x 11". Each submission shall be clearly identified with the name and address of the applicant. DO NOT send original work. Please submit reproductions of original works in the form of photocopies, prints, or photographs. The committee will not review the following work:

- models or other three-dimensional objects
- slides
- videotapes
- folded materials/blueprints
- electronic media (CDs, DVDs, disks) and/or digital files

DEADLINE

All graphic and design work must be received by Taubman College of Architecture and Urban Planning by March 10. Note that all paper application materials are due by February 1 to the Office of Undergraduate Admissions.

Typically a 1-1/2 hour portfolio workshop is offered at Taubman College in January. Details about the workshop are typically posted on the architecture program website at <http://arch.umich.edu/> as soon as the date is final. Or, you may contact the Architecture Program Office at arch@umich.edu or (734) 615-0431 for details.

RETURN

Graphic work may be picked up at Taubman College after admission decisions have been made. Portfolios will be returned to applicants that submit a self addressed, prepaid mailer or sufficient postage. Work not sent back or picked up by July 1 will be discarded, unless special arrangements are made for its retention.

B.S. FRESHMAN PREFERRED ADMISSIONS

The College of Literature, Science, and the Arts (LS&A) and A. Alfred Taubman

College of Architecture and Urban Planning have developed a program directed toward a limited number of highly-qualified entering LS&A freshmen who are interested in transferring to the Architecture Program during their junior year to obtain the Bachelor of Science degree. In order to be considered for the preferred admissions program, candidates must:

1. Have a high school GPA of 3.5 or higher (University of Michigan calculated)
2. Achieve a total SAT I score of 1300 math and verbal or ACT composite of 29 or higher
3. Indicate on their application that they are interested in the preferred admissions program in Architecture
4. Be admitted to the college of Literature, Science, and the Arts

Students should apply for admission in LS&A and indicate they are interested in the preferred admissions program in Architecture. If the student is accepted into LS&A and granted preferred admissions status, the student is guaranteed admission to the junior year of the Architecture Program, provided they maintain an overall GPA of 3.0 and complete the program requirements specified for the freshman and sophomore years (a minimum of 60 credit hours), including pre-architecture drawing, English composition, calculus, and physics.

Transfer students to the University are not eligible for preferred admissions. Participation in the preferred admissions program does not guarantee acceptance to the graduate program.

B.S. SCHOLARSHIPS

Applicants are automatically reviewed for two undergraduate scholarships that Taubman College has available. No separate application is necessary. Scholarship recipients will be notified of the scholarship award in the admission letter. Because financial resources are limited, we would encourage all applicants to seek out other sources of funding as well. Please apply for any scholarships, fellowships, and grants for which you are eligible. U.S. Citizens and permanent residents are also encouraged to complete the Free

Application for Federal Student Aid (FAFSA) to be considered for Federal Student Aid. Approximately 14 need-based scholarships are awarded to undergraduate students. Awards are determined by information provided by FAFSA.

B.S. HOUSING

Because the University of Michigan is so large, typically we can only guarantee residence hall (dormitory) living for incoming freshman students. Generally, sophomores, juniors, and seniors live in off-campus housing locations (either apartments or houses). Off-campus does not mean off-campus in the sense that it is not located near campus; most off-campus housing is actually within campus. It simply means that the properties are not owned and maintained by the University. Instead, they are privately owned apartments and homes managed by landlords and management companies.

Incoming LS&A students in pre-architecture are advised to select a Central Campus residence hall location, as most of the pre-requisite courses will be held on Central Campus. There is no specific residence hall for architecture students. Students studying many different disciplines are combined with one another in the various UM residence halls. Once a student transfers into the Architecture program, almost all of his/her classes will be in the Art and Architecture building (on North Campus), so students might want to consider apartments around the north campus area for their junior/senior years. However, some architecture students live in a variety of locations on Central Campus. The University bus system that runs between Central and North Campus every five minutes makes it possible for students to get around with relative ease, no matter where they live.

B.S. STUDENT PROFILE: 2009 ADMISSION STATISTICS

Applications	119
49 female, 70 male | 67 UM students, 52 transfer students	
Admissions.....	110
45 female, 65 male | 63 UM students, 47 transfer students	
Enrolled (unofficial).....	106
Scholarships offered.....	16
Undergraduate GPA Average (freshman + sophomore years).....	3.25

Student studio/faculty ratio: 12-1

OVERALL COLLEGE ENROLLMENT (APPROXIMATIONS)

Total students (all programs)	704
Undergraduates (106 Juniors, 115 Seniors)	221
Master of Architecture 2G students.....	113
Master of Architecture 3G students.....	113
Master of Urban Design students.....	14
Master of Science in Architecture students	12
Doctoral Program in Architecture students (Ph.D.).....	45
Master of Urban Planning students.....	123
Ph.D. in Urban Planning students	24
Graduate Certificate in Real Estate Development students (dual enrollees).....	39

UNIVERSITY OF MICHIGAN ENROLLMENT 2008 (APPROXIMATIONS)

Total enrollment	56,857
Ann Arbor Campus	41,028
Dearborn Campus.....	8,569
Flint Campus	7,260
Undergraduate.....	38,927
Graduate and professional.....	17,930
New freshman (Ann Arbor)	5,608

B.S. LS&A ACADEMIC MINORS

Students in the Architecture Program have the option of electing one or more academic minors offered by departments within the College of Literature, Science, and the Arts (LS&A). Minors are intended to recognize the completion of a coherent sequence of courses in a particular academic area. They also serve as recognition, via the transcript notation, of the completion of a more in-depth course sequence.

To initiate a minor, a student must meet with an LS&A advisor in the minor discipline and together determine the necessary minor courses. The certification that the appropriate courses have been completed will be communicated from the LS&A department offering the minor to the college

registrar. The student will be responsible for making sure this paperwork arrives at the appropriate offices.

There may be minors offered in units other than LS&A. For minors available in liberal arts, please refer to the LS&A website at <http://www.lsa.umich.edu/saa/minors.html>.

ACADEMIC COUNSELING

Students enrolled at UM are encouraged to discuss their academic plans with both their current academic advisor (through their home department) and the Architecture Admissions office.

LSA Office of Academic Advising
The University of Michigan
1255 Angell Hall
435 South State Street
Ann Arbor, MI 48109-1003
(734) 764-0332

For architecture advising, please contact:

Anne Schoen
Admissions Counselor
Phone (734) 615-0431
Email: aburghdo@umich.edu
Web: <http://taubmancollege.umich.edu/architecture/>

Students currently attending other universities and high school students interested in architecture are also encouraged to make an advising appointment with the Architecture Admissions Office.

B.S. FREQUENTLY ASKED QUESTIONS

Can I request an application packet?

The Office of Undergraduate Admissions processes applications to the B.S. Architecture Program. Transfer students must apply online. Students are encouraged to apply online at <https://apply.embark.com/ugrad/umich/> or register as a prospective student at <https://inquiry.embark.com/umich/ugrad/>.

What is the application deadline?

The application deadline is February 1, 2009, for fall 2009 admission. All application materials must be submitted to the Office of Undergraduate Admissions by February 1.

The portfolio part of the application is due to Taubman College on March 10, 2009. Incomplete files will not be reviewed.

How can I find out if my application materials have been received?

Applicants can check the status of their application and verify information using our Web Application Status function. Once an applicant submits an application online, s/he will receive email instructions on how to access their application status by logging into Wolverine Access at <http://wolverineaccess.umich.edu/>.

How do I apply for merit based scholarships?

Scholarships from Taubman College are awarded based on merit. All applicants are automatically considered for the two merit-based scholarships that are available. Scholarship recipients will be notified of the scholarship award in the admission letter. Because financial resources are limited, we would encourage all applicants to seek out other sources of funding as well. Please apply for any scholarships, fellowships, and grants for which you are eligible.

I am a US Citizen or permanent resident that submitted my FAFSA form. When should I expect to receive my financial aid package?

Federal Financial Aid awards are packaged approximately one to two weeks after an admission letter is processed. Students can view their financial aid

award online by logging into Wolverine Access at <http://wolverineaccess.umich.edu/>. The Office of Financial Aid will send an email to admitted students that submitted a FAFSA with instructions on how to view their financial aid package online as soon as their financial aid award is ready.

When can I expect to receive an admission decision?

The admissions committee typically has final admission decisions by mid-April.

All applicants will receive an official decision letter as soon as the committee has reached a conclusion. A general architecture admissions timeline is as follows:

February 1Application deadline
March 10Portfolio deadline (submit directly to Taubman College)
Mid MarchApplications go to admissions committee for review
Mid-AprilAdmissions decisions reached and applicants notified

If I am not a US Citizen or permanent resident alien, what amount of financial certification is required for my first year?

All international students must submit a Financial Certification Form along with their application, to show that they have sufficient funds to cover the cost of studying at University of Michigan for the first year. The estimated financial certification for

2010–2011 academic year is 51,925 USD. The final tuition rates will be set in July and an exact figure will be available then.

The Financial Certification does not affect your chances of receiving a merit based scholarship in any way. The admissions committee does not consider the financial certification form when making decisions regarding scholarships. The financial certification is only an administrative piece and is necessary to process I-20 forms for admitted students.

What qualifies for financial certification?

International students must submit two important documents for the financial certification. You must submit either item 1 and 3 or 2 and 3 below.

1. A letter of support (who will support the student and what their relationship to the student is) signed by the family member(s) offering financial support to the student. It must be an original signature. or
2. A completed financial certification form (found in the online application) with original signatures from the family member(s) offering support and the proper boxes checked. and
3. An original bank statement (on bank letterhead), showing the type of account, the exact balance of the account, with a bank representative's original signature. The statement must also show the account holder's name and it must match the name of the person offering support exactly.

Only funds in a liquid account, such as a checking or savings account will be accepted: Property, life insurance, stock, jewelry, mutual funds, land, medical savings, long-term savings for housing, benefits, securities, trusts, and retirement accounts do not qualify. If a student is supporting him/herself, we will only need an original bank statement in the student's name showing sufficient funds.

Can the financial certification come from more than one source/sponsor?
Yes, a student may have more than one sponsor or source of funding. We must have a letter of support or completed form and an original bank statement from each additional sponsor as well.

Will you return my bank statement to me after my I-20 is processed?
No, the original bank statement and letter of support will not be returned to you.

We need both those documents for I-20 processing and must keep the original in your file to be in accordance with the visa regulations. Your financial certification will become property of the University of Michigan.

I have been assigned to a waitlist. What does that mean and how does the waitlist process work?

The waitlist means that we are interested in your application, but have already offered admission to other candidates. If space becomes available, we will admit students from the waitlist. The waitlist is unranked and when spots open, all the waitlisted students will be reviewed again for admission. The chances of being admitted from the waitlist vary from year to year. Please check the student profile and admission statistics earlier in this section to see exact numbers of waitlisted students admitted.

Will I get my application fee back?

No, the application fee is non-refundable.

How do I put together a portfolio?

All applicants to the B.S. program are required to submit a portfolio as part of their application materials. Please review the portfolio guidelines earlier in this section or on the web at http://arch.umich.edu/admissions/apply/ug/portfolio_guidelines/ for more detailed information about preparing your portfolio. Taubman College also offers a portfolio workshop every January. Please contact the Architecture Admission Office in December by calling (734) 615-0431 or sending an email to arch@umich.edu for details. The workshop is open to the public; advance registration is not necessary.

Will you return my portfolio to me?

When you submit a portfolio as part of your application, it becomes property of the University of Michigan. If you would like to have your portfolio returned to you after admission decisions are made you must either come in and pick up the portfolio or submit one of the following with your application materials:

1. A prepaid, self addressed/labeled envelope
2. Proper postage to cover the cost of returning the portfolio to you
3. A check made payable to: The University of Michigan, to cover the cost of returning the portfolio to you

Taubman College will not return portfolios to applicants unless one of the above mentioned procedures is followed.

B.S. DEGREE REQUIREMENTS

In order to qualify for the Bachelor of Science degree, a student must meet the following requirements:

1. Complete a minimum of 120 credit hours, of which a minimum of 50 credit hours, including a minimum of 45 credit hours in architecture courses, must be earned while the student is enrolled in Taubman College
2. Complete all required courses and distribution requirements specified for the freshman and sophomore years and all required architecture courses specified for the junior and senior years, as listed under “Sample Schedule.”
3. Earn a passing grade (C- or better) in each required architecture course, in each required pre-professional course (art, English, mathematics, and physics), and in each course used to fulfill liberal arts distribution requirements (digital media arts, humanities, natural sciences, and social sciences).
4. Earn a minimum cumulative grade point average of 2.0 (C) for all required architecture courses.
5. Earn a minimum cumulative grade point average of 2.0 (C) for all courses taken while enrolled in the college.

All students expecting to receive the B.S. degree are required to apply to graduate on Wolverine Access. This should be done at least three months in advance of the expected date of graduation. Students who meet this deadline will have their names published in the Commencement Program. Faculty advisors and administrators can assist students in planning their course schedules, but the student is ultimately responsible for meeting all program and degree requirements. If degree requirements are not completed for the commencement period to which the student has applied on Wolverine Access, a student must apply again on Wolverine Access to be considered for graduation at a subsequent commencement date.

B.S. SAMPLE SCHEDULE: JUNIOR AND SENIOR YEARS

The following schedule is typical for students enrolled in their junior/senior year.

All listed architecture courses are required.

JUNIOR YEAR

Summer Half-Term (New Transfers only)	Credit Hours
Architectural Design UG0.....	3

Fall Term (All New and Cross Campus Transfers)	Credit Hours
Arch 312 Architectural Design UG1.....	6
Arch 316 Design Fundamentals I.....	3
Arch 317 Construction I.....	3
Elective*.....	3
Total.....	15

Winter Term	Credit Hours
Arch 322 Architectural Design UG2.....	6
Arch 315 Environmental Technology I.....	3
Arch 326 Design Fundamentals II.....	3
Elective*.....	3
Total.....	15

SENIOR YEAR

Fall Term	Credit Hours
Arch 432 Architectural Design UG3.....	6
Arch 314 Structures I.....	3
Arch 425 Environmental Technology II.....	3
Elective*.....	3
Total.....	15

Winter Term	Credit Hours
Arch 442 Architectural Design UG4.....	6
Arch 324 Structures II.....	3
Arch 427 Construction II.....	3
Elective*	3
Total	15

*Electives must include courses in history of architecture (Arch 313 and Arch 323), digital media, humanities, natural sciences, and social sciences if these requirements were not completed in the freshman and sophomore years.

MASTER OF ARCHITECTURE DEGREE: 2G OPTION

M.ARCH. 2G GENERAL DESCRIPTION

The 2G option: Master of Architecture Degree Program consists of graduate level course work in architecture and related fields for those applicants with a Bachelor of Science degree in Architecture or its equivalent.

The Master of Architecture (M.arch.), is awarded upon satisfactory completion of two years of study. The 2G option builds upon fundamentals established in the previous years of undergraduate studies. While a basic curriculum of professional course work forms the structure for graduate study, students have considerable freedom to organize their programs of study from the resources of the college and the University appropriate to their individual professional goals, skills, and interests. The objective of the 2G option is to prepare individuals to make professional contributions in a broad and diverse range of roles in architecture—graduates who can:

1. Work effectively within the opportunities and constraints of current practice
2. Adapt and renew their abilities to meet new and changing conditions
3. Contribute to the development of an environment surpassing present-day achievements

M.ARCH. 2G RANKINGS, ACCREDITATION, LICENSING, AND IDP

RANKINGS

The Master of Architecture Program was ranked 9th by the DesignIntelligence in 2009.

ACCREDITATION

The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit US professional degree programs in architecture, recognizes two types of degrees: the Bachelor of Architecture (5 Year) and the Master of Architecture (2 or 3 Year). Both Master of Architecture programs (2G and 3G) at the University of Michigan are fully accredited by the NAAB.

The accreditation process provides periodic independent evaluation of the quality of the professional program as assessed from a national perspective. It provides assurance that graduates of the program are competent in architectural design, have a grasp of technical systems and requirements, are able to incorporate considerations of health and safety into design, understand the historical, human, and environmental contexts of architecture, and are adequately prepared for internship in professional practice.

The Master of Architecture degree is the program of professional study at the University of Michigan that is accredited by NAAB. A copy of the most recent accreditation report is available in the Architecture Program Office.

In order to obtain an architectural license in the United States, all state registration boards (except Arizona) require a degree from an accredited professional degree program and a designated amount of work experience in the form of Intern Development Program requirements (IDP).

IDP

The IDP program is administered by The National Council of Architectural Registration Boards (NCARB) and the experience required for Michigan is currently 5,600 hours of training experience.

LICENSING

Typically, a minimum of three years experience and a professional degree in architecture are required before one can take the licensing exam. In the United States, licensing of architects is the legal prerogative of individual

state governments. Each jurisdiction sets its own requirements for initial registration, examination, and corporate practice. Due largely to the efforts of the National Council of Architectural Registration Boards (NCARB), guidelines for license examination eligibility and the exam itself are fairly uniform from state to state. However, it is always advisable to check with the individual board to verify registration and practice requirements, as each jurisdiction may change its rules, statutes, and regulations at any time. A license is not required in order to work in an architectural firm; but to have ownership in a firm or to use the title Architect legally, licensing is mandatory.

M.ARCH. 2G INFORMATION SESSIONS AND TOURS

Taubman College provides academic advising and tours for those students considering applying to the architecture program.

Please call Meghan Lee at (734) 764-1649 to make an appointment. Appointments are held Monday–Friday from 8:30 a.m.–4:00 p.m. All appointments are held at the Art and Architecture Building (suite 2150) on the University of Michigan North Campus so please take bus/driving time into consideration when scheduling your appointment. Please allow at least three business days lead time to make all arrangements. Because we are a very small office, we cannot guarantee that staff will be available to help walk-ins. We will do our best to assist all students, but those who have scheduled an appointment will be served first. All walk-ins will only be assisted on an “as an advisor is available” basis.

M.ARCH. 2G PREREQUISITE COURSES

A student should have completed the following courses as part of their undergraduate degree in Architecture. If any course deficiencies are found, the student must complete extra courses in addition to the regular Master of Architecture curriculum. The 2G option does not offer advanced standing.

ARCHITECTURE STUDIO

Four sequential (5–6) credit hour architectural design courses equivalent to Arch 312, 322, 432, 442

CONSTRUCTION

Two 3 credit hour construction courses equivalent to Arch 317 and Arch 427

STRUCTURES

Two 3 credit hour structure courses equivalent to Arch 314 and Arch 324

ENVIRONMENTAL TECHNOLOGY

Two 3 credit hour Environmental Technology courses equivalent to Arch 315 and

Arch 425

HISTORY OF ARCHITECTURE

Two 3 credit hour History of Architecture courses equivalent to Arch 313 and Arch 323

DESIGN FUNDAMENTALS

Two 3 credit hour Design Fundamentals courses equivalent to Arch 316 and Arch 326

M.ARCH. 2G HOW TO APPLY

The 2G Master of Architecture Option is suited for students who have previously studied architecture in their undergraduate work.

To be eligible for admission to the 2G option, a student must have received, prior to enrollment, either of the following:

1. A Bachelor of Science in Architecture degree, awarded by the A. Alfred Taubman College of Architecture and Urban Planning at the University of Michigan

2. A baccalaureate degree in a program equivalent in content to the Undergraduate Architecture Degree Program at the University of Michigan

M.ARCH. 2G APPLICATION DEADLINE

All applicants are required to apply online. The application deadline is January 15, 2010 for fall 2010 admission. Admission is limited to the fall term. The completion and submission of all application materials is solely the responsibility of the applicant. Failure to submit any of the required materials (for whatever reason) will result in a less than thorough review of your application. Incomplete applications are considered only after all complete applications have been reviewed.

M.ARCH. 2G APPLICATION FORM

The application form is required from all applicants and must be completed online. All supplementary material (official transcripts, application fee check or money order, letters of recommendation, portfolio, and certification for financial support for international students) must be sent in one package to Taubman College of Architecture and Urban Planning, Attn: Architecture Admissions. The form must be filled out completely and accurately to be considered a valid application for admission. Do not use an application form from the Horace H. Rackham School of Graduate Studies.

M.ARCH. 2G APPLICATION FEE

The \$60.00 (in U.S. funds) nonrefundable application fee is required from domestic applicants. A \$75 application fee is required from international applicants. Applicants may pay the fee online using a credit card or include a check or money order, made payable to the University of Michigan with their application materials.

Do not send Cash.

M.ARCH. 2G STATEMENT OF PURPOSE/PERSONAL STATEMENT

This essay should be 1,000–1,500 words and give the admissions committee a clear idea of:

- a.) Why you want to study architecture
- b.) What you want to learn/gain from the program
- c.) Why you want to pursue your degree at University of Michigan
- d.) Your design philosophy and process

The statement of purpose may be submitted as an attachment to the online application or mailed in with your application materials.

M.ARCH. 2G OFFICIAL TRANSCRIPTS

The College requires applicants, domestic and international, to provide one official transcript or certified credentials (transcripts) from all universities

and community colleges attended. If your academic credentials are in any language other than English, you must submit both the original document and a certified English Translation. International credentials should include a certified copy of the diploma, if awarded. Applicants holding degrees from Bangladesh, Sri-Lanka, Burma, India, Nepal, and Pakistan must include detailed examination records, for all years of the program, showing subjects, marks received, and class obtained. U-M graduates and current students do not need to submit a transcript from Michigan, but should request transcripts for any other schools they have attended.

M.ARCH. 2G LETTERS OF RECOMMENDATION

Three letters of recommendation are required for all applicants. If possible, at least two of these should come from former professors. Recommendations should be completed online as part of the online application process. Please ask your recommenders to complete the online form and attach their letter electronically. If absolutely necessary, we will also accept hard copy recommendations if they are on University or company/firm stationery. Please request your letters of recommendation sufficiently early to ensure your recommenders submit their letters by the January 15th deadline.

M.ARCH. 2G PORTFOLIO

All applicants are required to submit samples of their academic work and, if possible, their professional work. Please see the portfolio guidelines later in this section for details.

M.ARCH. 2G RESUME OR C.V.

Please submit an up to date resume or curriculum vitae with your application.

M.ARCH. 2G GRADUATE RECORD EXAMINATION

The Graduate Record Examination (GRE) is required. Information about the GRE including test dates and locations can be found at <http://www.gre.org>. Please contact ETS (www.ets.org or www.gre.org) and have an official score report sent to the University of Michigan (Institution code 1839, department

code 4401) at least 6–8 weeks prior to the January 15 deadline. GRE scores must be no older than five years old to be valid. There is no minimum requirement for the GRE test.

M.ARCH. 2G TOEFL/IBT EXAMINATION (International Students Only)

The Test of English as a Foreign Language (TOEFL) or Internet Based Toefl (IBT) is required of all non-native English speakers. Information about the TOEFL/IBT including test dates and locations can be found at www.ets.org/toefl/. Please contact ETS (www.ets.org) and have an official score report sent to the University of Michigan (Institution code 1839, department code 12) at least 6–8 weeks prior to the January 15 deadline. TOEFL/IBT scores must be no older than two years old to be valid. The minimum requirement for the TOEFL test is 250 computer based or 600 paper based. The minimum requirement for the IBT test is 100. Non-native English speakers that have graduated from a four-year University where English was the primary language of instruction are not required to submit a TOEFL score.

M.ARCH. 2G FINANCIAL CERTIFICATION (International Students Only)

Certification of financial support is required from all applicants who are not U.S. citizens or permanent resident aliens to show that they have sufficient funds to cover the cost of studying at University of Michigan for the first year. Please see the Financial Certification Section for more information.

M.ARCH. 2G I-20/PASSPORT COPIES (International Students Only)

Each international applicant should submit a copy of their passport (and copies of any dependent family members' passport that would be accompanying the student to the USA) with their application materials. Passport copies are required in order to process an I-20 form. In order to avoid processing delays, please submit the passport copies with your application materials.

M.ARCH. 2G VISA

Applicants that are currently in the U.S. should also send a copy of their current I-20 or I-94 form. A transfer-in-form is also required if an applicant is currently attending another U.S. school or college and is admitted to the program.

M.ARCH. 2G EVALUATION

Applications will not be evaluated until all credentials have been received and the application fee has been paid. Applications missing credentials cannot be guaranteed a review by the admissions committee.

Eligible applicants are considered for admission on the basis of the following criteria:

1. Quality and content of all previous academic education
2. Evidence of professional commitment and direction—statement of purpose, employment record, letters of recommendation, portfolio, etc.
3. The number of openings available

M.ARCH. 2G APPLICATION DEADLINE/ADMISSIONS TIMELINE

January 15.....All application materials due at Taubman College
Early–mid March.....Admission decisions reached and applicants notified
April 15.....Student response form due at Taubman College. All admitted
students must pay a \$500 enrollment deposit fee to accept
their offer of admission

For questions about the Master of Architecture program please contact:

Meghan Lee
Admissions Counselor
Phone (734)-764-1649
Email: meglee@umich.edu
Web: <http://TaubmanCollege.umich.edu>

M.ARCH. 2G APPLICATION CHECKLIST

Send all mailed application materials to:

Taubman College of Architecture and Urban Planning
Architecture Admissions, Room 2150
2000 Bonisteel Boulevard, Ann Arbor, MI 48109-2069

DOMESTIC APPLICANTS

- Application form
(submitted online)
- Application fee
(submitted online or mailed)
- Statement of purpose
(submitted online or mailed)
- Three letters of
recommendation
(submitted online or mailed)
- Official transcripts from all
schools attended (mailed)

- GRE scores
(reported from ETS)
- Portfolio of work
(mailed)
- Resume or C.V.
(mailed)

INTERNATIONAL APPLICANTS

- Application form
(submitted online)
- Application fee
(submitted online or mailed)
- Statement of purpose
(submitted online or mailed)
- Three letters of recommendation
(submitted online or mailed)

- Official transcripts
(and translations) from all schools
attended (mailed)
- GRE scores
(reported from ETS)
- Portfolio of work
(mailed)
- Resume or C.V.
(mailed)
- TOEFL/IBT scores
(reported from ETS)
- Financial certification (mailed)
- Copy of passport (and copies
for any family member(s) that would
accompany student to U.S.)
(mailed)

M.ARCH. 2G PORTFOLIO GUIDELINES

All applicants are required to submit samples of their academic work and, if possible, their professional work. The following guidelines have been prepared by the graduate admissions committee to help applicants select and prepare these samples.

NUMBER AND TYPE OF SAMPLES

Samples of work should be chosen to cover the breadth as well as the depth of the applicant's knowledge, abilities, and interests. The admissions committee is interested in work that demonstrates knowledge, interest, and ability in technical areas, human and social concerns, and symbolic and aesthetic issues. The committee considers the following types of work to be suitable for inclusion with an applicant's samples: graphic design, photography, paintings, freehand drawings, building design drawings, analytical investigations (structural and environmental systems), building programming, measured and working drawings, computer generated drawings, and other types of work which best represent the applicant's knowledge, aptitudes, and experience. Two or three items showing the development of a plan, detail, or concept from early schematics to finished presentation are especially appropriate. The portfolio should be considered a design problem.

PREPARATION OF SAMPLES

The committee encourages applicants to submit reproductions of work and to be judicious in the choice of reproduction methods. Do not send original work. The committee will assume that copies represent the actual quality of the original work in regard to line character, color, value, finish, and other visual characteristics. Slides, transparencies, CD's, blueprints, or videos will not be accepted. Each exhibit should be labeled neatly with information describing the medium used, whether the work represents an academic, professional, or other type of project, and whether the work was undertaken independently or as part of a group effort. For professional and group

projects, the label should indicate the type and extent of the applicant's personal involvement.

SIZE AND FORMAT OF SAMPLES

The collection of samples submitted with the application must be securely bound or fastened together in a durable folder, binder, or box, whose overall dimensions do not exceed 8 1/2" x 11". Do not use a mailing tube. When you submit a portfolio as part of your application, it becomes property of the University of Michigan. If you would like to have your portfolio returned to you after admission decisions are made you must submit one of the following with your application materials:

1. A prepaid, self addressed/labeled envelope
2. Proper postage to cover the cost of returning the portfolio to you
3. A check made payable to: The University of Michigan, to cover the cost of returning the portfolio to you

Taubman College will not return portfolios to applicants unless one of the above mentioned procedures is followed. Unclaimed portfolios will be destroyed on July 1, unless special arrangements are made for their retention.

M.ARCH. 2G FINANCIAL CERTIFICATION

All international students are required to submit financial certification as part of their application to show they have funding available to study in the USA. The estimated financial certification for 2010–2011 academic year is \$53,477 USD.

The Financial Certification does not affect your chances of receiving a merit based scholarship in any way. The admissions committee does not consider the financial certification form when making decisions regarding scholarships. The financial certification is only an administrative piece and is necessary to process I-20 forms for admitted students. Only funds in a liquid account, such

as a checking or savings account will be accepted: Property, life insurance, stock, jewelry, mutual funds, land, medical savings, benefit certificates, trusts, securities, long term savings for housing, and retirement accounts do not qualify. If a student is supporting him/herself, we will only need an original bank statement in the student's name showing sufficient funds. If a person other than the applicant will be sponsoring the student, the applicant must submit two important documents for the financial certification. You must submit either 1 and 3, or 2 and 3 below. An applicant may have several different sponsors. We will need the following documentation from each source of funding.

1. A letter of support (who will support the student and what their relationship to the student is) signed by the family member(s) offering financial support to the student. It must be an original signature. or
2. A completed financial certification form (found in the online application) with original signatures from the family member(s) offering support and the proper boxes checked. and
3. An original bank statement (on bank letterhead), showing the type of account, the exact balance of the account, with a bank representative's original signature. The statement must also show the account holder's name and it must match the name of the person offering support exactly.

M.ARCH. 2G WEB APPLICATION STATUS

Applicants can now verify application data and status online. You will need to use a login ID and password, and confirm some personal data before viewing your application status.

The site allows you to update your contact information, check the receipt of your application materials, and receive an admission decision online. The Admissions Office will try to keep all materials received current, however, please allow sufficient time for processing before contacting the office.

For applicants who are current students or employees: Log in to Wolverine Access using your existing UMICH username login and click “New and Prospective Student Business.”

For applicants new to the University: You need to create a secure login using a U-M friend account and then log in to the U-M administrative services called Wolverine Access. To do this, you MUST follow both steps below:

1. Create a U-M Friend Account

Click this link: [Create a Friend Account](#)

Note: If you have questions about creating a U-M Friend Account, use the following URL for detailed instructions: <http://www.itd.umich.edu/itcsdocs/s4316>

2. Log in to U-M administrative services (Wolverine Access)

After you create your U-M Friend Account, use the following URL to view your application data: <https://wolverineaccess.umich.edu> and click “New and Prospective Student Business.”

Taubman College receives a large volume of application materials so please allow 10 business days for processing time. Your application materials will be updated as quickly as possible.

M.ARCH. 2G SCHOLARSHIPS

INCOMING STUDENT SCHOLARSHIPS (AWARDED DIRECTLY FROM TAUBMAN COLLEGE)

Merit-based scholarships are available to select incoming students. Applicants are automatically considered for scholarships and are notified of an award in the admission letter. Because financial resources are limited, we would encourage all applicants to seek out other sources of funding as well. Please apply for any scholarships, fellowships, and grants for which you are eligible.

FEDERAL FINANCIAL AID AWARDS (FAFSA)

U.S. citizens and permanent residents are eligible to apply for federal financial aid. The Office of Financial Aid administers the financial aid award packaging and their website has a chart of financial aid awards that outlines the various types of federal awards.

CONTINUING STUDENT SCHOLARSHIPS

Continuing students have the opportunity, annually, to apply for continuing merit based scholarships. During winter term of your first year in the program you are eligible to apply for continuing merit based scholarships for the 2010–2011 academic year. An email will be sent to all students notifying them of the continuing scholarship application procedures and deadlines. To increase your chances of receiving a continuing scholarship, you should strive to achieve good grades and be in the top 50% of your class during your first year.

WORK-STUDY AWARDS

A Federal Work Study award is an award that allows a student to work for eligible employers on and off campus to earn money to pay for school. A student must be hired for a work study job through the Student Employment Office and earn the wages up to the specified award amount. Work Study employees are paid directly by their employer; the wages earned are NOT automatically applied towards tuition. It is the student's responsibility to manage their earnings accordingly.

NEED BASED ARCHITECTURE GRADUATE GRANTS

Taubman College also gives the Office of Financial Aid a block of funds to distribute to students based on financial need. These awards are called Architecture Graduate Grants.

PRIVATE LOANS

There are a few private loan options for students, such as a CitiAssist loan or an MI-LOAN.

STUDENT EMPLOYMENT (NON-WORK STUDY)

Graduate Student Instructor Positions

Students may apply for a Graduate Student Instructor (GSI) position after their first fall term at Taubman College. GSI positions are competitive, and you must be enrolled full time in the Architecture Program to be eligible. It is more likely that students will be selected for a GSI position after attending for one year. Typically, a GSI position would cover 100 percent of tuition for the term and provide a small stipend.

M.ARCH. 2G GRADUATE STUDENT HOUSING

Because the University of Michigan is so large, typically we can only guarantee residence hall (dormitory) living for incoming freshman students. Generally, sophomores, juniors, seniors, and graduate students live in off-campus housing locations (either apartments or houses). Off-campus does not mean off-campus in the sense that it is not located near campus; Most off campus housing is actually within campus. It simply means that the properties are not owned and maintained by the University. Instead, they are privately owned apartments and homes managed by landlords and management companies. There is also family housing for students that are married and/or have children. All Family housing is located on North Campus.

The University does offer a few single graduate student residence hall rooms. There is a limited number of both family housing and single graduate housing units, so both require an application. Please see the U-M Housing Office website at <http://www.housing.umich.edu> for on- and off-campus housing options.

Almost, if not all, of the graduate level architecture classes will be held in the Art and Architecture building (on North Campus), so students might want to consider apartments around the north campus area. However, some

architecture students live in a variety of locations on Central Campus. The University bus system that runs between Central and North Campus every five minutes makes it possible for students to get around with relative ease, no matter where they live.

M.ARCH. 2G STUDENT PROFILE: 2009 ADMISSION STATISTICS

Applications	400
176 female, 224 male | 159 international, 241 domestic	
Admissions.....	155
66 female, 89 male | 42 international, 113 domestic	
Enrolled (unofficial).....	59
Scholarships offered.....	85 (26 accepted)
Undergraduate average GPA.....	3.36
GRE average score	
Verbal	498
Quantitative.....	677
Analytical writing.....	4.1
Student studio/faculty ratio	12-1

OVERALL COLLEGE ENROLLMENT (APPROXIMATIONS)

Total students (all programs)	704
Undergraduates	221
Master of Architecture 2G students.....	113
Master of Architecture 3G students.....	113
Master of Urban Design students.....	14
Master of Science in Architecture students	12
Doctoral Program in Architecture students (Ph.D.).....	45
Master of Urban Planning students.....	123
Ph.D. in Urban Planning students	24
Graduate Certificate in Real Estate Development students (dual enrollees).....	39

UNIVERSITY OF MICHIGAN ENROLLMENT 2008 (APPROXIMATIONS)

Total enrollment	56,857
Ann Arbor Campus	41,028
Dearborn Campus.....	8,569
Flint Campus	7,260

Undergraduate.....	38,927
Graduate and professional.....	17,930
New freshman (Ann Arbor)	5,608

M.ARCH. 2G FREQUENTLY ASKED QUESTIONS

Can I request an application packet?

Taubman College no longer prints paper application materials.

We require all of our applicants to use the online application system at <http://apply.embarc.com/grad/umich/arch/>.

What is the application deadline?

The application deadline is January 15, 2010, for fall 2010 admission. Students are only admitted at this time each year. The architecture program must receive all application materials by January 15 in order to ensure that an applicant receives a full review by the admissions committee. Incomplete files will not be reviewed.

How can I find out if my application materials have been received?

Applicants can check the status of their application and verify information using our web application status function. Once an applicant submits an application online, she or he will receive email instructions on how to view their application status by logging into Wolverine Access at <http://wolverineaccess.umich.edu/>.

How do I apply for merit based scholarships?

Scholarships from Taubman College are awarded based on merit. All applicants are automatically considered for merit-based scholarships that are available. If you receive a scholarship, you will be notified of the scholarship award in your letter of admission. Because financial resources are limited, we would encourage all applicants to seek out other sources of funding as well. Please apply for any scholarships, fellowships, and grants for which you are eligible.

I am a U.S. Citizen or permanent resident that submitted my FAFSA form. When should I expect to receive my financial aid package?

Federal Financial Aid awards are packaged approximately 1–2 weeks after and admission letter is processed. Students can view their financial aid award online by logging into Wolverine Access at <http://wolverineaccess.umich.edu/>. The Office of Financial Aid will send an email to admitted students that submitted a FAFSA with instructions on how to view their financial aid package online as soon as their financial aid award is ready.

When can I expect to receive an admission decision?

The admissions committee typically has final admission decisions by mid-March. All applicants will receive an official decision letter as soon as the committee has reached a conclusion. A general architecture admissions timeline is as follows:

January 15.....Application deadline
February 1Applications go to admissions committee for review
Mid MarchAdmissions decisions reached and applicants notified

When do classes begin?

Fall term 2010 begins Tuesday, September 7, 2010. Orientation is normally held one to two days before classes begin.

What are the college's official TOEFL/iBT/MELAB and GRE test score requirements?

GRE

The Graduate Record Examination is a requirement for admission. Please take the GRE test and submit your scores to Institution code 1839, Department code 4401. It takes approximately 6–8 weeks to have the score reported to the University, so please make arrangements so that your scores will be received before the January 15 deadline. We must receive official scores—photocopies and tests more than five years old are not acceptable. Although there is no minimum requirement for scores, the average scores for an admitted student last year were: Verbal (498), Quantitative (677), and Analytical Writing (4.1).

Information about the GRE, including test dates and locations, can be found at <http://www.gre.org>.

TOEFL/iBT(Internet Based TOEFL)/MELAB

The TOEFL/iBT test is required for all non-native English speakers. Non-native English speakers that have received a degree from an institution where the language of instruction is English are not required to submit a TOEFL/iBT score. Please take the TOEFL/iBT test and submit your scores to Institution code 1839, Department code 12.

It takes approximately 6–8 weeks to have the score reported to the University, so please make arrangements so that your scores will be received before the January 15 deadline. We must receive official scores—photocopies and tests more than two years old are not acceptable.

Minimum requirements

Computer based.....	250
Paper based.....	600
Internet based (iBT).....	100

Information about the TOEFL/iBT, including test dates and locations, can be found at <http://www.ets.org/toefl/>.

If I am not a US Citizen or permanent resident alien, what amount of financial certification is required for my first year?

All international students must submit a financial certification form along with their application, to show that they have sufficient funds to cover the cost of studying at University of Michigan for the first year. The estimated financial certification for

2010–2011 academic year is \$53,477 USD. The final tuition rates will be set in July and an exact figure will be available at that time.

The financial certification does not affect your chances of receiving a merit based scholarship in any way. The admissions committee does not consider the financial certification form when making decisions regarding scholarships.

Financial certification is only an administrative step necessary to process I-20 forms for admitted students.

What qualifies for financial certification?

International students must submit two important documents for the financial certification. You must submit either item 1 and 3 or 2 and 3 below.

1. A letter of support (who will support the student and what their relationship to the student is) signed by the family member(s) offering financial support to the student. It must be an original signature or
2. A completed financial certification form (found in the online application) with original signatures from the family member(s) offering support and the proper boxes checked and
3. An original bank statement (on bank letterhead), showing the type of account, the exact balance of the account, with a bank representative's original signature. The statement must also show the account holder's name and it must match the name of the person offering support exactly.

Only funds in a liquid account, such as a checking or savings account will be accepted: Property, life insurance, stock, jewelry, mutual funds, land, medical savings, long-term savings for housing, benefits, securities, trusts, and retirement accounts do not qualify. If a student is supporting him/herself, we will only need an original bank statement in the student's name showing sufficient funds.

Can the financial certification come from more than one source/sponsor?

Yes, a student may have more than one sponsor or source of funding. We must have a letter of support or completed form and an original bank statement from each additional sponsor as well.

Will you return my bank statement to me after my I-20 is processed?

No, the original bank statement and letter of support will not be returned to you.

We need both those documents for I-20 processing and must keep the

original in
your file to be in accordance with the Visa regulations. Your financial
certification
will become property of the University of Michigan.

I have been assigned to a waitlist. What does that mean and how does the
waitlist process work?

The waitlist means that we are interested in your application, but have already
offered admission to other candidates. If space becomes available, we will
admit students from the waitlist. The waitlist is unranked and if spots open,
all the waitlisted students will be reviewed again for admission. The chances

of being admitted from the waitlist vary from year to year. Please check the student profile and admission statistics earlier in this section to see exact numbers of waitlisted students admitted.

Will I get my application fee back?

No, the application fee is non-refundable.

Should I send a copy of my passport in with my application?

Yes, please include a photocopy of your passport (and passport copies for any dependents you will be bringing to the U.S.) with your application materials. It will speed up the processing time for I-20 forms significantly.

Will you return my portfolio to me?

When you submit a portfolio as part of your application, it becomes property of the University of Michigan. If you would like to have your portfolio returned to you after admission decisions are made you must either come in and pick up the portfolio or submit one of the following with your application materials:

1. A prepaid, self addressed/labeled envelope
2. Proper postage to cover the cost of returning the portfolio to you
3. A check made payable to: The University of Michigan, to cover the cost of returning the portfolio to you

Taubman College will not return portfolios to applicants unless one of the above mentioned procedures is followed.

Can I be a Graduate Student Instructor?

Students may apply for a Graduate Student Instructor (GSI) position after their first fall term at Taubman College. GSI positions are competitive, with approximately 50 percent of applicants receiving positions. It is more likely that students will be selected for a GSI position after attending for one year.

Do I qualify for Michigan residency?

The University of Michigan enrolls students from 50 states and more than 120 countries. Residency classification guidelines have been developed to ensure that decisions about whether a student pays in-state or out-of-state tuition are fair and equitable. Please visit the Registrar's Office website at <http://www.umich.edu/~regoff/resreg.html> to view current residency guidelines.

M.ARCH. 2G DEGREE REQUIREMENTS

In order to qualify for the 2G option: Master of Architecture Degree, a student must complete all 60 credit hours must be in architecture and related professional fields (i.e., planning, landscape architecture, natural resources, public health, engineering, business administration, and other), including a minimum of 36 credit hours of 500/600 level architecture courses.

Specifically, a student must complete:

- Four courses (24 credit hours) of architectural design (Arch 552, Arch 562, Arch 662, Arch 672). Spring half-term Architectural Design can not be counted as one of the required design courses
- Five courses (15 credit hours) of specific required architecture courses (Arch 516—Architectural Representation, Arch 572—Architectural Theory and Criticism, Arch 583—Professional Practice, Arch 589—Site Planning, and Arch 660—Thesis Development Seminar)
- One course (3 credit hours) selected from 500/600 level History of Architecture courses as indicated in the Index of Architecture Program Courses at the end of this section
- One course (3 credit hours) selected from 500/600 level environmental technology courses as indicated in the Index of Architecture Program Courses at the end of this section

- One course (3 credit hours) selected from 500/600 level Structures courses as indicated in the Index of Architecture Program Courses at the end of this section
- Two courses (6 credit hours) of 500/600 level elective architecture courses
- Two courses (6 credit hours) of non-architecture cognate courses, not cross-listed with architecture courses and ordinarily at the graduate level

IMPORTANT NOTES ABOUT M.ARCH. 2G DEGREE REQUIREMENTS

- It is strongly recommended that all required courses (Arch 516, Arch 572, Arch 583, Arch 589, and the required courses in Architectural History, Environmental Technology, and Structures) be taken in the terms suggested in the 2G M.arch.. sample schedule at the end of this section. Class sizes are limited and those students taking a required course out of the suggested sequence may find that space in some required courses is not available in the preferred term.
- No more than six hours of Tutorial Studies (Arch 593 and Arch 600) can be counted toward the 60-hour minimum.
- Students who enter the first year of the 2G option may not elect required undergraduate architecture courses for credit.
- The one credit hour courses, Arch 993 Teaching Methods for GSIs, and Arch 690 Architectural Curriculum Practical Training, cannot be counted towards graduation requirements.

A student must complete the 60 credit hours required for the M.arch.. degree with a cumulative GPA of 3.0 or above and with a grade of C- or better in each required architecture course. Those students earning a cumulative GPA of 3.8 and above shall graduate with high distinction; students earning a GPA of 3.6 to 3.79 shall graduate with distinction. These honors will be entered on the students' transcript and diploma.

The student's faculty advisor must approve all course elections, including cognates and 500/600 level architecture courses, on a program planning form. The program planning form is placed on file with the college registrar and is used to finalize degree requirements at the time of graduation. In addition, all students expecting the 2G option: Master of Architecture Degree are required to submit a diploma application to the college registrar. This

should be done at least three months in advance of the expected date of graduation. Students who meet this deadline will have their names published in the commencement program. Faculty advisors and administrators can assist a student in planning course schedules, but the student is ultimately responsible for meeting all program and degree requirements. If degree requirements are not completed for the commencement period to which the diploma application has been filed, a student must complete a new diploma application to be considered for graduation at a subsequent commencement date.

M.ARCH. 2G SAMPLE SCHEDULE

FIRST YEAR

Fall Term	Credit Hours
Arch 552 Architectural Design 2G1	6
Arch 516 Architectural Representation.....	3
Arch 589 Site Planning	3
History of Architecture, Environmental Technology, or Structures requirement	3
Total	15

Winter Term	Credit Hours
Arch 562 Architectural Design 2G2	6
Arch 572 Architectural Theory and Criticism.....	3
History of Architecture, Environmental Technology, or Structures requirement	3
Arch 583 Professional Practice	3
Total	15

SECOND YEAR

Fall Term	Credit Hours
Arch 672 Architectural Design 2G3	6
Arch 660 Thesis Development Seminar	3
History of Architecture, Environmental Technology, or Structures requirement	3
*Elective/Cognate.....	3

Total15

Winter Term	Credit Hours
Arch 662 Thesis Studio	6
*Elective/Cognate.....	3
*Elective/Cognate.....	3
*Elective/Cognate.....	3
Total	15

*Electives and/or cognates should normally include either 500/600 level architecture or non-architecture courses. The number and nature of these courses should be determined after consultation with the student's faculty advisor.

MASTER OF ARCHITECTURE DEGREE: 3G OPTION

M.ARCH. 3G GENERAL DESCRIPTION

Taubman College offers a Master of Architecture 3G option for students that have received an undergraduate degree in a discipline other than architecture. Admission is limited to the summer half-term only. Under the 3G option the normal period of time required to earn the Master of Architecture degree is 3-1/2 years. The second and third years of the 3G option are similar to the 2G option. To be eligible for admission to the 3G option, the student must, by June preceding the intended summer half-term of entrance, have:

1. Earned a four-year, non-architectural baccalaureate degree
2. Completed the specific following courses: two studio art courses, one calculus course and one physics course with lab (4 credit hours minimum; on laws of motion, force, energy, and power)

The college also recommends—but does not require—completion of two courses in history, with at least one history course a survey of art or architecture.

M.ARCH. 3G RANKINGS, ACCREDITATION, LICENSING, AND IDP

RANKINGS

The Master of Architecture Program was ranked 9th by DesignIntelligence in 2009.

ACCREDITATION

The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit US professional degree programs in architecture, recognizes two types of degrees: the Bachelor of Architecture (5 Year) and the Master of Architecture (2 or 3 Year). Both Master of Architecture programs (2G and 3G) at the University of Michigan are fully accredited by the NAAB.

The accreditation process provides periodic independent evaluation of the quality of the professional program as assessed from a national perspective. It provides assurance that graduates of the program are competent in architectural design, have a grasp of technical systems and requirements, are able to incorporate considerations of health and safety into design, understand the historical, human, and environmental contexts of architecture, and are adequately prepared for internship in professional practice.

The Master of Architecture degree is the program of professional study at the University of Michigan that is accredited by NAAB. A copy of the most recent accreditation report is available in the Architecture Program Office.

In order to obtain an architectural license in the United States, all state registration boards (except Arizona) require a degree from an accredited professional degree program and a designated amount of work experience in the form of Intern Development Program requirements (IDP).

IDP

The IDP program is administered by The National Council of Architectural Registration Boards (NCARB) and the experience required for Michigan is currently 5,600 hours of training experience.

LICENSING

Typically, a minimum of three years of experience and a professional degree in architecture are required before one can take the licensing exam. In the United States, licensing of architects is the legal prerogative of individual state governments. Each jurisdiction sets its own requirements for initial registration, examination, and corporate practice. Due largely to the efforts of the National Council of Architectural Registration Boards (NCARB), guidelines for license examination eligibility and the exam itself are fairly uniform from state to state. However, it is always advisable to check with the individual board to verify registration and practice requirements, as each jurisdiction may change its rules, statutes, and regulations at any time. A license is not required in order to work in an architectural firm; but to have ownership in a firm or to use the title Architect legally, licensing is mandatory.

M.ARCH. 3G INFORMATION SESSIONS AND TOURS

Taubman College provides academic advising and tours for those students considering applying to our architecture program.

Please call Meghan Lee at (734) 764-1649 to make an appointment. Appointments are held Monday–Friday from 8:30 a.m.–4:00 p.m. All appointments are held at the Art and Architecture Building (suite 2150) on the University of Michigan North Campus so please take bus/driving time into consideration when scheduling your appointment. Please allow at least three business days lead time to make all arrangements. Because we are a very small office, we cannot guarantee that staff will be available to help walk-ins. We will do our best to assist all students, but those who have scheduled an

appointment will be served first. All walk-ins will only be assisted on an “as an advisor is available” basis.

M.ARCH. 3G PREREQUISITE COURSES

A student should have completed the following pre-requisite courses to be eligible to apply to the program. Courses must be taken for a grade and taken at an accredited university, college, or community college. Online courses may not be taken.

STUDIO ART

Two studio art courses (6 credit hours) in basic freehand drawing and design, painting, sculpture, ceramics, photography, woodworking, printmaking, etc. which provide students with drawing and visual design skills.

MATHEMATICS

One course (4 credit hours) in analytic geometry and calculus—functions and graphs, limits, derivatives, differentiation of algebraic and trigonometric functions.

PHYSICS

One course in physics, lecture plus lab, (4 credit hours minimum)—laws of motion, force, energy and power, gas laws, heat, wave motion, sound, electricity and magnetism, and light and optics.

M.ARCH. 3G HOW TO APPLY

The 3G Master of Architecture Option is for students with prior non-architectural baccalaureate degrees. The 3G program begins in the summer half term.

M.ARCH. 3G APPLICATION DEADLINE

All applicants are required to apply online. The application deadline is January 15, 2010 for summer 2010 admission. Admission is limited to the summer half-term. The completion and submission of all application materials is solely the

responsibility of the applicant. Failure to submit any of the required materials (for whatever reason) will result in a less than thorough review of your application. Incomplete applications are considered only after all complete applications have been reviewed.

M.ARCH. 3G APPLICATION FORM

The application form is required from all applicants and must be completed online. All supplementary material (official transcripts, application fee check or money order, letters of recommendation, portfolio, and certification for financial support for international students) must be sent in one package to Taubman College of Architecture and Urban Planning, Attn: Architecture Admissions. The form must be filled out completely and accurately to be considered a valid application for admission. Do not use an application form from the Horace H. Rackham School of Graduate Studies.

M.ARCH. 3G APPLICATION FEE

The \$60.00 (in U.S. funds) nonrefundable application fee is required from all domestic applicants. A \$75.00 fee (in U.S. funds) is required from all international applicants. Applicants may pay the fee online using a credit card or include a check or money order, made payable to the University of Michigan with their application materials.

Do not send cash.

M.ARCH. 3G STATEMENT OF PURPOSE/PERSONAL STATEMENT

This essay should be 1,000–1,500 words and give the admissions committee a clear idea of:

- a.) Why you want to study architecture
- b.) What you want to learn/gain from the program
- c.) Why you want to pursue your degree at University of Michigan
- d.) Your design philosophy and process

The statement of purpose may be submitted as an attachment to the online application or mailed in with your application materials.

M.ARCH. 3G OFFICIAL TRANSCRIPTS

The College requires applicants, domestic and international, to provide one official transcript or certified credentials (transcripts) from all universities and community colleges attended. If your academic credentials are in any language other than English, you must submit both the original document and a certified English Translation. International credentials should include a certified copy of the diploma, if awarded. Applicants holding degrees from Bangladesh, Sri-Lanka, Burma, India, Nepal, and Pakistan must include detailed examination records, for all years of the program, showing subjects, marks received, and class obtained. U-M graduates and current students do not need to submit a transcript from Michigan, but should request transcripts for any other schools they have attended.

M.ARCH. 3G LETTERS OF RECOMMENDATION

Three letters of recommendation are required for all applicants. If possible, at least two of these should come from former professors. Recommendations should be completed online as part of the online application process.

Please ask your recommenders to complete the online form and attach their letter electronically. If absolutely necessary, we will also accept hard copy recommendations if they are on University or company/firm stationery.

Please request your letters of recommendation sufficiently early to ensure your recommenders submit their letters by the January 15 deadline.

M.ARCH. 3G PORTFOLIO

All applicants are required to submit samples of their academic work and, if possible, their professional work. Please see the portfolio guidelines later in this section for details.

M.ARCH. 3G RESUME OR C.V.

Please submit an up to date resume or curriculum vitae with your application.

M.ARCH. 3G GRADUATE RECORD EXAMINATION

The Graduate Record Examination (GRE) is required. Information about the GRE including test dates and locations can be found at <http://www.gre.org>. Please contact ETS (www.ets.org or www.gre.org) and have an official score report sent to the University of Michigan (Institution code 1839, department

code 4401) at least 6–8 weeks prior to the January 15 deadline. GRE scores must be no older than five years old to be valid. There is no minimum requirement for the GRE test.

M.ARCH. 3G TOEFL/IBT EXAMINATION (International Students Only)

The Test of English as a Foreign Language (TOEFL) or Internet Based Toefl (IBT) is required of all non-native English speakers. Information about the TOEFL/IBT including test dates and locations can be found at www.ets.org/toefl/. Please contact ETS (www.ets.org) and have an official score report sent to the University of Michigan (Institution code 1839, department code 12) at least 6–8 weeks prior to the January 15 deadline. TOEFL/IBT scores must be no older than two years old to be valid. The minimum requirement for the TOEFL test is 250 computer based or 600 paper based. The minimum requirement for the IBT test is 100. Non-native English speakers that have graduated from a four-year University where English was the primary language of instruction are not required to submit a TOEFL score.

M.ARCH. 3G FINANCIAL CERTIFICATION (International Students Only)

Certification of financial support is required from all applicants who are not U.S. citizens or permanent resident aliens to show that they have sufficient funds to cover the cost of studying at University of Michigan for the first year. Please see the information about financial certification later in this section for more information.

M.ARCH. 3G I-20/PASSPORT COPIES (International Students Only)

Each international applicant should submit a copy of their passport (and copies of any dependent family members' passport that would be accompanying the student to the USA) with their application materials. Passport copies are required in order to process an I-20 form. In order to avoid processing delays, please submit the passport copies with your application materials.

M.ARCH. 3G VISA

Applicants that are currently in the US should also send a copy of their current I-20 or I-94 form. A transfer-in-form is also required if an applicant is currently attending another US school or college and is admitted to the program.

M.ARCH. 3G EVALUATION

Applications will not be evaluated until all credentials have been received and the application fee has been paid. Applications missing credentials cannot be guaranteed a review by the admissions committee.

Eligible applicants are considered for admission on the basis of the following criteria:

1. Quality and content of all previous academic education
2. Evidence of professional commitment and direction—statement of purpose, employment record, letters of recommendation, portfolio, etc.
3. The number of openings available

M.ARCH. 3G APPLICATION DEADLINE/ADMISSIONS TIMELINE

January 15.....All application materials are due at Taubman College
Early-mid March.....Admissions decisions reached and applicants notified
April 15Student response form due at Taubman College. All
admitted

students must pay a \$500 enrollment deposit fee to
accept
their offer of admission

For questions about the Master of Architecture Program please contact:

Meghan Lee

Admissions Counselor

Phone (734)-764-1649

Email: meglee@umich.edu

Web: <http://taubmancollege.umich.edu/architecture/>

M.ARCH. 3G APPLICATION CHECKLIST

Send all mailed application materials to:

Taubman College of Architecture and Urban Planning
Architecture Admissions, Room 2150
2000 Bonisteel Boulevard, Ann Arbor, MI 48109-2069

DOMESTIC APPLICANTS

- Application form
(submitted online)
- Application fee
(submitted online or mailed)
- Statement of purpose
(submitted online or mailed)
- Three letters of
recommendation
(submitted online or mailed)
- Official transcripts from all
schools attended (mailed)

- Portfolio of work
(mailed)
- Resume or C.V.
(mailed)
- GRE scores
(reported from ETS)

INTERNATIONAL APPLICANTS

- Application form
(submitted online)
- Application fee
(submitted online or mailed)
- Statement of purpose
(submitted online or mailed)
- Three letters of recommendation
(submitted online or mailed)

- Official transcripts
(and translations) from all schools
attended (mailed)
- Portfolio of work
(mailed)
- Resume or C.V.
(mailed)
- GRE scores
(reported from ETS)
- TOEFL/IBT scores
(reported from ETS)
- Financial certification (mailed)
- Copy of passport (and copies
for any family member(s) that would
accompany student to U.S.)
(mailed)

M.ARCH. 3G PORTFOLIO GUIDELINES

All applicants are required to submit samples of their academic work and, if possible, their professional work. The following guidelines have been prepared by the graduate admissions committee to help applicants select and prepare these samples.

NUMBER AND TYPE OF SAMPLES

Samples of work should be chosen to cover the breadth as well as the depth of the applicant's knowledge, abilities, and interests. The admissions committee is interested in work that demonstrates knowledge, interest, and ability in technical areas, human and social concerns, and symbolic and aesthetic issues. The committee considers the following types of work to be suitable for inclusion with an applicant's samples: graphic design, photography, paintings, freehand drawings, building design drawings, analytical investigations (structural and environmental systems), building programming, measured and working drawings, computer generated drawings, and other types of work which best represent the applicant's knowledge, aptitudes, and experience. Two or three items showing the development of a plan, detail, or concept from early schematics to finished presentation are especially appropriate. The portfolio should be considered a design problem.

PREPARATION OF SAMPLES

The committee encourages applicants to submit reproductions of work and to be judicious in the choice of reproduction methods. Do not send original work. The committee will assume that copies represent the actual quality of the original work in regard to line character, color, value, finish, and other visual characteristics. Slides, transparencies, CD's, blueprints, or videos will not be accepted. Each exhibit should be labeled neatly with information describing the medium used, whether the work represents an academic, professional, or other type of project, and whether the work was undertaken independently or as part of a group effort. For professional and group projects, the label should indicate the type and extent of the applicant's personal involvement.

SIZE AND FORMAT OF SAMPLES

The collection of samples submitted with the application must be securely bound or fastened together in a durable folder, binder, or box, whose overall dimensions do not exceed 8 1/2" x 11". Do not use a mailing tube. When you submit a portfolio as part of your application, it becomes property of the University of Michigan. If you would like to have your portfolio returned to you after admission decisions are made you must submit one of the following with your application materials:

1. A prepaid, self addressed/labeled envelope
2. Proper postage to cover the cost of returning the portfolio to you
3. A check made payable to: The University of Michigan, to cover the cost of returning the portfolio to you

Taubman College will not return portfolios to applicants unless one of the above mentioned procedures is followed. Unclaimed portfolios will be destroyed on July 1, unless special arrangements are made for their retention.

M.ARCH. 3G FINANCIAL CERTIFICATION

All international students are required to submit financial certification as part of their application to show they have funding available to study in the USA. The estimated financial certification for 2010–2011 academic year is \$62,624 USD.

The Financial Certification does not affect your chances of receiving a merit based scholarship in any way. The admissions committee does not consider the financial certification form when making decisions regarding scholarships. The financial certification is only an administrative piece and is necessary to process I-20 forms for admitted students. Only funds in a liquid account, such as a checking or savings account will be accepted: Property, life insurance, stock, jewelry, mutual funds, land, medical savings, benefit certificates, trusts, securities, long term savings for housing, and retirement accounts do not qualify. If a student is supporting him/herself, we will only need an original bank statement in the student's name showing sufficient funds. If a person other than the applicant will be sponsoring the student, the applicant must

submit two important documents for the financial certification. You must submit either 1 and 3, or 2 and 3 below. An applicant may have several different sponsors. We will need the following documentation from each source of funding.

1. A letter of support (who will support the student and what their relationship to the student is) signed by the family member(s) offering financial support to the student. It must be an original signature or
2. A completed financial certification form (found in the online application) with original signatures from the family member(s) offering support and the proper boxes checked and
3. An original bank statement (on bank letterhead), showing the type of account, the exact balance of the account, with a bank representative's original signature. The statement must also show the account holder's name and it must match the name of the person offering support exactly.

M.ARCH. 3G WEB APPLICATION STATUS

Applicants can now verify application data and status online. You will need to use a login ID and password, and confirm some personal data before viewing your application status.

The site allows you to update your contact information, check the receipt of your application materials, and receive an admission decision online. The Admissions Office will try to keep all materials received current, however, please allow sufficient time for processing before contacting the office.

For applicants who are current students or employees: Log in to Wolverine Access using your existing UMICH username login and click "New and Prospective Student Business."

For applicants new to the University: You need to create a secure login using a U-M Friend Account and then go to and log in to the U-M administrative

services called Wolverine Access. To do this, you MUST follow both steps below:

1. Create a U-M Friend Account

Click this link: [Create a Friend Account](#)

Note: If you have questions about creating a U-M Friend Account, use the following URL for detailed instructions: <http://www.itd.umich.edu/itcsdocs/s4316>

2. Log in to U-M administrative services (Wolverine Access)

After you create your U-M Friend Account, use the following URL to view your application data: <https://wolverineaccess.umich.edu> and click “New and Prospective Student Business.”

Taubman College receives a large volume of application materials so please allow 10 business days for processing time. Your application materials will be updated as quickly as possible.

M.ARCH. 3G SCHOLARSHIPS

INCOMING STUDENT SCHOLARSHIPS (AWARDED DIRECTLY FROM TAUBMAN COLLEGE)

Merit-based scholarships are available to selected incoming students.

Applicants are automatically considered for scholarships and are notified of an award in the admission letter. Because financial resources are limited, we would encourage all applicants to seek out other sources of funding as well. Please apply for any scholarships, fellowships, and grants for which you are eligible.

FEDERAL FINANCIAL AID AWARDS (FAFSA)

U.S. citizens and permanent residents are eligible to apply for federal financial aid. The Office of Financial Aid administers the financial aid award package and their website has a chart of financial aid awards that outlines the various types of federal awards. Because the 3G program begins in the summer half term, students applying to the 3G program should submit a FAFSA form for both the 2009–2010 and 2010–2011 academic years.

CONTINUING STUDENT SCHOLARSHIPS

Continuing students have the opportunity, annually, to apply for continuing merit based scholarships. During winter term of your first year in the program you are eligible to apply for continuing merit based scholarships for the 2011–2012 academic year. An email will be sent to all students notifying them of the continuing scholarship application procedures and deadlines. To increase your chances of receiving a continuing scholarship, you should strive to achieve good grades and be in the top 50 percent of your class during your first year.

WORK-STUDY AWARDS

A Federal Work Study award is an award that allows a student to work for eligible employers on and off campus to earn money to pay for school. A student must be hired for a work study job through the Student Employment Office and earn the wages up to the specified award amount. Work Study employees are paid directly by their employer; the wages earned are NOT automatically applied towards tuition. It is the student's responsibility to manage their earnings accordingly.

NEED BASED ARCHITECTURE GRADUATE GRANTS

Taubman College also gives the Office of Financial Aid a block of funds to distribute to students based on financial need. These awards are called Architecture Graduate Grants.

PRIVATE LOANS

There are a few private loan options for students, such as a CitiAssist loan or an MI-LOAN.

STUDENT EMPLOYMENT (NON-WORK STUDY)

Graduate Student Instructor Positions

Students may apply for a Graduate Student Instructor (GSI) position after their first fall term at Taubman College. GSI positions are competitive, and you must be enrolled full time in the Architecture Program to be eligible. It is more likely that students will be selected for a GSI position after attending for one year.

Typically, a GSI position would cover 100 percent of tuition for the term and provide a small stipend.

M.ARCH. 3G GRADUATE STUDENT HOUSING

Because the University of Michigan is so large, typically we can only guarantee residence hall (dormitory) living for incoming freshman students. Generally, sophomores, juniors, seniors, and graduate students live in off-campus housing locations (either apartments or houses). Off-campus does not mean off-campus in the sense that it is not located near campus; Most off campus housing is actually within campus. It simply means that the properties are not owned and maintained by the University. Instead, they are privately owned apartments and homes managed by landlords and management companies. There is also family housing for students that are married and/or have children. All Family housing is located on North Campus.

The University does offer a few single graduate student residence hall rooms. There is a limited number of both family housing and single graduate housing units,

so both require an application. Please see the U-M Housing Office website at <http://www.housing.umich.edu> for on- and off-campus housing options.

Almost, if not all, of the graduate level architecture classes will be held in the Art and Architecture building (on North Campus), so students might want to consider apartments around the north campus area. However, some architecture students live in a variety of locations on Central Campus. The University bus system that runs between Central and North Campus every five minutes makes it possible for students to get around with relative ease, no matter where they live.

M.ARCH. 3G STUDENT PROFILE: 2009 ADMISSION STATISTICS

Applications	161
83 female, 78 male | 41 international, 120 domestic	
Admissions.....	119
63 female, 56 male | 22 international, 97 domestic	
Enrolled (unofficial).....	35
Scholarships offered.....	64 (23 accepted)
Undergraduate average GPA.....	3.37

GRE average score	
Verbal	556
Quantitative.....	703
Analytical writing.....	4.3
Student studio/faculty ratio	12-1

OVERALL COLLEGE ENROLLMENT (APPROXIMATIONS)

Total students (all programs)	704
Undergraduates (97 Juniors, 104 Seniors)	221
Master of Architecture 2G students.....	113
Master of Architecture 3G students.....	113
Master of Urban Design students.....	14
Master of Science in Architecture students	12
Doctoral Program in Architecture students (Ph.D.).....	45
Master of Urban Planning students.....	123
Ph.D. in Urban Planning students	24
Graduate Certificate in Real Estate Development students (dual enrollees).....	39

UNIVERSITY OF MICHIGAN ENROLLMENT 2008 (APPROXIMATIONS)

Total enrollment	56,857
Ann Arbor Campus	41,028
Dearborn Campus.....	8,569
Flint Campus	7,260
Undergraduate.....	38,927
Graduate and professional.....	17,930
New freshman (Ann Arbor)	5,608

M.ARCH. 3G FREQUENTLY ASKED QUESTIONS

Can I request an application packet?

Taubman College no longer prints paper application materials.

We require all of our applicants to use the online application system at

<http://apply.embarc.com/grad/umich/arch/>.

What is the application deadline?

The application deadline is January 15, 2010, for summer 2010 admission. Students are only admitted at this time each year. The architecture program must receive all application materials by January 15 in order to ensure that an applicant receives a full review by the admissions committee. Incomplete files will not be reviewed.

How can I find out if my application materials have been received?

Applicants can check the status of their application and verify information using our web application status function. Once an applicant submits an application online, she or he will receive email instructions on how to view their application status by logging into Wolverine Access at <http://wolverineaccess.umich.edu/>.

How do I apply for merit based scholarships?

Scholarships from Taubman College are awarded based on merit. All applicants are automatically considered for merit-based scholarships that are available. If you receive a scholarship, you will be notified of the scholarship award in your letter of admission. Because financial resources are limited, we would encourage all applicants to seek out other sources of funding as well. Please apply for any scholarships, fellowships, and grants for which you are eligible.

I am a U.S. Citizen or permanent resident that submitted my FAFSA form.

When should I expect to receive my financial aid package?

Federal Financial Aid awards are packaged approximately 1–2 weeks after and admission letter is processed. Students can view their financial aid award online by logging into Wolverine Access at <http://wolverineaccess.umich.edu/>. The Office of Financial Aid will send an email to admitted students that submitted a FAFSA with instructions on how to view their financial aid package online as soon as their financial aid award is ready. Because the 3G program begins in the summer half term, students applying to the 3G program should submit a FAFSA form for both the 2009–2010 and 2010–2011 academic years.

When can I expect to receive an admission decision?

The admissions committee typically has final admission decisions by mid-March. All applicants will receive an official decision letter as soon as the committee has reached a conclusion. A general architecture admissions timeline is as follows:

January 15.....Application deadline

February 1Applications go to admissions committee for review

Mid MarchAdmissions decisions reached and applicants notified

When do classes begin?

Summer half-term 2010 classes begin Wednesday, June 30, 2010. Orientation is normally held one to two days before classes begin.

What are the college's official TOEFL/iBT/MELAB and GRE test score requirements?

GRE

The Graduate Record Examination is a requirement for admission. Please take the GRE test and submit your scores to Institution code 1839, Department code 4401. It takes approximately 6–8 weeks to have the score reported to the University, so please make arrangements so that your scores will be received before the January 15 deadline. We must receive official scores—photocopies and tests more than five years old are not acceptable. Although there is no minimum requirement for scores, the average scores for an admitted student last year were: Verbal (556), Quantitative (703), and Analytical Writing (4.3). Information about the GRE, including test dates and locations, can be found at <http://www.gre.org>.

TOEFL/iBT(Internet Based TOEFL)/MELAB

The TOEFL/iBT test is required for all non-native English speakers. Non-native English speakers that have received a degree from an institution where the language of instruction is English are not required to submit a TOEFL/iBT score. Please take the TOEFL/iBT test and submit your scores to Institution

code 1839, Department code 12.

It takes approximately 6–8 weeks to have the score reported to the University, so please make arrangements so that your scores will be received before the January 15 deadline. We must receive official scores—photocopies and tests more than two years old are not acceptable.

Minimum requirements

Computer based.....	250
Paper based.....	600
Internet based (iBT).....	100

Information about the TOEFL/iBT, including test dates and locations, can be found

at <http://www.ets.org/toefl/>.

If I am not a US Citizen or permanent resident alien, what amount of financial certification is required for my first year?

All international students must submit a financial certification form along with their application, to show that they have sufficient funds to cover the cost of studying at University of Michigan for the first year. The estimated financial certification for 2010–2011 academic year is \$62,624 USD. The final tuition rates will be set in July and an exact figure will be available at that time.

The financial certification does not affect your chances of receiving a merit based scholarship in any way. The admissions committee does not consider the financial certification form when making decisions regarding scholarships. Financial certification is only an administrative step necessary to process I-20 forms for admitted students.

What qualifies for financial certification?

International students must submit two important documents for the financial certification. You must submit either items 1 and 3, or 2 and 3 below.

1. A letter of support (who will support the student and what their relationship to the student is) signed by the family member(s) offering financial support to the student. It must be an original signature or

2. A completed financial certification form (found in the online application) with original signatures from the family member(s) offering support and the proper boxes checked and
3. An original bank statement (on bank letterhead), showing the type of account, the exact balance of the account, with a bank representative's original signature. The statement must also show the account holder's name and it must match the name of the person offering support exactly.

Only funds in a liquid account, such as a checking or savings account will be accepted: Property, life insurance, stock, jewelry, mutual funds, land, medical savings, long-term savings for housing, benefits, securities, trusts, and retirement accounts do not qualify. If a student is supporting him/herself, we will only need an original bank statement in the student's name showing sufficient funds.

Can the financial certification come from more than one source/sponsor?

Yes, a student may have more than one sponsor or source of funding. We must have a letter of support or completed form and an original bank statement from each additional sponsor as well.

Will you return my bank statement to me after my I-20 is processed?

No, the original bank statement and letter of support will not be returned to you.

We need both those documents for I-20 processing and must keep the original in

your file to be in accordance with the Visa regulations. Your financial certification

will become property of the University of Michigan.

I have been assigned to a waitlist. What does that mean and how does the waitlist process work?

The waitlist means that we are interested in your application, but have already offered admission to other candidates. If space becomes available, we will admit students from the waitlist. The waitlist is unranked and if spots open,

all the waitlisted students will be reviewed again for admission. The chances of being admitted from the waitlist vary from year to year. Please check the student profile and admission statistics earlier in this section to see exact numbers of waitlisted students admitted.

Will I get my application fee back?

No, the application fee is non-refundable.

Should I send a copy of my passport in with my application?

Yes, please include a photocopy of your passport (and passport copies for any dependents you will be bringing to the U.S.) with your application materials. It will speed up the processing time for I-20 forms significantly.

Will you return my portfolio to me?

When you submit a portfolio as part of your application, it becomes property of the University of Michigan. If you would like to have your portfolio returned to you after admission decisions are made you must either come in and pick up the portfolio or submit one of the following with your application materials:

1. A prepaid, self addressed/labeled envelope
2. Proper postage to cover the cost of returning the portfolio to you
3. A check made payable to: The University of Michigan, to cover the cost of returning the portfolio to you

Taubman College will not return portfolios to applicants unless one of the above mentioned procedures is followed.

Can I be a Graduate Student Instructor?

Students may apply for a Graduate Student Instructor (GSI) position after their first fall term at Taubman College. GSI positions are competitive; approximately 25 GSI positions are offered each semester. It is more likely that students will be selected for a GSI position after attending for one year.

Do I qualify for Michigan residency?

The University of Michigan enrolls students from 50 states and more than 120 countries. Residency classification guidelines have been developed to ensure that decisions about whether a student pays in-state or out-of-state tuition are fair and equitable. Please visit the Registrar's Office website at <http://www.umich.edu/~regoff/resreg.html> to view current residency guidelines.

M.ARCH. 3G DEGREE REQUIREMENTS

In order to qualify for the Master of Architecture degree, a 3G option student must complete a minimum of 105 credit hours while enrolled in Taubman College.

Specifically a student must complete:

- Three Architectural Design courses (Arch 402, Arch 412, and Arch 422), one course in Design Fundamentals (Arch 416), one course in History of Architecture (Arch 413), two courses in Construction (Arch 417 and Arch 527), two courses in Structures (Arch 314, Arch 324) and two courses in Environmental Technology (Arch 315, Arch 425)
- Four courses (24 credit hours) of Architectural Design (Arch 552, Arch 562, Arch 662, Arch 672). Spring half-term Architectural Design cannot be counted as one of the required design courses
- Five courses (15 credit hours) of specific required architecture courses (Arch 516—Architectural Representation, Arch 572—Architectural Theory and Criticism, Arch 583—Professional Practice, Arch 589—Site Planning, and Arch 660—Thesis Development Seminar)
- Two courses (6 credit hours) selected from 500/600-level History/Theory courses*
- One course (3 credit hours) selected from 500/600-level Environmental Technology courses*
- One course (3 credit hours) selected from 500/600-level Structures courses*
- One course (3 credit hours) selected from 500/600-level Design Fundamentals courses*
- Three courses (9 credit hours) selected from 500/600 level electives

*As indicated in the Index of Architecture Program Courses at the end of this section

NOTES

- Students should make every effort to take all required courses (Arch 516, Arch 572, Arch 583, and Arch 589) in the terms suggested in the sample schedule. Class sizes are limited and space may not be available in the preferred term for students taking required courses out of the preferred sequence
- No more than six hours of tutorial studies (Arch 593, Arch 600) can be counted toward the 105-hour minimum
- The student must earn a cumulative GPA of 3.0 or above, with a grade of C- or better in each required architecture course
- All required 300- and 400-level architecture courses and a computer science course should be completed by the end of the second year
- All course elections must be approved by the student’s faculty advisor on a 3G option program planning form. Policies regarding the diploma application and graduation honors are the same as those for other graduate students

M.ARCH. 3G SAMPLE SCHEDULE

The following schedule is typical for a 3G option student who needs courses in both History of Architecture and computer science.

FIRST YEAR

	Credit Hours
Summer Half-Term	
Arch 402 Architectural Design 3G1	6
Arch 416 Design Fundamentals 3G	3
Total	9

MICHIGAN ARCHITECTURE PROGRAMS and COURSE DESCRIPTIONS 2009–2010

Fall Term	Credit Hours
Arch 412 Architectural Design 3G2	6
Arch 413 History of Architecture 3G	3
Arch 314 Structures I.....	3
Arch 589 Site Planning	3
Total	15

Winter Term	Credit Hours
Arch 422 Architectural Design 3G3	6
Arch 324 Structures II.....	3
Arch 315 Environmental Technology I	3
Arch 417 Construction 3G.....	3
Total	15

Spring Half-Term	Credit Hours
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* † ‡ Elective..... 3

SECOND YEAR

Fall Term	Credit Hours
Arch 552 Architectural Design 3G4	6
Arch 425 Environmental Technology II	3
Arch 516 Architectural Representation.....	3
*History of Architecture, Design Fundamentals, Environmental Technology,	
or	
Structures requirement (or † Elective).....	3
Total.....	15

Winter Term	Credit Hours
Arch 562 Architectural Design 3G5	6
Arch 572 Architectural Theory and Criticism	3
Arch 583 Professional Practice.....	3
Arch 527 Building Systems.....	3
Total.....	15

Spring Half-Term	Credit Hours
* † ‡Arch 592 Architectural Design (as Elective credit)	6

THIRD YEAR

Fall Term	Credit Hours
Arch 672 Architectural Design 3G6	6
Arch 660 Thesis Development Seminar	3
*History of Architecture, Design Fundamentals, Environmental Technology,	
or	
Structures requirement.....	3
*†Elective.....	3
Total	15

Winter Term	Credit Hours
Arch 662 Thesis Studio	6

*History of Architecture, Design Fundamentals, Environmental Technology, or Structures requirement (or † Elective)	9
Total	15

FOURTH YEAR (OPTIONAL)

Fall Term	Credit Hours
*History of Architecture, Construction, Design Fundamentals, Environmental Technology, or Structures requirement (or Elective)	6
Total	6

* 3G Students are required to elect a total of 6 architecture courses and 3 architecture or non-architecture electives.

† 3G students must elect a digital media arts course (211, 421, or 551) as an elective if they have not already fulfilled the digital media arts requirement before entering the program

‡ 3G students must elect 6 additional credits hours outside the regularly scheduled terms to meet the 105 minimum credit hours needed for graduation. Students may elect to take spring/summer courses (listed above as optional) or register for 18 credits two semesters to receive the additional 6 credit hours.

M.ARCH. 3G SELECTIVES

HISTORY/THEORY

Arch 503 SP Topics
Arch 518 Renaissance
Arch 528 Baroque
Arch 533 19th Cen.
Arch 543 20th Cen.
Arch 553 American
Arch 563 Col./Post Col.
Arch 568 Russian
Arch 573 History Arch.
Arch 588 Bldg. Tech.
Arch 603 Seminar Arch. Hist.
Arch 623 Seminar Arch.
Theory
Arch 633 Seminar Ren./Bar.
Arch 643 Seminar Mod. Arch.
Arch 653 Seminar Am. Arch.
Arch 663 Seminar Russian
A.G.
Arch 693 Seminar Col. Arch./
Urb.

DESIGN

FUNDAMENTALS

Arch 506 Special Topics
in Design Fundamentals
Arch 531 Networked
Cities
Arch 513 Social Change
Arch 523 Theory/Mng.
Ct.
Arch 526 Socio. Issues
Arch 561 Building
Program
Arch 567 Pgm./Built Env.
Arch 613 Roots Env.
Design

One summer half-term plus 6 fall and winter terms yields 99 credit hours.

As a result, to reach the required 105 credit hours, the 3G student must either:

1. Elect an extra 3 credit hour course for two terms (18 credits/term—considered an overload), or
2. Elect an optional design studio during a spring half-term (credit hours only), or
3. Elect two 3 credit hour courses during a spring half-term, or
4. Enroll in at least 6 credit hours in an extra fall or winter term

M.ARCH/M.U.D. 3G SAMPLE SCHEDULE

FIRST YEAR

	Credit Hours
Summer Half-Term	
Arch 402 Architectural Design 3G1.....	6
Arch 416 Design Fundamentals 3G.....	3
Total.....	9

	Credit Hours
Fall Term	
Arch 412 Architectural Design 3G2	6
Arch 413 History of Architecture 3G	3
Arch 314 Structures.....	3
Arch 589 Site Planning	3
Total	15

	Credit Hours
Winter Term	
Arch 422 Architectural Design 3G3	6
Arch 324 Structures II.....	3
Arch 315 Environmental Technology I	3
Arch 417 Construction 3G.....	3
Total	15

SECOND YEAR

	Credit Hours
Fall Term	
Arch 552 Architectural Design 3G4	6
Arch 425 Environmental Technology II	3
Arch 516 Architectural Representation.....	3
History of Architecture, Design Fundamentals, Environmental Technology,	

or

Structures requirement	3
Total	15

	Credit Hours
Winter Term	
Arch 562 Architectural Design 3G5	6
Arch 572 Architectural Theory + Criticism.....	3
Arch 583 Professional Practice	3
Arch 527 Building Systems	3

Total15

THIRD YEAR

Summer Half-Term	Credit Hours
UD 712 Urban Design Studio I.....	6
UD 739 Seminar	3
Total.....	9

Fall Term	Credit Hours
UD 722 Urban Design Studio II.....	6
UD 713 History of Urban Form.....	3
UD 719 Theories of Urban Design.....	3
Econ RE Housing	3
Total	15

Winter Term	Credit Hours
UD 732 Urban Design Studio III.....	6
UD 723 Methodologies of Urban Design	3
UD 729 Practices of Urban Design.....	3
History of Architecture, Design Fundamentals, Environmental Technology, or Structures requirement	3
Total	15

FOURTH YEAR

Fall Term	Credit Hours
Arch 672 Architectural Design 3G6.....	6
Arch 660 Thesis Development Seminar	3
History of Architecture, Design Fundamentals, Environmental Technology, or Structures requirement (or Elective*).....	6
Total	15

Winter Term	Credit Hours
Arch 662 Thesis Studio	6
Total	6

*Architecture electives must be 500/600 level architecture courses.

MASTER OF ARCHITECTURE JOINT/DUAL DEGREE PROGRAMS

DUAL MASTER OF ARCHITECTURE/ MASTER OF URBAN PLANNING

M.ARCH./M.U.P. DESCRIPTION AND OBJECTIVES

This dual degree is structured to develop highly qualified professionals capable of combining architecture and urban planning to work effectively in the professional fields of architecture, urban development, and community and social planning. It equips students with a broad range of skills and particular expertise related to the design and planning of the built environment. Graduates with a dual degree in architecture and urban planning are able to work both in the private sector and with a wide range of public agencies and non-profit organizations. The program combines the two-year/60 credit hour M.arch.. degree with the two-year/48 credit hour M.U.P. degree, resulting in a three-year/84 credit hour program.

M.ARCH./M.U.P. ADMISSION REQUIREMENTS AND APPLICATION PROCEDURE

To be eligible for admission, a student must have a B.S. degree from A. Alfred Taubman College of Architecture and Urban Planning or an equivalent degree earned at another institution. Graduate students enrolled in the 3G option must complete all required 300 and 400 level course work before applying to the dual M.arch../M.U.P program. Admission to both programs is normally limited to the fall semester, but winter admission may be considered in special cases. The recommended procedure is to apply to each program for the same term. It is possible, however, to apply to either program once enrollment has taken place in the other.

Two complete and separate applications are necessary, one to Taubman College for the Master of Architecture and one to the Horace H. Rackham School of Graduate Studies for the Master of Urban Planning degree. An

application fee is required for each program (two total). Each program will make an admission decision independently of the other. Only if both programs approve admission is the applicant considered a dual degree student.

M.ARCH./M.U.P. DEGREE REQUIREMENTS

Students must register in the A. Alfred Taubman College of Architecture and Urban Planning and the Horace H. Rackham School of Graduate Studies. Course elections should be identical in each unit for each semester. The dual M.arch./M.U.P. degree requires the completion of a minimum of 84 credit hours. Specifically, a student must complete:

1. 36 credit hours of 500/600 level architecture courses, including four courses (24 hours) of architectural design (Arch 552, Arch 562, Arch 662, Arch 672)
2. Five courses (15 credit hours) of specific required architecture courses: (Arch 516—Architectural Representation, Arch 572—Architectural Theory and Criticism, Arch 583—Professional Practice, Arch 589—Site Planning, and Arch 660—Thesis Development Seminar)
3. One course (3 credit hours) in each of three subject areas—Architectural History, Environmental Technology, and Structures
4. 30 credit hours of graduate level urban planning courses, including all “core” course work unless waived by the instructor
5. Any additional cognate/elective courses needed to fulfill the 84 credit hour requirement

In addition, students who lack college-level economics and statistics must complete acceptable courses in these two areas. One, but not both, may be counted toward the 30 credit hours of graduate-level urban planning courses, provided it has been taken for graduate credit. A cumulative GPA of “B” must be earned in each unit and not more than 24 credit hours may be double-counted toward the two degrees.

Each unit maintains a separate transcript and either degree may be awarded independently, provided the requirements for the single degree have been met. Because enrollment in the dual program involves two separate units, it

becomes the responsibility of the student to follow the academic policies and procedures of each.

M.ARCH./M.U.P. SAMPLE SCHEDULE

FIRST YEAR

Fall Term	Credit Hours
Arch 552 Architectural Design 2G1	6
Arch 519 (UP 519) Principles and Practice of Urban Design I.....	3
UP 503 Planning Analysis.....	3
UP 513 Legal Aspects of the Planning Process.....	3
Total	15

Winter Term	Credit Hours
Arch 562 Architectural Design 2G2	6
UP 504 Quantitative Planning Methods II	3
UP 505 Qualitative Planning Techniques	3
Architectural History, Environmental Technology, or Structures requirement	3
Total	15

SECOND YEAR

Fall Term	Credit Hours
Arch 672 Architectural Design 2G3	6
Arch 516 Architectural Representation.....	3
Arch 660 Thesis Development Seminar.....	3
UP 540 Planning Theory	3
Total	15

Winter Term	Credit Hours
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Arch 662 Thesis Studio	6
Arch 572 Architectural Theory + Criticism	3
Arch 583 Professional Practice	3
Architectural History, Environmental Technology, or Structures requirement	
3	
Total	15

THIRD YEAR

Fall Term	Credit Hours
Arch 443 (UP 443) History of Urban Form	3
Arch 589 Site Planning	3
Graduate level courses in architecture, urban planning or elective field	9
Total	15

Winter Term	Credit Hours
UP 631 (NRE 631) Land Use and Physical Planning Studio	6
UP 610 Fiscal Planning and Management	2–3
Arch 529 (UP 620) Principles and Practice of Urban Design II	3
Graduate level courses in architecture, urban planning or elective field	6
Total	14–15

**MASTER OF ARCHITECTURE/
MASTER OF URBAN DESIGN**

M.ARCH./M.U.D. DESCRIPTION AND OBJECTIVES

This dual degree is structured to develop highly qualified professionals capable of combining Architecture and Urban Design to work effectively in the professional fields of architecture, urban development, and community and social planning. It equips students with a broad range of skills and particular expertise related to the design and planning of the built environment.

Graduates with a dual degree in Architecture and Urban Design are able to work both in the private sector and with a wide range of public agencies and non-profit organizations. The program combines the two-year/60 credit hour

M.arch.. degree with the one and one-half year or three-term/39 credit hour M.U.D. degree, resulting in a six term program.

M.ARCH./M.U.D. ADMISSION REQUIREMENTS AND APPLICATION PROCEDURE

To be eligible for admission, a student must have a B.S. degree from the A. Alfred Taubman College of Architecture and Urban Planning or an equivalent degree earned at another institution. Graduate students enrolled in the 3G option must complete all required 300 and 400 level course work before applying to the dual M.arch../M.U.D. program. Admission to both programs is normally limited to the fall semester, but winter admission may be considered in special cases. The recommended procedure is to apply to each program for the same term. It is possible, however, to apply to either program once enrollment has taken place in the other.

Two complete and separate applications are necessary, one for the Master of Architecture and one for the M.U.D. Degree. An application fee is required for each program (two total). Each program will make an admission decision independently of the other. Only if both programs approve admission is the applicant considered a dual degree student.

M.ARCH./M.U.D. DEGREE REQUIREMENTS

The dual M.arch../M.U.D. degree requires the completion of a minimum of 81 credit hours. Specifically, a student must complete:

1. 36 credits of 500/600 level architecture courses, including 4 courses (24 credits) of architectural design (Arch 552, Arch 562, Arch 662, and Arch 672)
2. 5 courses (15 credits) of specific required architecture courses (Arch 516, Arch 572, Arch 583, Arch 589, and Arch 660)
3. 1 course (3 credits) in each of three subject areas: Architectural History, Environmental Technology, and Structures
4. 39 credits of graduate level urban design courses

A cumulative GPA of "B" must be earned in each unit and not more than 24 credit hours may be double-counted toward the two degrees.

M.ARCH./M.U.D. 2G SAMPLE SCHEDULE

FIRST YEAR

Fall Term	Credit Hours
Arch 552 Architectural Design 2G1	6
Arch 516 Architectural Representation.....	3
Arch 589 Site Planning	3
Total	15

Winter Term	Credit Hours
Arch 562 Architectural Design 2G2	6
Arch 572 Architectural Theory + Criticism.....	3
Arch 583 Professional Practice	3
History of Architecture, Environmental Technology, or Structures requirement	3
Total	15

SECOND YEAR

Summer Half-Term	Credit Hours
UD 712 Urban Design Studio I.....	6
UD 739.....	3
Total.....	9

Fall Term	Credit Hours
UD 722 Urban Design Studio II	6
UD 713 History of Urban Form	3
UD 719 Theories of Urban Design.....	3
Econ RE Housing or Urban Design Elective.....	3
Total	15

Winter Term	Credit Hours
UD 732 Urban Design Studio III	6
UD 723 Methodologies of Urban Design	3
UD 729 Practices of Urban Design.....	3
Econ RE Housing or Urban Design Elective.....	3

Total 15

THIRD YEAR

Fall Term	Credit Hours
Arch 672 Architectural 2G3	3
Arch 660 Thesis Development Seminar	3
History of Architecture, Environmental Technology, or Structures Requirement	3
Cognate or Elective*	3
Total	12

Winter Term	Credit Hours
Arch 662 Thesis Studio	6
Total	6

*Architecture electives must be 500/600 level architecture courses.

**MASTER OF ARCHITECTURE/
MASTER OF BUSINESS ADMINISTRATION**

M.ARCH./M.B.A. DESCRIPTION AND OBJECTIVES

Taubman College and the Business School offer a joint degree enabling a small number of qualified students to pursue concurrent work in architecture and business administration.

The program combines the two-year/60 credit hour M.arch.. degree with the two-year/60 credit hour M.B.A. degree resulting in a three-year/90 credit hour

program. The program is arranged so that all requirements are completed in three years of enrollment. The degrees are awarded simultaneously.

M.ARCH./M.B.A. ADMISSION REQUIREMENTS
AND APPLICATION PROCEDURE

To be eligible for admission, a student must have a B.S. degree from Taubman College or an equivalent earned at another institution. Graduate students enrolled in the 3G program must complete all required 300 and 400 level course work before applying to the joint M.arch./M.B.A. program. Two separate and complete applications are required: one to Taubman College for the Master of Architecture (see “Master of Architecture Degree” earlier in this section) and one to the Business School for the full-time M.B.A. program available from:

Office of Admissions and Student Services
University of Michigan Business School
2260 Business Administration Building
701 Tappan
Ann Arbor, MI 48109-1234
Phone: (734) 763-5796
Fax: (734) 763-7804
Email: umbsmba@umich.edu
Web: <http://www.bus.umich.edu>

The GMAT is required for admission to the Business School. Admission is for the fall term. A special notation, indicating the joint program, should be made on the front of the M.B.A. application. Although the joint degree program is not available to students who have previously earned the M.arch.. or the M.B.A. degree, a student enrolled in the first year of either program may apply. The recommended procedure is to file an application to each program for the same term. An application fee is required for each application. Each program makes an admission decision independently of the other. Only if both programs approve admission is the applicant considered a joint degree student. If admission to each program is granted for the same term, one

unit must apply its deferred admission procedures, depending upon which program the student chooses for the first year of study.

M.ARCH./M.B.A. DEGREE REQUIREMENTS

Students in the Joint Degree M.arch./M.B.A. Program must complete a minimum of 90 credit hours, including a minimum of:

60 credit hours in Taubman College (cannot include transfer credit or work experience) including:

- 36 credit hours of 500/600 level architecture courses, including four courses (24 hours) of architectural design (Arch 552, Arch 562, Arch 662, Arch 672)
- Four courses (12 credit hours) of specific required architecture courses (Arch 516—Architectural Representation, Arch 572—Architectural Theory and Criticism, Arch 583—Professional Practice, and Arch 589 Site Planning)
- One course (3 credit hours) in each of three subject areas—Architectural History, Environmental Technology, and Structures
- 15 credit hours of transferable electives from the Business School

60 credit hours in the Business School, including:

- 30 credit hour M.B.A. core (no credit is awarded for Business Administration core courses successfully waived; credit must be earned with Business electives)
- 15 elective credit hours in Business Administration
- 15 credit hours of transferable elections from Taubman College

Students must earn a cumulative GPA of “B” in Architecture and maintain good academic standing in Business.

Enrollment is evenly divided between the two units, resulting in two separate transcripts. For the first year, the student has a choice between registering in Taubman College (Plan I) or registering in the Business School (Plan II). Registration in the second year then takes place in the other unit. During the third year, registration is split between the two units, with one semester completed in Taubman College and one in the Business School. Each program then applies its individual policies on the transfer of credit to award the degrees simultaneously. If a student decides not to continue in the program, either degree may be awarded independently, provided the requirements of the single degree have been met. Because enrollment in the program involves two separate units, it becomes the responsibility of the student to follow the academic policies and procedures of each.

M.ARCH./M.B.A. SAMPLE SCHEDULE I (STARTING IN ARCHITECTURE)

FIRST YEAR

Fall Term	Credit Hours
Arch 552 Architectural Design 2G1	6
Arch 516 Architectural Representation.....	3
Arch 589 Site Planning	3
History of Architecture, Environmental Technology, or Structures requirement	3
Total	15

Winter Term	Credit Hours
Arch 562 Architectural Design 2G2	6
Arch 572 Architectural Theory + Criticism	3
History of Architecture, Environmental Technology, or Structures requirement	6
Total	15

SECOND YEAR

Fall Term	Credit Hours
A 501 Principles of Financial Accounting	3
M 501 Marketing Management	3
BE 501 Applied Microeconomics.....	3
CS 502 Corporate Strategy + International Business	1.5
CS 503 Corporate Strategy + International Business	1.5
F 551 Principles of Finance	3
Total	15

Winter Term	Credit Hours
A 552 Management Accounting	1.5
OBHRM 552 Human Behavior and Organization.....	1.5
OM 552 Operations Management Basics	1.5
BA 553 Multidisciplinary Action Project	7.5
Business Elective	1.5
SMS 502 Applied Business Statistics	1.5
Total	15

THIRD YEAR

Fall Term	Credit Hours
Arch 672 Architectural Design 2G3	6
Business Law or Business Ethics	1.5
Business Electives	9
Total	16.5

Winter Term	Credit Hours
Arch 662 Thesis Studio	6
Arch 583 Professional Practice	3
Business Electives	6
Total	15

M.ARCH./M.B.A. SAMPLE SCHEDULE II (STARTING IN BUSINESS)

FIRST YEAR

Fall Term	Credit Hours
A 501 Principles of Financial Accounting	3
M 501 Marketing Management	3
BE 501 Applied Microeconomics.....	3
CS 502 Corporate Strategy + International Business	1.5
CS 503 Corporate Strategy + International Business	1.5
F 551 Principles of Finance	3
Total	15
Winter Term	Credit Hours
A 552 Management Accounting	1.5
OBHRM 552 Human Behavior and Organization.....	1.5
OM 552 Operations Management Basics	1.5
BA 553 Multidisciplinary Action Project	7.5
Business Elective	1.5
SMS 502 Applied Business Statistics	1.5
Total	15

SECOND YEAR

Fall Term	Credit Hours
Arch 552 Architectural Design 2G1	6
Arch 516 Architectural Representation.....	3
Arch 589 Site Planning	3
History of Architecture, Environmental Technology, or Structures requirement	3
Total	15

Winter Term	Credit Hours
Arch 562 Architectural Design 2G2	6
Arch 572 Theory + Criticism	3
History of Architecture, Environmental Technology, or Structures requirement	6
Total	15

THIRD YEAR

Fall Term	Credit Hours
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Arch 672 Architectural Design 2G3	6
Business Law or Business Ethics	1.5
Business Electives	9
Total	16.5

Winter Term	Credit Hours
Arch 662 Thesis Studio	6
Arch 583 Professional Practice	3
Business Electives	6
Total	15

**MASTER OF ARCHITECTURE/
MASTER OF ENGINEERING**

M.ARCH./M.ENG. DESCRIPTION AND OBJECTIVES

Taubman College of Architecture and Urban Planning and the Department of Civil and Environmental Engineering, in conjunction with the college of Engineering, have established a Dual Degree Program in Architecture and Construction Engineering and Management.

The program combines the two-year/60 credit hour M.arch.. degree with the one-year/30 credit hour M.Eng. degree, resulting in a two and one half year/75 credit hour program.

**M.ARCH./M.ENG. ADMISSION REQUIREMENTS
AND APPLICATION PROCEDURE**

To be eligible for admission, a student must have a B.S. degree from Taubman College or an equivalent degree earned at another institution with at least one year of calculus, one year of physics and a minimum "B" average in science and mathematics courses. Admission to both programs is normally limited to the fall term, but winter admission may be considered in special cases. The recommended procedure is to apply to each program for the same term. It is possible, however, to apply to either program once enrollment has taken place in the other.

Two separate and complete applications are required, one to Taubman College for the Master of Architecture and one to the Department of Civil and Environmental Engineering for the M.Eng./Construction Engineering and Management Program. This is available from:

Department of Civil and Environmental Engineering (CEE)
College of Engineering
The University of Michigan
2340 G.G. Brown Building
2350 Hayward
Ann Arbor, MI 48109-2125
Phone: (734) 764-8495
Fax: (734) 764-4292
Email: cee-dept@umich.edu
Web: <http://www.engin.umich.edu/dept/cee>

An application fee is required for each program (two total). Each program will make an admission decision independently of the other. Only if both programs approve admission is the applicant considered a dual degree student.

M.ARCH./M.ENG. DEGREE REQUIREMENTS

Students must dually register in the A. Alfred Taubman College of Architecture and Urban Planning and the college of Engineering. For any given term, courses being double-counted should be elected in each unit, while those pertaining only to the M.arch. degree are elected in Architecture and Urban Planning and those pertaining only to the M.Eng. degree in Engineering. The dual M.arch./M.Eng. degree requires the completion of a minimum of 75 credit hours. Specifically, a student must complete:

1. 36 credit hours of 500/600 level architecture courses, including four courses (24 credit hours) of architectural design (Arch 552, Arch 562, Arch 662, Arch 672);

2. Five courses (15 credit hours) of specific required architecture courses: (Arch 516—Architectural Representation, Arch 572—Architectural Theory and Criticism, Arch 583—Professional Practice, Arch 589—Site Planning, and Arch 660—Thesis Development Seminar)
2. One course (3 credit hours) in each of three subject areas—Architectural History, Environmental Technology, and Structures
3. 9 credit hours of construction engineering “core” courses (CEE 531, CEE 532, CEE 536)
4. 6 credit hours of graduate-level construction engineering courses
5. 3 credit hours of a construction practice seminar (CEE 530)
6. Any additional cognate/elective courses needed to fulfill the 75 credit hours and general requirements of each degree

In addition to the requirements outlined above, students must also complete—by the end of their first year of graduate study—the following courses or approved equivalents: CEE 351 Civil Engineering Materials, CEE 431 Construction Contracting, CEE 432 Construction Engineering, and CEE 445 Engineering Properties of Soils. In order to minimize scheduling problems, students are strongly encouraged to complete these courses prior to entering the dual program. Note that these four courses, as well as other 300 and 400 level courses, will not be recognized for graduate credit within the 30 credit hours required for the M.Eng. degree.

A cumulative GPA of “B” must be earned in each unit and no more than 15 credit hours may be double-counted toward the two degrees.

Each unit maintains a separate transcript and either degree may be awarded independently, provided the requirements for the single degree have been met. Because enrollment in the dual program involves two separate units, it becomes the responsibility of the student to follow the academic policies and procedures of each.

M.ARCH./M.ENG. SAMPLE SCHEDULE

FIRST YEAR

Fall Term	Credit Hours
Arch 552 Architectural Design 2G1	6
Arch 516 Architectural Representation.....	3
CEE 431 Construction Contracting (if needed) or a graduate-level architecture or	3
construction engineering course.....	3
Architectural History, Environmental Technology, or Structures requirement 3	
Total	15
Winter Term	Credit Hours
Arch 562 Architectural Design 2G2	6
Arch 572 Architectural Theory + Criticism	3
CEE 351 Construction Engineering Materials (if needed) or a graduate-level architecture or construction engineering course	3
CEE 432 Construction Engineering (if needed) or a graduate-level architecture or	
construction engineering course.....	3
Total	15

SECOND YEAR

Fall Term	Credit Hours
Arch 672 Architectural 2G4	6
Arch 660 Thesis Development Seminar	3
CEE 531 Construction Cost Engineering.....	3
CEE 445 Engineering Properties of Soil (if needed) or a graduate-level architecture or construction engineering course	3
Total	15

Winter Term	Credit Hours
Arch 662 Thesis Studio	6
CEE 532 Construction Management and Project Engineering.....	3
CEE 530 Construction Practice Seminar.....	1
Architectural History, Environmental Technology, or Structures Requirements or Graduate-level courses in architecture, construction engineering or elective field.....	6
Total	16

THIRD YEAR

Fall Term	Credit Hours
Arch 583 Professional Practice	3
Arch 589 Site Planning	3
CEE 530 Construction Practice Seminar.....	2
CEE 536 Critical Path Methods	3
Architectural History, Environmental Technology, or Structures requirement or Graduate-level courses in architecture, construction engineering, or elective field.....	6
Total	17

MASTER OF ARCHITECTURE/

MASTER OF SCIENCE IN ARCHITECTURE

M.ARCH./M.SC. DESCRIPTION AND OBJECTIVES

This dual degree program prepares students to become professional architects while introducing them to the knowledge and modes of research/scholarship in a specialized area: Building Technology, Design Studies, or History and Theory. The M.Sc. is an advanced, post-professional degree, offered by Doctoral Studies in Architecture, that provides an additional credential enabling its graduates to pursue research-based practices, teach in schools of architecture, and/or pursue doctoral studies. The dual degree combines the two-year/60 credit hour or the three-year/105 credit hour M.Arch. degree with the two and one-half term/30 credit hour M.Sc. degree, resulting, respectively, in a six or eight term program.

M.ARCH./M.SC. ADMISSION REQUIREMENTS AND APPLICATION PROCEDURE

To be eligible for admission, a student must have a B.S. degree from Taubman College of Architecture and Urban Planning or an equivalent degree earned at another institution. Graduate students enrolled in the 3G option must complete all required 300 and 400 level course work before applying to the dual M.Arch./M.Sc. degree program. Admission to both programs is limited to the fall semester. It is possible, however, to apply to one program while a current student in the other, but only when enrollment into the new program will begin prior to graduation from the current program. If enrollment into the new program is anticipated to be after graduation from the current program, the student should apply to either the M.Arch. or the M.Sc. and pursue a student-initiated dual degree

Two complete and separate applications are necessary, one to Taubman College for the Master of Architecture and one to the Horace H. Rackham School of Graduate Studies for the Master of Science in Architecture. An application fee is required for each program (two total). Each program will make an admission decision independently of the other. Only if both programs approve admission is the applicant considered a dual M.Arch./M.Sc. degree student.

M.ARCH./M.SC. DEGREE REQUIREMENTS

The dual M.Arch./M.Sc. degree requires the completion of a minimum of 90 credit hours (M.Arch. 2G) or 135 credit hours (M.Arch. 3G). It is possible to

double-count up to 15 credit hours, resulting in a minimum of 75 credit hours (M.Arch. 2G) or 120 credit hours (M.Arch. 3G).

Specifically, a student must complete:

M.Arch./M.Sc. 2G:

1. 36 credits hours of 500/600 level architecture courses, including four courses (24 CH) of Architectural Design (Arch 552, Arch 562, Arch 662, Arch 672)
2. 5 courses (15 credit hours) of specific required architecture courses: Arch 516—Architectural Representation, Arch 572—Architectural Theory and Criticism, Arch 583—Professional Practice, Arch 589—Site Planning, and Arch 660—Thesis Development Seminar
3. 1 course (3 credit hours) in each of three subject areas: Architectural History, Environmental Technology, and Structures
4. 12 credit hours of required M.Sc. core courses
5. 30 credit hours of electives or cognates in the student's area of specialization (at least 6 credit hours must be cognates)

M.Arch./M.Sc. 3G:

1. 43 credit hours total of: 3 Architectural Design courses (Arch 402, Arch 412, and Arch 422), 1 course in Design Fundamentals (Arch 416), 1 course in History of Architecture (Arch 413), 2 courses in Construction (Arch 417, Arch 527), 2 courses in Structures (Arch 314, Arch 324), and 2 courses in Environmental Technology (Arch 314, Arch 425)
2. Four courses (24 credits hours) of architectural design (Arch 552, Arch 562, Arch 662, Arch 672)
3. 5 courses (15 credit hours) of specific required architecture courses: Arch 516—Architectural Representation, Arch 572—Architectural Theory and Criticism, Arch 583—Professional Practice, Arch 589—Site Planning, and Arch 660—Thesis Development Seminar
4. 2 courses (6 credit hours) selected from 500/600-level History/Theory courses and 1 course (3 credits each) selected from 500/600 level courses in each of four subject areas: Environmental Technology, Structures, and Design Fundamentals
5. 12 credit hours of required M.Sc. core courses

DOCTORAL STUDIES IN ARCHITECTURE

Doctoral Studies in Architecture was one of only four such programs in the United States when it was established in 1969, the first to offer the Doctorate of Architecture degree. Over the last forty years the program has continued to evolve in response to the changing nature of the discipline and the profession. Through research, scholarship, and education, its goal is to study and contribute to knowledge within the discipline itself, but also in relationship to its shifting boundaries and increasingly global outlook. Students learn to conduct rigorous and significant research and scholarship, preparing them to make important contributions to the understanding and development of architecture through a variety of professional roles. Over two hundred degrees originally named Doctorate of Architecture and now Doctor of Philosophy in Architecture have been granted—more than any institution in the country. In addition, since 1996 the program has offered a Master of Science in Architecture degree. Both the Ph.D. and the M.Sc. are awarded by Rackham Graduate School.

The program's strength lies in the specialized knowledge and accomplishments of its permanent and affiliated faculty but also their interdisciplinary interests. Thus it is able to capitalize on the University of Michigan's commitment to interdisciplinary studies, reflected in the breadth and quality of degree programs as well in specific initiatives shared by these programs. Students, who are typically graduates from professional schools of architecture, but also from fields outside of it, study within a particular field of specialization represented by a faculty major advisor. At the same time they tailor this course of study according to their specific interests by means of contact with other units and, in the case of Ph.D. students, work with a minor advisor from one of these units. The doctoral curriculum culminates in dissertation research guided by major, minor, and cognate committee members from within the university, but also in some cases outside of it. The M.Sc. curriculum culminates in a master's thesis guided by the advisor. If their interests and abilities are well-suited, students can participate in the sponsored research projects of faculty members, giving them exposure to

research activities in settings ranging from the archive, to the laboratory, and to the field.

In addition to faculty, the program is supported by a broad range of resources necessary to pursue advanced research within Taubman College and in other units on campus. This includes library, computing, and laboratory facilities that are among the best in the country. In addition, students are encouraged to seek any other resources unavailable on campus but necessary to develop and carry out topics of research, particularly for the dissertation or thesis. Funding is available from Rackham Graduate School and Doctoral Studies in Architecture for students to carry out research that advances their progress to degree.

Doctoral Studies in Architecture offers two post-professional degrees: the Master of Science (M.Sc.) and the Doctor of Philosophy (Ph.D.).

The Master of Science (M.Sc.) in Architecture is an advanced degree in architectural research. It introduces students to knowledge in a specialized area as well as to modes of research/scholarship in architecture and related disciplines.

The Doctor of Philosophy (Ph.D.) in Architecture degree is the highest degree offered in architectural research and scholarship. Students acquire the knowledge and skills necessary to conduct substantive and original work in a specialized area that creates a deeper and broader understanding of the discipline of architecture, including its theoretical and methodological bases, and contributes to its development.

Students in Doctoral Studies are competitive with their peers within UM and other institutions, winning prestigious internal fellowships, including those offered by Rackham Graduate School and the Institute for Humanities, and from outside agencies, including the Fulbright, American Academy in Rome, Social Science Research Council, Getty Institute, and others. Graduates of this program are prepared to occupy a broad array of professional roles. Although most Ph.D. graduates take teaching positions in four-year colleges

and research universities, a number return to professional design practice, gain positions in research institutions, or complete post-doctoral training. Similarly, M.Sc. graduates go into teaching and/or practice, but a large number choose to pursue the Ph.D. degree.

Doctoral Studies encompasses three areas of specialization that reflect the interests and expertise of the faculty: Building Technology, Design Studies, and History and Theory. Each offers core courses and seminars that are both specific to the area and interdisciplinary in nature.

BUILDING TECHNOLOGY

How buildings are made and how they are controlled is the realm of building technology. There are many possible sub-areas of research within this specialization. They include materials and construction, structural systems, lighting and day lighting, acoustics, heating and air conditioning, energy conservation, sustainable design, and intelligent buildings. Typically, research in these areas requires physical testing of building components, computer simulation of systems performance, and statistical evaluation. In recent years, faculty and student research in building technology has focused on heating and air conditioning, lighting and day lighting, sustainable materials and materials behavior, structural form optimization, energy conservation, sustainable design, and intelligent buildings.

DESIGN STUDIES

Design Studies focuses on research and knowledge of the design process, decision-making, and the cultural and behavioral context of these activities. Research in this area investigates how the design and formal properties of buildings and urban spaces shape experience, use patterns, and cultural expressions; thereby assisting designers, planners, and decision-makers in creating more exciting, effective, and responsive places. New kinds of knowledge representations, particularly information models, are often vital to this research. There are several subareas of research within design studies,

including design process and design cognition, cultural and behavioral studies, urban design and building form, and design computing.

HISTORY AND THEORY

The specialization area in architectural history and theory emphasizes the study of buildings and cities in terms of the various social formations, intellectual and practical traditions, and theoretical lenses through which architecture and urbanism have developed as distinctive fields of endeavor. Faculty and students work in a variety of settings: from Medieval and Early Modern Europe and Western Asia, to nineteenth and twentieth century settings in North America, Europe, the former Soviet Union, Eastern Europe, the Middle East, and South Asia. History and theory faculty and students carry out research using a diverse array of historical methods and theoretical paradigms that engage with and contribute to a growing field of interdisciplinary scholarship concerned broadly with contemporary material, spatial, and intellectual genealogies. Rather than pursuing a single modality for the discipline in order to establish an institutional identity, individuals explore the subjects and paradigms they deem most appropriate. All are united however in their commitment to the practice of rigorous historical scholarship.

COURSEWORK IN OTHER UNITS

The courses offered by the three areas of specialization, as well as their interdisciplinary outlook, are augmented by cognate coursework that supports a student's minor area of specialization and/or complement his/her individual research interests. These may include not only other area course offerings within Taubman College, but also courses offered by other units/ departments on campus. These have included:

- Center for African and African American Studies (CAAS)
- Center for European Studies (CES)
- Center for Mideastern and North African Studies (CMENAS)
- Center for South Asian Studies (CSAS)
- Center for Southeast Asian Studies (CSEAS)
- Department of Anthropology

Department of Civil and Environmental Engineering
Department of Electrical Engineering and Computer Science
Department of History of Art
Department of Psychology
Department of Sociology
Institute for Historical Studies
Institute for Humanities
Institute for Social Research
School of Art and Design
School of Natural Resources and Environment
School of Public Health
School of Public Policy
School of Social Work
Program in Organizational Studies
Program in Urban and Regional Planning
Program in Urban Design

Students in Doctoral Studies can pursue their minor area or individual interests in even greater depth by enrolling in a formal dual degree program, a student-initiated dual degree, or a certificate program.

SYMPOSIA, CONFERENCES, AND OTHER EVENTS

In addition to coursework, Doctoral Studies in Architecture offers and supports events that contribute to the education of its students. These include those organized by the program and by students. Doctoral Studies also supports the participation of students in professional and academic conferences.

The Doctoral Symposia occur every year over the course of a semester. Organized by the coordinator of Doctoral Studies and faculty, three distinguished visitors, each representing one of the areas, are invited to deliver a public lecture, open to all, as well as a seminar solely for doctoral students and faculty. Initiated in 2007-08, the inaugural speakers were Werner Sobek, Jonathan Hill, and Reinhold Martin, followed the next year by Keith Besserud, David Leatherbarrow, and Nancy Stieber. The intent of the

Doctoral Symposia is to engage speakers whose work crosses over two or more of the areas represented in Doctoral Studies and by the professional M.Arch. degree, thus promoting interdisciplinary discussion and collaboration among students and faculty.

Every few years, with the support of Doctoral Studies, students organize an Interdisciplinary Graduate Student Conference. These began in 2005 with “Homeland(s) in Question-Relocating ‘Europe’ in the Spaces of Cultural Negotiation, followed three years later by “Global Suburbs: Discussing International Metropolitan Expansion.” The purpose of these student-initiated conferences is to create a forum, for those within but also outside of UM, to discuss an issue of particular relevance to current students in Doctoral Studies.

Students have also organized Rackham Interdisciplinary Workshops on their subjects of interest. These include “Classics and Architectural History” (2006-2007) and “Reproducing Suburbia: Planning Retirement in Sun City, Arizona” (2008). These workshops include discussion groups, as well as lectures by speakers invited from other institutions.

Students organize other events, in collaboration with doctoral students in the Urban and Regional Planning, through the student organization, Planning and Architectural Research Group (PARG). This group was created by students in 2005 to facilitate a collegial environment between the two doctoral programs and to increase opportunities for academic service and research within the college. Most recently the lectures series “Emerging Voices” was created, with the support of Doctoral Studies, to bring younger researchers and scholars to the college in order to share their work with the students.

Outside the university, students as well as faculty participate in national and international conferences of professional and academic organizations by delivering papers and posters, organizing sessions, as well as serving on panels. These organizations include the Association for Collegiate Schools of Architecture (ACSA), the Society of Architectural Historians (SAH), Environmental Design Research Association (EDRA), the International Seminar on Urban Form (ISUF), Architectural Research Centers Consortium (ARCC),

Urban History Association, and the Space Syntax Symposia. Students' travel to participate in such venues is supported by Rackham Graduate School and Doctoral Studies in Architecture.

MASTER OF SCIENCE DEGREE

M.Sc. DESCRIPTION AND OBJECTIVES

The Master of Science (M.Sc.) in Architecture is an advanced, post-professional degree in architectural research. It introduces students to knowledge in a specialized area as well as to modes of research/scholarship in architecture and related disciplines. Although students are typically recent recipients of a professional architecture degree, the M.Sc. also provides midcareer professionals, as well as graduates with degrees in fields related to architecture (such as art history or engineering), the opportunity to pursue architectural research in ways that will challenge and enrich their understanding of the discipline. The M.Sc. provides an additional credential that enables its graduates to pursue research-based practices, teach in schools of architecture, and/or pursue doctoral studies.

The degree is a two and one-half term, intensive course of study culminating in an independent research-based master's thesis. Each student elects one of three major areas of specialization offered by Doctoral Studies, or one of possibly several M.Sc. design research options offered during a particular year. He/she is guided by a faculty advisor affiliated with that area or option.

A student who elects the Building Technology, Design Studies, or History and Theory area pursues a course of study that includes Ph.D. core courses and does not include design studio courses. Elective and cognate courses are related to the area of specialization. The master's thesis, developed under the student's advisor, is typically based on archival, qualitative, or quantitative research and is primarily written in form.

A student who elects a M.Sc. design research option pursues a thematically based course of study that includes design work in a studio setting as well as related seminars. Elective and cognate courses, which can be selected from Ph.D. courses, are related to the option and to the student's particular research and design interests. The master's thesis, developed under the student's advisor, is based on a broad range of research and creative modalities and includes a design component. It is both graphic and written in form. Only students who will hold the M.Arch. degree at the time of enrollment into the M.Sc. can elect a design research option.

Note: Building Technology, Design Studies, History and Theory, and Design Research are called "subplans" in the Rackham online application.

Currently enrolled UM M.Arch. students who, prior to graduation, wish to begin M.Sc. studies in Building Technology, Design Studies, or History and Theory, can pursue the dual M.Arch./M.Sc. degree and double-count up to 15 credit hours of coursework. UM M.Arch. graduates who enroll for the M.Sc. can pursue a student-initiated dual degree and may double count up to 15 credit hours from their M.Arch. coursework towards the M.Sc., thus accelerating their time to degree.

In contrast to the Master of Architecture, the Master of Science is a non-professional, non-terminal degree. Those who hold only the M.Sc. are not eligible to apply for professional registration.

M.SC. DEGREE REQUIREMENTS

To earn the Master of Science degree students must complete a minimum of 30 credit hours with a GPA of 5.0 (B) or better. Specifically a student must complete:

1. One course (3 credit hours) of Research Design and Methods in Architecture (Arch 813), or another course approved by Doctoral Studies
2. One course (6 credit hours) of Master's Thesis (Arch 739) under the direction of the student's faculty advisor and pursued over two consecutive terms,

typically winter and spring terms. Those continuing to pursue a Ph.D. at UM's Doctoral Studies in Architecture need not elect Arch 739.

3. One course (3 credit hours) of Area Seminar (Arch 823, 824, 825) related to the student's area of specialization or option, or another course approved by Doctoral Studies

4. Four courses (12 credit hours) of elective architecture courses related to the student's area of specialization or option (for History and Theory, 6 of these credit hours must be area course offerings)

5. Two courses (6 credit hours) of cognate courses related to the student's area, option, or interests. Courses offered by University units other than Doctoral Studies in Architecture and the Architecture Program are considered cognate courses.

All course elections, including cognate courses, are made on the basis of area specialization and in consultation with the student's major advisor.

Master of Science degree students who apply and are accepted for Ph.D. studies may count two courses (up to 6 credit hours) from their M.Sc. coursework towards either their Ph.D. major or minor. They must still however complete the 40 credit hour requirement for the Ph.D. degree.

M.SC. SAMPLE SCHEDULE

FIRST YEAR

Fall Term	Credit
Hours	
Arch 813 Research Design and Methods in Architecture	

PH.D. IN ARCHITECTURE DEGREE

PH.D. DESCRIPTIONS AND OBJECTIVES

The Doctor of Philosophy (Ph.D.) in Architecture degree is the highest degree offered in architectural research and scholarship. Students acquire the knowledge and skills necessary to conduct substantive and original work in a specialized area that creates a deeper and broader understanding of the discipline of architecture, including its theoretical and methodological bases, and contributes to its development.

Doctoral students come from a variety of backgrounds. They are graduates with the professional M.Arch. and/or the post-professional M.Sc. Some are continuing students, while others are mid-career professionals, or even those already holding academic positions. All have in common however a demonstrated ability to conduct research in a specific area in architecture. Furthermore all share a commitment to achieve and maintain expertise in that area through study, research, and scholarship, not only during doctoral studies, but also later on as the core activity of their professional careers. For most this is united with a desire to teach, and upon graduation they go on to take positions in four-year colleges and research universities. A number however return to professional design practice or gain positions in research institutions. Whether as academics, researchers, or architects; working alone or collaboratively; disseminating their work through teaching, publication, or practice--Ph.D. graduates are able and ready to pursue specialized, rigorous research and scholarship at the highest level.

The doctoral curriculum is structured to enable students to pursue coursework in a major area of specialization, as well as in a minor area that complements and supports it, guided by major and minor advisors respectively. It culminates in highly specialized and original

dissertation research, supported by major, minor, and cognate committee members from within the university, but also in some cases outside of it.

PH.D. MAJOR AND MINOR AREAS OF SPECIALIZATION

Each Ph.D. student identifies a major and a minor area of specialization, and works with faculty advisors associated with each area.

The major is one of the three areas of specialization within Doctoral Studies: Building Technology, Design Studies, and History and Theory. The student is advised by a faculty member from that area, and takes core and other coursework as well as writes a dissertation within that area.

Note: Building Technology, Design Studies, and History and Theory are called “subplans” in the Rackham online application.

The minor is a subject area that is distinct from but complements the major. The minor can be in one of the other two areas within Doctoral Studies, in Urban and Regional Planning, or within another University of Michigan department, program, or center. The student is advised by a faculty member in the minor area. Coursework in the minor must be approved for Rackham graduate credit, deemed appropriate by the Doctoral Studies Advisory Committee, and approved by the major advisor. Minor areas of specialization that students have pursued include:

- American Culture
- Anthropology
- Behavior, Education, and Communication
- History
- History of Art
- Information Technology
- Information and Media Integration
- Material Sciences and Engineering
- Mechanical Engineering

Middle Eastern Studies
Museum Studies
Organizational Behavior and Management
Psychoacoustics
Psychology
Public Health
Sociology
Sustainability
Urban Planning
Urban Planning History
Women's Studies

Cognate courses may be used in partial fulfillment of the major or minor areas of specialization, if approved by the Advisory Committee. Cognates, required by Rackham Graduate School, are courses that are in a discipline or area different from the student's major area of study, but are related or connected with some aspect of this area. They may include course offerings within Taubman College that are outside of the student's major area of specialization, as well as courses offered by other units/departments on campus.

Students can pursue their minor area in even greater depth by enrolling in a certificate program offered in that subject.

PH.D. DEGREE REQUIREMENTS

Students who have been offered admission are required to complete a minimum of 40 credit hours of graded course work (including core courses and electives) prior to achieving candidacy. Specifically, students are required to take:

1. 13 credit hours of core courses (including 4 credit hours related to the Research Practicum)
2. 12 credit hours of letter graded courses in the major specialization area
3. 9 credit hours of letter graded courses in the minor specialization area
4. 6 credit hours of letter graded elective courses.

All students who anticipate working with quantitative or qualitative data manipulation are required to complete at least 3 credit hours of graded coursework in statistical analyses and/or advanced research methods (beyond the required core course).

Students must complete two consecutive terms of full-time graduate work in residence beginning in the fall term of their first year so that the core courses may be taken in the required sequence. Students who have been offered special admission will be required to complete additional course work.

Rackham requires that graduate-level cognate courses of 4 credit hours be satisfactorily completed in a department/program other than Doctoral Studies in Architecture or the Architecture Program. These courses may be used to satisfy the major or minor requirement and must be approved by the student’s major professor. These credit hours are not additional to the 40 required program hours. Upon satisfactorily completing all Ph.D. course work, a Ph.D. student is eligible to apply for and be awarded the Master of Science degree.

PH.D. CORE COURSE OFFERINGS

The core curriculum for the program consists of courses in the theoretical foundations of architecture, research methods, and seminars relating to the student’s major and/or minor specialization areas. For detailed description of these courses see the Course Descriptions section.

Course	Credit
Hours	
Arch 812 Theory in Architectural Research.....	3
(Ph.D. student in the H/T specialization area can replace 812 with an alternative course designate by the H/T area)	
Arch 813 Research Design and Methods in Architecture.....	3

Arch 823 Area Seminar: Architectural History and Theory.....3
 Arch 824 Area Seminar: Design Studies.....3
 or Arch 825 Area Seminar: Building Technology.....3
 or Arch 839 Research Practicum.....4
 With approval from Doctoral Studies a student may elect to take another 3 hour methods course in lieu of Arch 813.

PH.D. AREA SEMINARS

The Area Seminars each represent a Doctoral Studies specialization area. The intention of the Area Seminar is to provide a substantive overview of the seminal literature and themes in each specialty area. This can be achieved using different combinations of substantive content and staffing. The intended substantive overview may entail either a selection of key topic areas, or an integrative theme whereby multiple perspectives/literatures are highlighted. Staffing may involve either multiple faculty from the specialty area or a single faculty member.

Every student is required to attend the one in his/her major specialization area. The student may, however, be required by the minor advisor to elect a second area seminar. In that case, the second seminar would count toward the required 9 credits in the student’s minor area.

PH.D. RESEARCH PRACTICUM

The Practicum represents both an opportunity and a challenge for the student to conduct, on a limited scale, independent research at the level of quality expected for a dissertation; the research accomplishment should be comparable to that which results in a publishable article. Based on consultation with the major advisor, the practicum may take one of several forms, including but not limited to:

1. a self-contained paper or empirical study of publishable quality that may or may not be a component of the dissertation work;

2. the development of a theoretical model upon which the dissertation will be based;
3. a proposal for pilot research in the student's dissertation area that will include a focused literature review, research design and protocol.

Each student must elect, with the approval of his/her major advisor, to take the Practicum in one of three ways:

1. as a 4 credit hour independent study with his/her major advisor, or
2. as 1 credit hour of independent study with his/her major advisor taken in conjunction with a 600 or higher level course of at least 3 credit hours in his/her major area of specialization or
3. as a 4 credit hour UP 835 with prior approval from his/her major advisor.

Please note that students must have completed the research practicum and be registered for at least one credit hour of Arch 990 to be eligible to sit for the preliminary examinations.

PH.D. RACKHAM FEE TOTALS (RFTS)

Rackham Fee Totals (commonly known as RFTs) is a phrase used to designate the number of fee hours Rackham students earn when they register for course work. They are relevant to doctoral students ONLY. RFTs are not the same as credit toward program (CTP).

Rackham Fee Totals were implemented in an effort to bring some measure of equity to the cost of a UM doctoral education across all graduate programs. The creators of the RFT system took into account what they determined to be the minimum number of terms (during both Pre-Candidacy and Candidacy) doctoral students must enroll in order to complete their studies. This, in turn, helped to determine the number of required RFTs. Each doctoral student enrolled in the Rackham Graduate School must accumulate a minimum number of RFTs to be recommended for Candidacy and to receive the doctoral degree.

PH.D. LANGUAGE REQUIREMENT

There is no overall language requirement for Ph.D. students. Language requirements depend upon the major area of specialization and the research/dissertation topic.

- 1) Building Technology: does not have a language requirement, except as specified in item 4.
- 2) Design Studies: does not have a language requirement, except as specified in item 4.
- 3) History and Theory: requires its students to have reading knowledge of at least one language other than English that is relevant to their specific field of research. Additional languages may be required as specified in item 4.
- 4) A student working on certain research/dissertation topics may require a reading knowledge of one or more languages. In this case, following the recommendation of the faculty in the student's major area of specialization, the Doctoral Studies Advisory Committee will specify what language(s) is required of the student.

Students who have a language requirement must fulfill it prior to completing preliminary examinations by passing a written examination administered by an appropriate faculty member that tests the student's general proficiency in translating a scholarly or research text (with a dictionary) in his/her area of specialization.

PH.D. ANNUAL PROGRAM OF STUDY REPORT

At the end of each academic year, every active Ph.D. student is required to submit an Annual Program of Study Report, approved by his/her advisor, which is reviewed by the Doctoral Studies Advisory Committee. This report is used as a working document that helps the student and his/her advisor track courses already taken, select courses for the upcoming terms, and carefully plan future studies so that academic/research objectives are achieved and timely progress made to the degree.

After review by the Advisory Committee, the report is placed in the student's file, along with evaluations of his/her progress by the advisor and of his/her work as GSI/GSRA by the faculty supervisor(s). A letter describing the committee's assessment of the student's academic progress, copied to the

advisor, is sent to the student by the coordinator. If the committee has concerns, that letter will outline the requirements that the student must meet by a certain time in order to remain in good academic standing.

Financial support for the subsequent year depends upon timely completion of a satisfactory review.

The pre-candidate report, reviewed and signed by the major advisor, includes:

--a spreadsheet showing completed core and non-core courses as well as those proposed for the upcoming terms.

-- a statement of the student's Program of Study that includes:

- a) a general description about the student's area of scholarly/research interest and how the major and minor areas of study contribute to it.
- b) a more specific description of the major area, naming the major advisor and describing how the student has and will work with this advisor to develop scholarship/research in the major.
- c) a more specific description of the minor area, naming the minor advisor and describing how the student has and will work with this advisor to develop scholarship/research in the minor.
- d) a review of the student's progress over the past academic year, including a description of sources of funding/financial support.
- e) a plan for the upcoming summer and academic year, with a description of how proposed courses will potentially to the major and minor areas, projected sources of funding/financial support, a projected timeline for completing your preliminary exams, assembling a dissertation committee, and presenting/defending a dissertation proposal.

The candidate report, reviewed by the major advisor, is comprised of:

--a statement of the student's Program of Study that includes:

- a) the major advisor and dissertation committee members.
- b) a review of the student's progress over the past academic year and summer, including a description of sources of funding/financial support. If in the dissertation writing phase, the number of chapters completed.

c) a plan for the upcoming summer and academic year, including a projected timeline indicating the stages for progress to degree, a detailed description of the student's research plan (if still in the research phase), and a description of projected sources of funding/financial support.

PH.D. SIX STEPS TO CANDIDACY

Preliminary dissertation research should begin during the summer months at the end of the first and second years in order to investigate possible dissertation topics and the sources that might support them. Funding to support pre-dissertation research is available from various units on campus.

A student advances to candidacy status after successfully completing a preliminary examination.

A student should make every effort to advance to candidacy within two years from the date of first enrollment. Effective for those entering in the fall 2007 term, students should achieve candidacy in no later than three calendar years. A student who does not achieve candidacy within three years will be placed on academic probation. It is recommended that students establish the parameters of the dissertation topic and the reading lists for the major and minor preliminary exams by the end of the second year. (May) Preparation for the exams should take place during the ensuing summer months, and the exams completed during the fall term of the third year.

PRELIMINARY EXAMINATION

The preliminary examination is intended to be both a personally broadening and synthesizing experience. In general, it is an examination designed to challenge students with the kinds of questions that researchers and scholars seek answers to throughout their careers. The purpose of the examination is to demonstrate the student's competence in both the major and minor subject areas, as well as a broad and integrative knowledge of architectural research. Specifically, the preliminary examination seeks to pose the kinds of questions that will help the student:

1. look back and rethink in a broader framework the knowledge that has been gained through the student's coursework and especially the practicum.
2. to look ahead and conceptualize in a broader context the question(s) that may inform the concept and research design of the dissertation.

Step One: Dissertation Topic:

A dissertation topic serves to provide an important context for formulating examination questions and should be developed in consultation with the student's major faculty advisor. The dissertation topic should be defined and articulated in a text that is as concise as possible. This text should provide an indication of the research question or hypothesis, the methods that may be used and the possible outcomes of the research. It is understood that these ideas are preliminary.

Step Two: Preliminary Committee

The Preliminary Examination Committee consists of the major examination advisor, the minor examination advisor, and a third member from the architecture program (This committee may or may not include members of the student's dissertation committee). This committee must be approved by the program coordinator prior to the start of the exam period (form is available from the program assistant).

Step Three: Scheduling Examinations

Confirm an exam date with all committee members. With the approval of their advisor, students should provide a general time frame, understood by all participants, concerning the schedule for the examinations. Students are required to begin their examinations at least 30 days prior to the last day of classes in the term in which they advance to candidacy. It should be noted that no more than 90 days are permitted to elapse between the beginning of the examinations and their conclusion. A copy of this schedule should then be forwarded to program assistant.

The program assistant will perform a prelims audit making certain that the student has met all requirements prior to taking the prelims. The requirements for passing the prelims audit are as follows:

☒1. has acquired at least 18/36 Rackham Fee Totals

☒2. no outstanding incompletes in coursework

☒3. enrolled at least 1 credit hour in the term in which taking the preliminary exams

☒4. Completion of 40 Credit Hours of Graded Course Work

Course work includes 13 credits of core courses (includes 4 credit hours related to the Research Practicum), 12 credit hours in the major specialization area, 9 credit hours in a minor specialization area, and 6 elected credit hours.

Step Four: Taking the Written Exams

The written examinations consist of a series of essay questions formulated with each student's particular course preparation, research interests, and proposed dissertation topic in mind.

A. Pick up major exam question on scheduled date from the program assistant. Major examination questions are developed by the major professor. They are aimed at testing the student's knowledge of his/her declared major area of specialization and his/her ability critically to integrate various aspects of that knowledge. The parameters of the student's declared major area of specialization and the emphasis reflected in the major examination questions are, for the most part, established by the major professor in consultation with the student.

B. Complete and return exam to the program assistant within the 96 hour time period.

C. Pick up the minor exam question on scheduled date from the program assistant. The minor examination is intended to cover the student's minor area of specialization. The question(s) for the minor examination is/are developed by the minor professor in a _____ manner similar to those prepared for the major examination.

D. Complete and return exam to the program assistant within the 48 hour time period.

Step Five: Evaluation of the Written Examinations

Student responses to the two written examinations are reviewed by all members of the Examination Committee. However, each member of the Examination Committee has the responsibility to evaluate critically student responses to his/her questions. If the results of this evaluation are deemed satisfactory, they are used to formulate questions for the oral exam. If the written examinations are not passed, the student may be separated from the program. The Examination Committee may, however, permit one re-take of any or all of the written examinations as well as indicate any additional requirements the student needs to satisfy to prepare for re-examination. Only those examinations evaluated as unsatisfactory need to be re-taken.

Step Six: Taking the Oral Examination

The oral examination is based upon the two written examinations. The Examination Committee shall meet at least once prior to the oral examination to discuss the results of the written examinations and to formulate questions for the oral examination.

The oral examination is aimed at assessing the student's ability to synthesize the theoretical and methodological issues in his/her major and minor areas of specialization within the discipline of architecture. This examination is also intended as a forum for the Examination Committee to meet with the student and discuss issues arising from the written examinations. The Examination Committee may choose to conduct this discussion in closed session.

Upon completion of the oral examination, the qualifying examination process is complete. If the student does not pass this examination, he or she may be separated from the program. The Examination Committee may, however, permit the student to take the oral examination once more as well as indicate any additional steps the student needs to take in preparing for re-examination.

After completion of the oral examinations, the Examination Committee informs the student of the committee's evaluation and its recommendation to the program chair. If the Examination Committee determines that all

parts of the preliminary examination have been successfully completed, the program assistant will forward Recommendation for Candidacy to the Rackham Graduate School for final approval. Formal notification of his/her advancement to candidacy is sent to the student by Rackham.

PH.D. DISSERTATION GUIDELINES

COMMITTEE FORMATION GUIDELINES (www.rackham.umich.edu/OARD/forms.html)

Upon successful completion of the preliminary examination, each candidate, in collaboration with his/her major professor, forms a dissertation committee. The dissertation committee will include at least four members chosen by the student in consultation with his/her major advisor and approved by the program chair. These members will include: one outside or cognate member who holds at least a 50% appointment in a Rackham doctoral program, but does not hold any fraction of an appointment in the Architecture Program. At least two members must be faculty from the Doctoral Studies in Architecture. Three members must have an appointment as professor, associate professor, or assistant professor with an earned doctorate degree.

DISSERTATION PROPOSAL

Before embarking upon dissertation research, each student is required to submit a Dissertation Proposal for review and approval by his/her dissertation committee. The proposal should:

1. Build on the outcome of the research practicum and demonstrate the student's mastery of the literature on the subject area of the dissertation.
2. Contain a clear, detailed description of the proposed dissertation topic and its underlying hypothesis or objective.
3. Present an account of the research methodology to be used in the dissertation.
4. Conclude with a discussion of the contribution that the proposed dissertation will be expected to make both to the subject area in question and to the discipline of architecture.

The candidate will give a public, oral presentation of the proposal at a time and place designated by the dissertation committee chair. The oral presentation schedule and copy of the proposal must be submitted to the Program Office. A student should make every effort to complete his or her dissertation proposal within six months of advancing to candidacy.

DISSERTATION AND FINAL DEFENSE

Each candidate is required to prepare a dissertation, which will give satisfactory evidence of his/her ability to conduct original, advanced research and to present the results of that research in effectively organized and well-written form. The dissertation is expected to contribute substantive new knowledge both to the subject area of the dissertation and to the discipline of architecture as well as to exhibit the student's mastery of the source material.

The complete dissertation draft should be submitted to the committee at least one month prior to the defense date. Prior to the dissertation defense, a pre-defense meeting with the full dissertation committee (including an abbreviated presentation by the candidate) is recommended to fully prepare for the oral examination and to refine and augment the written dissertation. Based upon an assessment of the quality of the work at this meeting, the committee will reach a decision on scheduling the defense.

Once all members of the dissertation committee find the dissertation acceptable, the final oral examination or defense of the dissertation is scheduled and conducted by the committee. The dissertation defense is open to the members of the faculty and students of the university. Upon successful completion of the procedure, the candidate is recommended by the dissertation committee to Rackham for conferral of the Ph.D. degree.

Completed dissertations must be submitted in a form suitable for publication in print or other media. In addition, the candidate is required to prepare a written abstract of the dissertation for publication in the dissertation abstracts. Rackham's requirements regarding the number of dissertation

copies to be submitted by the candidate apply to Doctoral Studies in Architecture.

NOTE: Students must be enrolled for 8 hours of Arch 995 during the term in which he/she defends.

PH.D. TIMELINE

The following is an example of a planned program of study. Students are generally expected to meet these target completion dates for course work and other program requirements.

FIRST AND SECOND YEAR

- Completion of 40 credits of required coursework
- Practicum
- Submission & Approval of an Annual Program of Study Report

THIRD YEAR

- Completion of Preliminary Examinations
- Completion/approval of dissertation proposal
- Submission & Approval of an Annual Program of Study Report
- Apply for funding from outside sources

FOURTH & FIFTH YEAR (optional if needed)

- Dissertation research and writing
- Final Oral Defense
- Degree awarded/graduation

DOCTORAL STUDIES COMBINED DEGREES

Because architecture is an interdisciplinary field that relates to many other professions and disciplines, Doctoral Studies offers its Ph.D. or M.Sc. students opportunities to enroll in combined degrees and certificate programs. These allow them to pursue in greater depth their individual specializations and

interests. Dual degree programs enable students to earn two degrees in considerably less time than if each degree were earned separately.

A formal Rackham dual degree program offered within Doctoral Studies is:

--M.Arch./M.Sc. in Architecture

Students may also initiate other dual degrees, with the approval of Doctoral Studies, allowing them to combine a second field of study with the M.Sc. in Architecture. Student-initiated dual degrees have included:

--Architecture (M.Sc.) and Urban and Regional Planning

--Architecture (M.Sc.) and Architecture (M.Arch.)

--Architecture (M.Sc.) and Social Work

--Architecture (M.Sc.) and Urban Design

--Architecture (M.Sc.) and Landscape Architecture

Students may enroll in a certificate program offered by a large number of units on campus. The certificates that have most interested students in Doctoral Studies in Architecture are:

--Certificate in Culture and Cognition

--Certificate in Medieval and Early Modern Studies

--Certificate in Museum Studies

--Certificate in Survey Methodology

Other certificate programs of potential interest to students in Doctoral Studies in Architecture include:

--Chinese Studies

--Complex Systems

--Latin American and Caribbean Studies (LACS)

--Russian and East European Studies (CREES)

--Science, Technology, and Society (STS)

--Screen Arts and Cultures

--South Asian Studies

--Southeast Asian Studies

--Spatial Analysis

--Women's Studies

Students apply for admission to each program. After admission, the student meets the requirements of both degrees, or the degree and the certificate. The student may double-count one-sixth of the sum of the credits required for each of degree/certificate. A student may apply for a student-initiated dual degree or a certificate at any time during the course of study.

If the two units in a combined degree program charge different tuition fees, the student may be liable for the higher tuition in a semester when he/she registers for any credits in the unit with the high tuition.

DOCTORAL STUDIES HOW TO APPLY

Doctoral Studies in Architecture is part of the Rackham School of Graduate Studies. This is the overall administrative unit for graduate programs and works in conjunction with 17 schools and colleges to recruit applicants, administer the admissions process, and serves students through the final stages of degree attainment.

Admission to Doctoral Studies in Architecture to pursue either the M.Sc./ Ph.D. degree is limited to the Fall term only. The process conducted by the admissions committee is highly selective, admitting a maximum of 10 students each year.

M.SC./PH.D. APPLICATION DEADLINE

All applicants are required to apply online. All application materials including statement of purpose, personal statement, transcripts, letters of recommendation, and examples of work should be submitted/uploaded via the Rackham online application. We recommend beginning this process well in advance of the December 15, 2009 deadline.

M.SC./PH.D. APPLICATION FEE

The fee for United States Citizens and those with permanent resident visa status is \$60 (U.S. funds) . The fee for non-U.S. citizens is \$75 (U.S. funds).

The application fee is paid online, via credit card, before the application is submitted. The application is submitted electronically to the program of study and the Rackham Graduate School. There is no need to follow-up with a paper copy of the application or an additional application fee.

Applications received without fees will not be processed.

M.SC./PH.D. STATEMENT OF PURPOSE

Two page statement of purpose should describe the research that you anticipate pursuing if admitted to the program including which area of specialization you plan to engage. The ideas should be clearly, well stated, and specific. Describe your qualifications to undertake this research and reference your own or others related work if appropriate.

M.SC./PH.D. PERSONAL STATEMENT

The Personal Statement should be a concise, well-written statement about how your personal background and life experiences, including social, cultural, familial, educational, or other opportunities or challenges that have motivated your decision to pursue a graduate degree at the University of Michigan.

M.SC./PH.D. OFFICIAL TRANSCRIPTS

For your convenience, we offer a transcript upload page within the online application that allows you to expedite the processing of your application. This transcript will be considered unofficial. When submitting transcripts online upload the front and back of the transcript(s). The admissions committee is able to make a decision based upon your submission of an electronic transcript.

All applicants are required to submit transcripts to the Rackham Graduate School and Doctoral Studies. It is your responsibility to request the release of any records from the institutions.

M.SC./PH.D. SENDING OFFICIAL TRANSCRIPTS TO THE RACKHAM GRADUATE SCHOOL

All applicants are required to mail one (1) set of official academic records/transcripts from undergraduate and postgraduate institutions to the Rackham Graduate School.

Rackham Graduate School

Attn: Transcripts/U-M ID# (if known) or Date of Birth (mm/dd/yyyy)

915 E Washington Street

Ann Arbor MI 48109-1070

USA

Official documents must be provided by the institution awarding the degree. Academic records certified by notary publics are not official. Click on the links below for more details.

Submit your application before sending your academic records/transcripts to Rackham. This will allow your documents to be processed more quickly. If you do not obtain a U-M ID number before mailing your academic records/transcripts to Rackham it is important that you inform us of any name changes. This includes Former Last Name/Family Name/Surname and Former First Name/Given Name that appear on your academic records/transcripts. This information will enable us to match your records to your application quickly.

If you do not have a U-M ID# you can obtain one by registering as a Future Grad Student.

What Is the Benefit of Registering?

Indicating your University of Michigan ID number on your application and application documents allows your records to be matched and processed more quickly!

The University of Michigan will assign a U-M ID# to your record within 7-10 business days. If your program's deadline date is within 7-10 days submit your documents with your date of birth.

All of the following materials are submitted to Doctoral Studies in Architecture via the online Rackham application.

M.SC./PH.D. LETTERS OF RECOMMENDATION

Three (3) letters of recommendation are required and should testify mainly to your academic and professional capacity and promise. Letters should be substantive statements from academics and professionals familiar with your abilities and accomplishments. Electronic submission of recommendations is preferred. You will be prompted to register recommenders using the Rackham online admissions application, enabling recommenders to submit letters of recommendation electronically to the Doctoral Studies in Architecture.

M.SC./PH.D. EXAMPLES OF WORK

Submissions of examples of work should support your statement of purpose and clearly demonstrate research and writing abilities. These may consist of published articles, papers, portfolio or other writing samples. Examples should be uploaded as PDF files with the online application.

*M.Sc. applications to a design research option require a portfolio.

M.SC./PH.D. RESUME OR C.V.

Please submit an up to date resume or curriculum vitae with your application.

M.SC./PH.D. GRADUATE RECORD EXAMINATION

The Graduate Record Examination (GRE) Score Report is required of all students. Information about the GRE including test dates and locations can be found at <http://www.gre.org>. Please have an official score report sent to the University of Michigan at least 6-8 weeks prior to the December 15 deadline. GRE scores must be no older than five years old (not before 2005) to be valid; recent scores are preferable. There is no minimum GRE score required to apply.

*Institution code GRE: 1839

*Department code GRE: 4401

M.SC./PH.D. TOEFL EXAMINATION (INTERNATIONAL STUDENTS ONLY)

The Test of English as a Foreign Language (TOEFL) or Internet Based Toefl (IBT) is required of all non-native English speakers. Information about the TEOFL/IBT including test dates and locations can be found at www.ets.org/toefl/. Please contact ETS (www.ets.org) and have an official score report sent

to the University of Michigan (Institution code 1839, department code 12) at least 6-8 weeks prior to the December 15 deadline. TOEFL/IBT scores must be no older than two years old (not before 2008) to be valid. The minimum requirement for the TOEFL test is 250 computer based or 600 paper based. The minimum requirement for the IBT test is 100. Non-native English speakers that have graduated from a four-year University where English was the primary language of instruction are not required to submit a TOEFL score.

M.SC./PH.D. EVALUATION

Applications will not be evaluated until all credentials have been received and the application fee has been paid. Applications missing credentials cannot be guaranteed a review by the admissions committee.

M.Sc./Ph.D. Admissions Timeline

December 15Application deadline
January 15Applications go to the admissions committee for review
Mid–FebruaryAdmission decisions reached and applicants notified

When your application and application fee have been received by the Rackham Graduate School you will receive an Acknowledgement Email. This email will confirm receipt of your application and provide you with your U of M ID number. It will also inform you on how to check your application status online via Wolverine Access.

M.SC./PH.D. WEB APPLICATION STATUS

Applicants can verify your application data and status online. You will need to use a login ID and password, and confirm some personal data before viewing your application status. Applicants who have been recommended for admission are notified by the department and the Rackham Graduate School by mid-February. Only the written notice from the Dean of the Graduate School constitutes approval of admission.

The site allows you to update your contact information, check the receipt of your application materials, and receive and admission decision online.

Rackham will try to keep all materials received current, however, please allow sufficient time for processing before contacting the office.

For applicants who are current students or employees: Log in to Wolverine Access using your existing UMICH unickname login and click “New and Prospective Student Business.”

For applicants new to the University: You need to create a secure login using a U-M Friend Account and then go to and log in to the U-M administrative services called Wolverine Access. To do this, you MUST follow both steps below:

1. Create a U-M Friend Account

Click this link: [Create a Friend Account](#)

Note: If you have questions about creating a U-M Friend Account, use the following URL for detailed instructions: <http://www.itd.umich.edu/itcsdocs/s4316>

2. Log in to U-M administrative services (Wolverine Access)

After you create your U-M Friend Account, use the following URL to view your application data: <https://wolverineaccess.umich.edu> and click “New and Prospective Student Business.”

DOCTORAL STUDIES FINANCIAL SUPPORT

Ph.D. FUNDING

Doctoral Studies in Architecture is committed to funding each admitted Ph.D. student for four years of the expected time to complete the degree, including an annual stipend, full tuition, and health care during the academic year (Sept-April). Additional years of funding may be available through graduate student instructorships, research assistantships, and other sources. We do encourage students to apply for funding from independent sources.

With a student admissions application, no additional documents or materials are required to be considered for funding. Though funding packages vary from student to student, a typical departmental package for a student admitted for the Ph.D. consists of:

Years 1–2

Annual stipend, full tuition and health care coverage. Graduate Student Instructorship (GSI) in which the student teaches one class per term OR GSRA (Graduate Student Research Assistant) in which the student assists a faculty member. Typically requires a 12-14 hour work week.

Year 3-4

Annual stipend, candidacy tuition, and health care coverage.

M.Sc. FUNDING

Awarded on a case by case basis. A typical funding package covers one of the two terms of tuition required for the degree.

STUDENT EXPENSES

The Office of Financial Aid (www.finaid.umich.edu) establishes standard student budgets each year as a basis for awarding financial aid funds. These budgets reflect typical “modest but adequate” expense patterns of University of Michigan students based on research conducted by the Office of Financial Aid. While actual expenses will vary based on your lifestyle and level of enrollment, the estimated costs listed below should assist you in planning your own budget.

	Michigan Residents (In-State)	Nonresidents (Out of State)
Tuition & Fees	\$16,685	\$33,399
Room & Board	\$11,320	\$11,320
Books & Supplies	\$1192	\$1192
Personal & Misc	\$4042	\$4042
Total	\$33,239	\$49,953

For more information, visit www.umich.edu/~regoff/tuition

RESEARCH FUNDING

A limited amount of funding is available to students for research in connection with his/her dissertation or thesis work. Students should submit a request for a Rackham Graduate Student Research Grant (www.rackham.umich.edu/fellowships). These grants are designed to support Rackham graduate students who need assistance to carry out research that advances their progress toward their degree. A master's student is eligible for one Rackham Graduate Student Research Grant during his/her graduate program. A doctoral student is eligible for two Rackham Graduate Student Research Grants during his/her graduate program, one before candidacy and one as a candidate. Students who receive a master's award will not be eligible as a pre-candidate.

To request additional research support from Doctoral Studies in Architecture, students should submit a research proposal of 1500 words, detailed budget, and letter from his/her advisor supporting the need for such funding.

CONFERENCE PRESENTATIONS

Doctoral Studies in Architecture encourages the development and presentation of papers at conferences and professional meetings when those papers relate to a student's academic program.

Students are eligible for support for one national or international conference per academic year. If a student has had a paper or poster accepted, he/she should submit prior to the conference date a request for a Rackham Conference Travel Grant. These grants are intended to assist doctoral students to participate and attend conferences and professional meetings.

If a student has had a paper or poster accepted for any additional conferences during that academic year, or has been invited to serve on panel, he/she should submit prior to the conference date a request to Doctoral Studies. That request should include a copy of the acceptance to participate at the conference, a detailed budget, and a letter from his/her advisor commenting on how the conference participation is relevant to the student's research or graduate studies.

TEACHING AND RESEARCH ASSISTANTSHIPS:

Graduate Student Instructorship Positions (GSI)

<http://hr.umich.edu/acadhr/grads/index.html>

<http://www.umgeo.org/>

Students in Doctoral Studies are eligible for Graduate Student Instructorships (GSI), and typically hold those within the Architecture Program. The number of positions that is available depends on the program's teaching needs for the particular semester. Students apply for GSI positions each term, indicating their course preferences. Assignments are negotiated by the architecture chair, the Doctoral Studies coordinator, and the individual teaching faculty who require a position.

Prior to serving as Graduate Student Instructors, students whose undergraduate education was at an institution where the language of instruction was not English are required to pass the Graduate Student Instructor Oral English Test, administered by the English Language Institute. The test assesses competence and effectiveness in the type of communication typically used by GSIs at the University of Michigan. A student who does not demonstrate the necessary proficiency may be encouraged or required to take courses offered by ELI in order to pass the GSI-OET at the level required to serve as a GSI.

Graduate Student Research Assistant Positions (GSRA) and Other Research Positions

<http://hr.umich.edu/acadhr/grads/index.html>

Students in Doctoral Studies are eligible for Graduate Student Research Assistant (GSRA) positions as well as hourly research positions, and typically hold those within Taubman College. The number that is available varies depending on the amount of sponsored research that is currently in progress. Assignments are negotiated by the architecture chair, Doctoral Studies coordinator, and the faculty director of the research project.

Project directors seeking GSRA's recommend students to the Architecture chair and the Doctoral Studies coordinator. Generally they recommend

DOCTORAL STUDIES FREQUENTLY ASKED QUESTIONS

1. What is the Rackham Graduate School?

The Horace H. Rackham School of Graduate Studies is the overall administrative unit for graduate programs and works in conjunction with 17 schools and colleges to recruit applicants, administer the admissions process, and serves students through the final stages of degree attainment.

2. Can I request a paper application packet?

Taubman College no longer prints paper application materials. We require all of our applicants to use the online application system at <https://apply.embarck.com/Grad/UMich/Rackham/ProgramA/>

3. When is the application deadline?

The application deadline is December 15th for Fall admission. Students are only admitted at this time each year. The application and supporting materials must be received by December 15th in order to ensure that an applicant receives a full review by the admissions committee.

4. How do I check the status of my application materials?

Applicants can check the status of their application and verify information using the web application status function. Once an applicant submits an application online, s/he will receive email instructions on how to access/view their application status by logging into Wolverine Access at <http://wolverineaccess.umich.edu/>.

5. Do you offer a part-time or an online Ph.D.?

No, you must be registered as a full time student studying on campus to receive our funding package. Students are expected to devote full time to their studies and are supported financially to enable them to do that.

6. What can I do to improve my chances of admittance?

Begin planning in advance to present a complete, high quality application. In submitting your application, one of the most important items is a clear concise personal statement outlining your professional, intellectual, and

research interests. Prepare for the GRE and/or TOEFL tests and leave yourself enough time for a re-test if you feel you have not done your very best. In this same vein, start well in advance contacting current and previous universities and colleges about submitting grade transcripts. We cannot consider your application without them.

7. When can I expect to receive an admission decision?

The Admissions Committee typically completes final admission decisions by mid-February. All applicants will receive an official decision letter as soon as the committee has reached a conclusion. A general Doctoral Studies timeline is as follows:

December 15th – Application Deadline

January 15th – Applications go to the Admissions Committee for Review

Mid – February – Admission decisions reached and applicants are notified

8. I have been assigned to a waitlist. What does that mean and how does the waitlist process work?

The waitlist means that we are interested in your application, but have already offered admission to other candidates. If space becomes available, we will admit students from the waitlist in a non-ranked order.

9. How many letters of recommendation letters do I submit?

Three (3) are required and should testify mainly to academic and professional capacity and promise. Letters should be substantive statements from academics and professionals familiar with your abilities and accomplishments. The letter of recommendation form is available from the Rackham website.

10. Can I defer my admission offer?

Applicants may choose to defer their admission for up to 2 years. Scholarship recipients cannot defer a scholarship award.

11. Can I be a Graduate Student Instructor?

Students will be selected for GSI/GSRA positions as part of their funding package depending on the teaching needs of the college.

12. Will I get my application fee back?

No, the application fee is non-refundable.

13. Will you return my portfolio to me?

When you submit a portfolio as part of your application, it becomes property of the University of Michigan. If you would like to have your portfolio returned to you after admission decisions are made please submit a prepaid, self addressed envelope.

14. I am an international student. Am I eligible for funding?

Yes, you are eligible for the funding package described in the funding section of our website.

15. How do I apply for merit-based scholarships?

All applicants are automatically considered for any merit-based scholarships that are available. If you receive a scholarship, you will be notified of the scholarship award in your letter of admission. Because financial resources are limited, we would encourage all applicants to seek outside sources of funding as well. Please apply for any scholarships, fellowships, or grants for which you are eligible.

ACADEMIC POLICIES AND PROCEDURES

The following information on academic policies and procedures specifically pertains to students enrolled in Junior Year of the Undergraduate Program through the Master of Architecture Program and the Master of Urban Design Degree Program.

Students enrolled in Doctoral Studies in Architecture (Master of Science, Ph.D.) or the Urban and Regional Planning Program (Master of Urban Planning, Ph.D. in Urban and Regional Planning) must refer to the Horace H. Rackham School of Graduate Studies online publications for the most up-to-date information on admission, programs of study, courses, fees and expenses, financial support, academic standards, and various other policies at the web address below:

Office of Admissions
Horace H. Rackham School of Graduate Studies
The University of Michigan
106 Rackham Building
915 E. Washington Street
Ann Arbor, MI 48109-1070
Phone: (734) 764-8129
Fax: (734) 647-7740
Email: rackadmis@umich.edu
Web: <http://www.rackham.umich.edu/>

AP & P ADMISSION

Admission requirements and procedures are described in this section under Undergraduate Program, Junior Year Admission and under Master of Architecture Degree, 2G or 3G options.

AP & P READMISSION

Architecture Admissions
2000 Bonisteel Boulevard
Ann Arbor, MI 48109-2069
Phone: (734) 764-1649
Fax: (734) 763-2322

The application for readmission should be filed no later than two months before the beginning of the term of re-enrollment. No application fee is required.

AP & P ORIENTATION

Taubman College does not participate in the University Summer Orientation Program, but instead, conducts its own orientation program just prior to the start of fall term classes. It is important that all entering students attend. Students will receive detailed orientation information by early August.

AP & P REGISTRATION

Students are officially enrolled for a term at the time of registration. Each student completes this registration process by using Wolverine Access, a web-based information system. Students will receive detailed information about registering for courses during the summer before classes begin. Directions for Wolverine Access registration are in the "University of Michigan Schedule of Courses" for a selected term. A late registration fee will be assessed to students who register after the end of the scheduled registration period for any term or program. Please refer to the section on "Fees and Expenses."

AP & P COMPUTER HARDWARE AND SOFTWARE RECOMMENDATIONS

A personal computer is an essential tool for learning and professional work in the programs offered at Taubman College of Architecture and Urban Planning. Our students master computing technologies and use them throughout the curriculum. Although the college provides desktop computing clusters in various locations throughout the building and also hosts a campus computing site, it is strongly recommended each student provide his or her own personal computer.

Before making a purchase, students should consult the current hardware and software recommendations on the Taubman College Help Desk website at <http://www.Taubman College.umich.edu/computing/>.

AP & P ACADEMIC COUNSELING

The chair of the Architecture Program coordinates academic counseling. Throughout their period of enrollment, students are encouraged to consult with various members of the faculty regarding academic and career goals. Students enrolled in the Master of Architecture Program are required to have a Program Planning Form, signed by a faculty advisor, on file with the college Registrar. Although faculty and administrators may assist a student in arranging an academic program, the student is ultimately responsible for meeting all program and degree requirements.

AP & P COURSE ELECTIONS

GENERAL POLICY

Students in the Architecture Program are not required to have election worksheets or drop-add forms signed and stamped by the college registrar, provided they are registering or making changes within the official registration/drop-add period for any given term. Except under extraordinary circumstances, students will not be allowed to drop, add, or modify courses after the official drop-add deadline published in the university's time schedule. Any modifications to course elections after this date are subject to approval from the instructor(s) involved and/or the program chair or the chair's designee.

It is the responsibility of each student to adhere to the college's policies and procedures for course elections as described below. The college registrar reviews the class scheduled of all students to make sure they have complied with policy, but this does not take place until after the drop-add deadline as passed. If a student has not followed the college's policies and procedures, the registrar has the authority to change course elections consistent with the following rules. The student will be notified of such changes. Students should contact the registrar if they have any questions.

DROPPING and ADDING

Students may drop and/or add courses through the third week of any full term and the second week of any half term. A course officially dropped after this deadline will appear on the academic record with the designation “W” (withdrawal). No credit is awarded toward the degree and grade point averages are not affected. A withdrawal from a course does not result in tuition reimbursement. An unofficial drop is when the student does not complete a course and does not obtain permission for a withdrawal. Unofficial drops are recorded on the academic record as an “ED”. Provided the course is taken for a letter grade, an “ED” will be counted as an “E” when calculating grade point averages and no credit is awarded toward the degree.

AUDITING COURSES

A student may elect or modify a course as an official audit (visit) through the third week of any full term and the second week of any half term. Permission of the instructor (a signature on an election worksheet or drop-add form) is required and regular fees are assessed. A course elected as an official audit will appear on the academic record with the designation “VI,” but no credit will be awarded toward the degree and grade point averages are not affected. It is the responsibility of the student to make arrangements with the instructor as to class attendance, assignments, and/or exams to be completed. Unsatisfactory completion of these requirements, as determined by the instructor, will result in an “ED” (unofficial drop) on the academic record. The “ED” will not affect grade point averages because the course was not elected for a letter grade.

PASS/FAIL

A student may elect or modify a course to pass/fail through the third week of a full term and the second week of a half term, but under the following conditions:

1. Courses offered by Taubman College may not be taken pass/fail
2. Courses taken to fulfill pre-professional requirements for the B.S. degree—art, English, mathematics, physics, digital media arts, humanities, natural sciences, and social sciences—may not be taken pass/fail

3. Courses taken to fulfill the cognate requirement for the M.Arch. degree may not be taken pass/fail
 4. Courses taken as substitutes for required classes may not be taken pass/fail
 5. English Language Institute courses may not be taken pass/fail
 6. A maximum of one course per term may be taken on a pass/fail basis
- Credit hours for courses satisfactorily completed as pass/fail will apply toward the degree, but grade point averages are not affected. Instructors are not informed of those students taking a course on a pass/fail basis. Instructors report grades as usual and the Office of the Registrar makes the following conversions:
- A through C- is entered on the academic record as "P" (pass) for credit
 - D+ through E is entered on the academic record as "F" (fail) for no credit

ARCHITECTURE INDEPENDENT STUDIES

Undergraduate students must use Arch 300 or Arch 400 as an independent study number. Permission of the instructor (an override) is required. Graduate students must use Arch 600 (Arch 593 for Architectural History) as an independent study number. Permission of the instructor and approval by the program chair are required. Students should obtain a Tutorial Studies Approval Form from the college registrar. Only one Tutorial Studies course may be elected per term, and no more than 6 credit hours of Tutorial Studies credit may apply toward the M.Arch. degree.

TRANSFER OF CREDIT

Credit hours approved for transfer from another program, unit, or institution will appear on the student's transcript and will count toward the B.S. degree. Only credit hours, and not grades or honor points, will be posted to the student's record. Requests for transfer of credit should initially be made to the college registrar. In some cases, approval from the program chair is necessary.

Note: In order for course credits from external (non-UM) institutions to be eligible for transfer to the architecture program, students must achieve a grade of C or better in those courses.

AP & P UNDERGRADUATE

For undergraduate students, credit for academic courses from other units of the university and other institutions is evaluated by the Office of Undergraduate Admissions. All credit earned in other units of the university, except remedial courses below normal college-level and introductory officer education courses, will transfer.

Credit earned through high school advanced placement exams, conducted nationally by the college Entrance Examination Board, will transfer, provided the scores meet university standards. No credit will be awarded for placement exams offered by other departments of the university or by other institutions. Not more than 7 credit hours of nonacademic or technical courses earned at other institutions may be transferred; such credit is evaluated by the Architecture Program.

AP & P WAIVERS

A student may petition to receive a course waiver in a course he or she has already completed at another accredited university. The student must submit a waiver request form to the faculty member teaching the course in which he or she is seeking the waiver and submit supporting documentation, including but not limited to course syllabus, assignments, projects, papers, and tests to demonstrate sufficient knowledge of the subject. The granting of a waiver is at the discretion of the individual faculty member. If a student receives a course waiver, he or she has fulfilled that requirement, but no credit hours will be granted. The student will need to register for another course of equal credits in place of the waived course. It is recommended that students select a replacement course in the same area in which they received the waiver. For example, a student receiving a waiver from a structures course should select a structures elective. For graduate students, the selected replacement course should be 500 level or above. Prior approval from the chair is required for 400 level courses.

AP & P GRADING

GRADING SYSTEM

Course grades are awarded on a letter system, A through E. These letter grades are translated into honor points for each hour of course credit, as follows:

A	=	4.0	B-	=	2.7	D+	=	1.3
A-	=	3.7	C+	=	2.3	D	=	1.0
B+	=	3.3	C	=	2.0	D-	=	0.7
B	=	3.0	C-	=	1.7	E	=	0.0

In addition, the following notations are used to indicate unresolved academic situations:

ED	.....	unofficial drop
I	.....	incomplete
NR	.....	no report from instructor
X	.....	absent from examination
Y	.....	course extends beyond published schedule of term

No honor points are given for courses in which any of these grades are assigned. Students receiving a grade of ED or NR are advised to contact the college Registrar immediately. Students earning grades of I or X are advised to read the section on Incomplete Grades and to contact their instructors immediately.

GRADE POINT AVERAGE

The grade point average (GPA) for a term is calculated by dividing the Michigan honor points (MHP) earned during the term by the number of Michigan semester hours (MSH) elected for the term. The cumulative grade point average is calculated by dividing the total of all Michigan honor points earned during enrollment in the program by the number of Michigan semester hours elected in that program. The Michigan semester hours to not include credit hours:

1. Transferred from another program, unit, or institution

The instructor shall explain to the student the work that must be made up and shall set a time period for its completion within the limits described below. A final grade must be submitted to the Registrar within two months following the last day of classes of the term in which the "I" grade was earned. This deadline may be extended for just cause provided the instructor files a time extension form with the Registrar prior to the two-month deadline. No extension will be granted beyond the last day of classes of the first full term (fall, winter, or spring/summer) following the term in which the "I" grade was earned, unless such an extension is approved by the program chair. If the final grade is not submitted prior to the two-month (or extended) deadline, the "I" grade will lapse to an "E." When a student is absent from an examination, the instructor may report a grade of "X." The procedures and deadline for making up this work are similar to those described above for "I" grades.

GOOD STANDING

To be in good standing in the undergraduate program, a student must have a GPA of at least 2.0 for the term just concluded and a cumulative GPA of at least 2.0. To be in good standing in the graduate program, a student must have a GPA of at least 3.0 for the term just concluded and a cumulative GPA of at least 3.0.

AP & P ACADEMIC DISCIPLINE

DEFINITION OF ACADEMIC DISCIPLINE

Any student not in good standing is on academic discipline under one of the following categories: Action pending, probation, further enrollment withheld or reinstated on Probation. As soon as possible after the college receives the transcripts, all students on academic discipline will be notified of their status. Each student so notified should contact the college Registrar immediately. For students on academic discipline, the program chair (or chair's designee) has the right and responsibility to approve course elections and changes, to require the election of specific courses and to establish a maximum or minimum number of courses and credit hours. The final responsibility for the administration of matters related to academic discipline rests with the committee on academic

standing. All actions of academic discipline are entered on, and become a permanent part of, the student's academic record; except that when such action results from administrative, faculty, or staff error, the entry will be expunged. As soon as the student corrects all academic deficiencies, record clear is noted on the transcript, and the student is again in good standing.

In this policy on academic discipline, term, except as modified, refers to either a full term or a half term. When a student elects less than 6 credit hours in a term, his or her academic status will normally be determined by counting the current term and the preceding term as a single combined term; except that if this totals more than 20 credit hours, the status will normally be determined by counting the current term and the following term as a single combined term.

ACTION PENDING

Action pending is assigned when the academic record of a student not on probation or reinstated on probation is incomplete (grades of ED, I, NR, or X) for the term just

concluded, and when failure to correct this deficiency will result in a term GPA and/or cumulative GPA below 2.0 (undergraduate)/3.0 (graduate).

Action pending is assigned only for the two-month period permitted for finishing incomplete work. At the end of this makeup period, the student's academic record will be reviewed again and a status of either good standing or probation will be assigned, except that further enrollment withheld may be invoked in cases of extremely poor academic performance.

PROBATION

Probation is assigned when a student not already on probation or reinstated on probation has a deficiency of:

1. Less than 10 honor points below a 2.0 (undergraduate)/3.0 (graduate) for the full term just concluded
2. Less than 5 honor points below a 2.0 (undergraduate)/3.0 (graduate) for the half term just concluded
3. Below a cumulative 2.0 (undergraduate)/3.0 (graduate) GPA

Probation is assigned for a period of one term only, during which the student is

required to:

1. Earn at least a 2.0 (undergraduate)/3.0 (graduate) GPA for that term
2. Raise his or her cumulative GPA to at least 2.0 (undergraduate)/3.0 (graduate)
3. Meet any other special conditions of the probation

If a student satisfies all requirements of the Probation, he or she is again in good standing. If a student fails to satisfy all of these requirements, a status of further enrollment withheld is assigned. The student may not continue in the program unless he or she successfully appeals that action.

FURTHER ENROLLMENT WITHHELD

Further enrollment withheld is assigned when a student is in severe academic difficulty. Specifically, one of the following:

1. If the term GPA, the cumulative GPA, or any combination thereof is below 2.0 (undergraduate)/3.0 (graduate) for two successive terms.
2. If there is a deficiency of 10 or more honor points below either a 2.0 (undergraduate)/3.0 (graduate) full term GPA or cumulative GPA
3. If there is a deficiency of 5 or more honor points below either a 2.0 (undergraduate)/3.0 (graduate) half term GPA
4. If there is lack of reasonable progress toward a degree
5. If a student on probation or reinstated on probation fails to meet all requirements of the probation

When further enrollment is withheld and if the student is not already on Reinstated on Probation, he or she has the privilege of appealing the action, in accordance with procedures established by the committee on academic standing. The student will be required to explain in writing the particular reasons for the low academic performance and to present a compelling

argument why continuing enrollment or readmission should be permitted. Each case will be carefully considered on its own merits. If the committee on academic standing approves the appeal, the student is reinstated on probation. If the committee denies the appeal, the student is prohibited from enrolling in the college normally for at least two full terms, and the status of further enrollment withheld continues in effect. During the last term of the required disenrollment period, the student may petition for reinstatement by presenting evidence that, during this period, he or she has taken steps to substantially improve his or her chances for academic success in the remainder of the program. If the committee approves this petition, the student is reinstated on probation.

REINSTATED ON PROBATION

Reinstated on probation is assigned following a student's successful appeal, or subsequent petition, of further enrollment withheld. Reinstated on probation is assigned for a period of one term only during which the student is required to:

1. Earn at least a 2.0 (undergraduate)/3.0 (graduate) GPA for the term, unless a higher GPA is prescribed by the committee on academic standing
2. Raise his or her cumulative GPA to a level prescribed by the committee on academic standing
3. Meet any other special conditions of the probationary reinstatement

If a student satisfies all requirements of the probationary reinstatement and has a cumulative GPA of at least 2.0 (undergraduate)/3.0 (graduate), he or she is again in good standing. If a student satisfies all conditions of the probationary reinstatement except that the cumulative GPA is still below 2.0 (undergraduate)/3.0 (graduate), he or she is on probation. If a student fails to satisfy the requirements of the probationary reinstatement, further enrollment is automatically withheld and further appeal for continuing enrollment is not permitted.

AP & P REPEATING COURSES

A student must repeat a course that he or she has failed if the course is either a required course or a prerequisite for another course that the student wishes

2. If a student earns a grade below “C-” (1.7) in a course that is a prerequisite for a later course in a sequence, he or she may continue with the next course in the sequence, but must repeat the failed course.
3. If a student earns a grade below “C-” (1.7) in a second course (whether consecutive or not) in a sequence, he or she cannot continue with subsequent courses in the sequence until all earlier courses in the sequence have been satisfactorily completed prior to (and not concurrent with) election of the next course in the sequence.
4. If a student withdraws from a required course, he or she must repeat that course in its entirety at a later date. If the course is a prerequisite for a later course in a sequence, the course in which the withdrawal occurred must be satisfactorily completed prior to (and not concurrent with) election of the later course.
5. When a student is required to repeat a course and when, in the interim, the credit hours have changed and/or the course content has changed significantly, the program chair shall determine the extent of the remedial work required.

AP & P WITHDRAWAL FROM PROGRAM

A student who terminates his or her enrollment during the term is required to officially withdraw. The student is responsible for initiating the withdrawal; he or she should contact the college Registrar. Any refund of fees is handled in accordance with University regulations as described in the section on Fees and Expenses.

AP & P STUDENT RECORDS

An academic file is maintained by the college for each student. The file contains admission materials, academic records and transcripts, correspondence, etc. The college endorses the university’s Policy on Student Records, which meets the standards set forth in the Family Educational Rights and Privacy Act of 1974. Each student has the right to examine all materials in his or her file, except as prohibited by the above policies.

The college registrar and the administrative officers of the college, or their appointed representatives, shall have direct access to all records. All other

AP & P JOINT/DUAL DEGREES

Students wishing to pursue a dual degree program other than those described are advised to contact the college Registrar. Requests are approved on an individual basis.

AP & P OFFICER EDUCATION PROGRAMS

Officer education training programs are available to all students enrolled in the University of Michigan. Enrollment in officer education programs is voluntary, but the University and the armed forces expect each student who volunteers to meet the full obligations accepted. Since there are minor variations in the programs, interested students are encouraged to consult the chairpersons of the respective Army, Navy, and Air Force Officer Education Programs for information.

Questions regarding the granting of academic credit for Officer Education Program course elections for students in the Architecture Program should be directed to the college registrar.

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One course in each of three subject areas—Environmental Technology, History of Architecture, and Structures—required for all students pursuing an M.Arch. degree

One course in Design Fundamentals required for all 3G students

+ Not open to students enrolled in the college

! 3G option only

ARCHITECTURE COURSE DESCRIPTIONS

ARCH 201 BASIC DRAWING

Prerequisite: None

Fall and Winter (3 credit hours)

A freehand studio drawing course limited to pencil and pen, this introductory class concentrates upon seeing, describing, and analyzing form through linear graphic means. Though intended primarily for students considering a design-related career, it is open to students from any discipline wishing to improve their visual literacy. The first half of the course—unbiased toward a particular art—focuses upon understanding the role of line in creating form. Principles of orthographic and perspective projection are introduced in the second half of the semester.

ARCH 202 GRAPHIC COMMUNICATIONS

Prerequisite: None

Fall and Winter (3 credit hours)

This studio drawing course emphasizes mechanical drawing means and is intended primarily for students contemplating careers in architecture and related professional fields. The student is introduced to a wide range of basic techniques, conventions, and means used in the design fields, as well as selection of drawing instruments and surfaces. Considerable attention is given to the development of a disciplined approach to the construction of measured drawings.

ARCH 209 SPECIAL TOPICS IN ARCHITECTURE

Prerequisite: Non-architecture student

Fall and Winter (1–3 credit hours)

This omnibus course provides a vehicle for either:

1. Subject material offered for the first time on a “trial run” basis with the intention of its subsequent acceptance as a regular course offering.
2. A “one

time only” course offering centered on the particular interests and abilities of a faculty member.

ARCH 211 CAD FUNDAMENTALS

Prerequisite: None

Fall and Winter (3 credit hours)

This introductory course investigates architectural drawing using digital design tools. Lectures and readings focus on digital drawing as a generative and representational device, while exercises and laboratory sessions help students achieve a basic competency with drawing and image manipulation software. Projective and translational drawing exercises are used as a means to explore fundamental concepts shared by many digital software interfaces. Emphasis is placed on exploiting the unique capabilities presented by digital design tools, while developing a critical understanding the inherent biases and limitations of any software.

ARCH 212 (HA 212) UNDERSTANDING ARCHITECTURE

Prerequisite: None

Winter (3 credit hours)

This course examines visual, cultural, historical, and philosophical aspects of the man-made environment using examples from the field of architecture and the allied arts. The intent of the course is to provide a general view and a rudimentary understanding of the profession and the discipline of architecture. Upon completion of the course, the student is expected to demonstrate an understanding of the ideation context and the formal attributes of the built environments of various eras. The format includes two weekly lectures, weekly discussion sections, and several basic design problems.

ARCH 218 VISUAL STUDIES

Prerequisite: None

Fall and Winter (3 credit hours)

This studio course provides an introduction to the elements, principles, and techniques that underlie and inform the analysis, creation, and evaluation of visual organizations and are crucial to the process and product of form-making. The course consists of:

1. An overview of selected topics pertaining to the perception of visual organizations
2. The study of visual organizations entailing point, linear, two-, and three-dimensional elements or combinations thereof
3. The study of color and its influence on visual organizations

A variety of studio exercises are used to apply the knowledge and skills acquired throughout the term.

ARCH 300 TUTORIAL STUDIES IN ARCHITECTURE

Prerequisite: Junior standing and permission of instructor

Winter (1–3 credit hours)

This omnibus course provides an individual student or a small group of students, under the direction of a faculty member, a vehicle for self-motivated study in specially identified areas pertinent to architecture which are not covered by other existing courses and which are appropriate to students in their first year of professional studies.

ARCH 302 ARCHITECTURAL DESIGN UG0

Prerequisite: Junior standing

Summer (3 credit hours)

This four-week studio intensive is focused on the introduction of analytical and technical skills for perceiving, understanding, and developing spatial definitions and relationships. Translation is emphasized in the introduction and application of a broad range of tools for physical and digital drawing and modeling. This intensive presents the transfer student an opportunity to bring methods of production in the architecture studio to the same level as the continuing student who has completed at least two of the pre-architecture courses A201, A202, A211, and A218.

ARCH 312 ARCHITECTURAL DESIGN UGI

Prerequisite: Junior standing

Fall (6 credit hours)

The course—an introduction to architectural design—offers small-scale studio problems that deal with space, measure, structure, site, tectonics,

program, and habitation. These problems address human needs and the interaction of persons with the natural and built environment.

ARCH 313 HISTORY OF ARCHITECTURE I

Prerequisite: Sophomore standing

Fall (3 credit hours)

This course is the first in the undergraduate two-course sequence (Arch 313/323) surveying the history of architecture from antiquity to the present. The course introduces students to leading developments in the history and theory of architecture and urban design from ancient times through the Renaissance. Innovation and change in architectural conception, stylistic expression, building typology, and construction technique are examined. Attention is also paid to the way architecture has historically been shaped by varying combinations of the formal and theoretical intentions of the architect, the preferences and needs of the client, and the particular mix of social, economic, cultural, and technical factors operating to define the specific characteristics of a given time and place.

ARCH 314 STRUCTURES I

Prerequisite: Junior standing

Fall (3 credit hours)

This course covers the basic principles of architectural structures, including the influence of geometric, sectional, and material properties related to flexure and shear in beam and framed systems; vector mechanics with application to analysis of trusses, catenaries, and arches; diagrammatic analysis of beams for bending moment, shear, and deflection as well as the study of structural framing systems for vertical and lateral loads.

ARCH 315 ENVIRONMENTAL TECHNOLOGY I

Prerequisite: Junior standing

Fall (3 credit hours)

This introductory course addresses human needs and comfort in relation to the natural and man-made environments. It shows how environmental factors may be utilized, controlled, and modified as an integral part of architectural design. Specific topics include: climate and weather; psychrometrics; solar radiation; wind patterns; heat gains and losses; systems for heating,

ventilating, and air-conditioning; requirements for energy conservation; plumbing and drainage systems; fire safety and fire fighting systems.

ARCH 316 DESIGN FUNDAMENTALS I

Prerequisite: Junior standing

Fall (3 credit hours)

This course introduces the beginning student in architecture to a working understanding of the factors and issues that underlie the translation of human needs and purposes into significant architectural form. Course objectives are:

1. To establish a base of design concepts and knowledge with an introduction to references and ideas to foster independent inquiry
2. To develop skills in environmental analysis, concept formation, and certain aspects of design
3. To familiarize students with images of architecture and design drawn from various times and cultures

Specific topics include the basic elements, attributes, and organizational principles of architectural form and their relationship to design intention. Related topics include framework for design, design methods, site analysis and design, human factors, and environmental factors.

ARCH 317 CONSTRUCTION I

Prerequisite: Junior standing Fall (3 credit hours)

This course offers an introduction to the study of construction materials and methods. The course stresses general principles that affect construction and its relationship to design intentions. It is divided into three sections: masonry, light frame, and enclosure. Specific topics within these sections include unit modularity, wall systems, floor and roof systems, waterproofing, prefabrication, and project delivery. Exercises that provide a focus for discussion and practice relating to the broader issues of the course center on masonry and light wood frame.

ARCH 322 ARCHITECTURAL DESIGN UG2

Prerequisite: Arch 312

Winter (6 credit hours)

A continuation of Arch 312, this course focuses on the context in which we build, how people perceive the urban environment, how buildings fit contextually into existing circumstances, and how outdoor spaces relate to built forms. Projects include both analysis of existing places and synthesis incorporating the many dimensions of architectural environments. The course concludes with design of a building of modest scale and complexity.

ARCH 323 HISTORY OF ARCHITECTURE II

Prerequisite: Arch 313

Winter (3 credit hours)

A continuation of Arch 313, this course is the second in the undergraduate two-course sequence (Arch 313/323) surveying the history of architecture from antiquity to the present. The course examines leading developments in the history and theory of architecture and urban design from the Baroque through the twentieth century. Consideration is given to the role of innovation and change in architectural conception, stylistic expression, building typology, and construction technique. Also examined is the way architecture has historically been shaped by varying combinations of the formal and theoretical intentions of the architect, the preferences and needs of the client, and the particular mix of social, economic, cultural, and technical factors operating to define the specific characteristics of a given time and place.

ARCH 324 STRUCTURES II

Prerequisite: Arch 314

Winter (3 credit hours)

This course covers the basic principles of elastic behavior for different materials such as wood, steel, concrete, and composite materials and compares the properties and applications of materials generally. It investigates cross sectional stress and strain behavior in flexure and in shear, and torsion as well as the stability of beams and columns. The qualitative behavior of combined stresses and fracture in materials is also covered.

ARCH 326 DESIGN FUNDAMENTALS II

Prerequisite: Arch 316

Winter (3 credit hours)

Through the examination of exemplary buildings, this course considers techniques and strategies of architectural design. Lectures present analyses of individual buildings relating their form and conceptual ambitions to relevant theoretical premises and historical contexts. The works examined range from the early part of the last century through the present and trace the diverse trajectory of developments in twentieth century architecture. Lectures and readings examine structuring principals of design including programmatic organization, material construction, formal syntax, and type. The course aims to reveal and make available to students design strategies found in historically significant and varied examples of architecture while instilling a critical understanding of all these approaches.

ARCH 400 TUTORIAL STUDIES IN ARCHITECTURE

Prerequisite: Senior standing and permission of instructor

Fall and Winter (1–3 credit hours)

This omnibus course provides an individual or a small group of students, under the direction of a faculty member, a vehicle for self-motivated study in specially identified areas pertinent to architecture which are not covered by other existing courses and are appropriate for undergraduate students.

ARCH 402 ARCHITECTURAL DESIGN 3G1

Prerequisite: 3G Option student

Summer-half (6 credit hours)

The sequence begins as small scale studio problems that deal with space, measure, structure, site, tectonics, program, and habitation while addressing human needs and interaction with the natural and built environment. As students are introduced to and explore the many dimensions of architectural environments, there will also be a focus on the context in which we build, the perception of the built environment, the interrelation of buildings to the existing context, and exterior spaces.

ARCH 409 SPECIAL TOPICS IN ARCHITECTURE

Prerequisite: Undergraduate architecture student

Fall and Winter (1–3 credit hours)

This omnibus course provides a vehicle for either:

1. Subject material offered for the first time on a “trial run” basis with the intention of its subsequent acceptance as a regular course offering
2. A “one time only” course offering centered on the particular interests and abilities of a faculty member

ARCH 412 ARCHITECTURAL DESIGN 3G2

Prerequisite: 3G Option student

Fall (6 credit hours)

The sequence continues in the integration and translation of the knowledge, understanding, experience, and skill gained in previous courses into architectural solutions to satisfy given needs, conditions, and means. The primary emphasis is the development of insight into the solution of building and environmental design problems: how they are studied (analysis), how they are approached and carried through (process), and how they are conceptualized and developed (synthesis). Assigned projects require the student to consider issues of human scale and behavior, environmental responsibility, and building construction at a level of greater complexity than previously encountered.

ARCH 413 HISTORY OF ARCHITECTURE AND URBANISM

Prerequisite: 3G Option student

Fall (3 credit hours)

This course surveys key themes in the history of architecture and urbanism from antiquity to the present. The course is intended to introduce students to leading developments in the history and theory of architecture and urban design, both chronologically and thematically. The scope of material covered in this course is broad in geographical terms, and will include settings in Europe, Asia, The Americas, and Africa. The course seeks to illuminate ways that architecture has historically been shaped by the formal and theoretical intentions of the architect, the preferences and needs of the client, and the particular mix of social, economic, cultural, and technical practices present in a given time and place. Our objective is to provide a conceptual framework to help students both digest a substantial body of visual and factual information,

and develop new habits of seeing, analyzing, and thinking critically about architecture.

ARCH 416 DESIGN FUNDAMENTALS 3G

Prerequisite: 3G Option student

Summer half-term (3 credit hours)

This course introduces the incoming graduate student to a working knowledge of the factors and issues that underlie the translation of human needs and purposes into significant architectural form. Course objectives are:

1. To establish a base of design concepts and knowledge with an introduction to references and ideas to foster independent inquiry
2. To develop skills in environmental analysis and concept formation
3. To familiarize students with exemplary architecture and design drawn from various times and cultures

Lectures present analysis of individual projects relating their form and conceptual ambitions to relevant theoretical premises and historical contexts. The course aims to reveal and make available to students design strategies found in historically significant and varied examples of architecture while instilling a critical understanding of all of these approaches.

ARCH 417 CONSTRUCTION 3G

Prerequisite: 3G Option student

Fall (3 credit hours)

The intent of this course is to reveal the role that construction plays in the ideation and elaboration of architectural form and to focus on the inherent and tangible materiality of the built artifact. Lectures are given twice weekly and provide an introduction into theories and methods of construction. The first series of lectures focus on:

1. The architecture of mass and of the wall
2. The development of the frame
3. The building envelope

Lectures are reinforced by reading assignments intending to place the role of construction in a historical and theoretical context and to locate it in the realm of enlightened practice. The second part of this course is the construction studio. Here the student is required—in a number of exercises that parallel the lecture sequence—to demonstrate through small but precise models their understanding of issues of wall, frame, and enclosure. This work is critiqued in the studio as it develops and concludes with a formal public review.

ARCH 421 GEOMETRIC MODELING

Prerequisite: Arch 211 or permission of instructor

Fall and Winter (3 credit hours)

This course approaches three-dimensional digital modeling as a core competency in architecture. Emphasis is on measure and construction. A series of short creative exercises explores such individual methods as orthographic sweeps, constructive solids, lofted spline surfaces, proportional derivations, and embedded assemblies, as well as the projection and visualization of resulting forms. A longer documentary exercise introduces practices for managing the degree of hierarchy, precision, abstraction and organization within a more detailed model. From this general base, subsequent courses provide opportunities to advance in such specialties as digital fabrication, information design and generative algorithms.

ARCH 422 ARCHITECTURAL DESIGN 3G3

Prerequisite: 3G Option student

Winter (6 credit hours)

The sequence continues in complexity as most or all of the term is focused on a single design problem. The primary emphasis is in the further development and reinforcement of knowledge, understanding, experience, and skill in all aspects of design communication: the analysis and design of an urban site, further comprehension of issues of context and complex building

organization and design, and further experience in the application of building science skills.

ARCH 423 (UP 423, NRE 370) INTRODUCTION TO URBAN AND ENVIRONMENTAL PLANNING

Prerequisite: None

Fall and Winter (3 credit hours)

This overview course explores urban and environmental planning issues and problems, and reviews the ways planners grapple with them. Speakers from within and outside of the University describe the content of the issues and state-of-the-art intervention programs and techniques. Topics covered include the origins and history of urban planning, the legal aspects of planning, planning for sustainable development, metropolitan growth and urban sprawl, urban design, housing and real estate development, transportation planning, environmental planning, planning for open space, and historic preservation, brownfield redevelopment, waste management, and third world development.

ARCH 425 ENVIRONMENTAL TECHNOLOGY II

Prerequisite: Arch 315

Winter (3 credit hours)

This introductory course addresses human needs and comfort in relation to the natural and man-made environments. Specific topics include: Daylighting and electrical lighting systems, building acoustics, code requirements for energy conservation, communication systems, and elevator systems.

ARCH 427 CONSTRUCTION II

Prerequisite: Arch 317 Winter (3 credit hours)

The objective of this course is to expand the student's understanding of construction materials, to demonstrate that modern construction practice requires the assembly of many independent components, and to illustrate the relationship of the act of building to design intentions. The course consists of three sections: steel and concrete; enclosure materials and systems; and building case studies. Specific topics include heavy timber; steel sections and connections; cast in place and precast concrete; cladding and roofing; fire

protection and compartmentation; and an introduction to building types including long span and high rise. Exercises based upon concrete and steel-framed buildings concentrate upon structural and enclosure systems at the scale of both building and the detail.

ARCH 432 ARCHITECTURAL DESIGN UG3

Prerequisite: Arch 322 or 422 Fall (6 credit hours)

This is a studio course in which the knowledge, understanding, experience and skill gained in previous courses are integrated and translated into architectural solutions to satisfy given needs, conditions, and means. The primary emphasis is in the development of insight into the solution of building and environmental design problems: how they are studied (analysis), how they are approached and carried through (process), and how they are conceptualized and developed (synthesis). Assigned projects require the student to consider issues of human scale, human behavior, environmental responsibility, and building construction at a level of greater complexity than previously encountered.

ARCH 442 ARCHITECTURAL DESIGN UG4

Prerequisite: Arch 432 Winter (6 credit hours)

A continuation of Arch 432, this course addresses problems of moderate complexity in a more thorough and comprehensive manner. The objectives are:

1. To provide experience in urban site analysis and design
2. To gain further insight into the issues of contextualism in design
3. To gain experience in multi-level building organization and design
4. To apply knowledge of building science skills
5. To reinforce skills in all aspects of design communications

Most or all of the term is focused on a single design problem.

ARCH 443 (UP 443) HISTORY OF URBAN FORM

Prerequisite: None

Fall (3 credit hours)

The course offers a study of the historical development of the physical form of western cities from ancient times to the present. The course will deal primarily with European and North American cities under the following headings:

Ancient and Classic, Medieval, Renaissance and Baroque, and Modern (nineteenth and twentieth centuries). Cities of Asia, Africa, and Latin America will be included where possible and applicable.

ARCH 466 DIMENSIONS

Prerequisite: None

Fall and Winter (1 or 3 credits)

The goal of this course is to introduce students to the inter-dependent relationships between form and content as they relate to the publishing of works of architecture, essays, student projects, and lectures. The workshop will study the means and methods of book production via printing, typography, and the working of image and text as a commingled practice of editing and design. These subjects will be tested through the design and production of Dimensions, the annual journal of architecture at Michigan.

ARCH 476 MODELING SPACE AND MARKING TIME

Prerequisite: None

Winter (3 credit hours)

Video production has long been seen as having roots in narrative film, yet moving images have become a progressively popular mode of visualization in spatial, non-narrative practices. This studio offers a platform to explore how both cinematic and 3D design conventions can be combined to create dynamic images of space through time. Throughout the term, students are exposed to spatiotemporal precedents from other creative disciplines, thus expanding their design logic.

ARCH 492 ARCHITECTURAL DESIGN UG STUDY ABROAD

Prerequisite: Senior standing

Spring (6 credit hours)

For description, see Arch 432 and 442.

ARCH 500 STUDENT ORGANIZED STUDY

Prerequisite: Graduate standing and permission of instructor

Fall and Winter (1–3 credit hours)

This omnibus course provides a vehicle for self-motivated organization and study by a group of students in specially identified areas pertinent

to architecture which are not covered by other existing courses. Students contemplating using this vehicle should apply to the program chair—well in advance of the beginning of the term—in order to permit time for administrative review and assignment of faculty.

ARCH 503 SPECIAL TOPICS IN ARCHITECTURAL HISTORY

Prerequisite: Arch 323 or permission of instructor

Fall and Winter (1–3 credit hours)

This course in architectural history provides a vehicle for either:

1. A topic being explored by a member of the architectural history faculty, with the possibility of subsequent conversion into a regular course offering
2. A course capitalizing on the particular interests and abilities of a visiting faculty member in architectural history

ARCH 504 SPECIAL TOPICS IN STRUCTURES

Prerequisite: Arch 324

Fall and Winter (3 credit hours)

This course in structures provides a vehicle for either:

1. A topic being explored by a member of the structures faculty, with the possibility of subsequent conversion into a regular course offering, or
2. A course capitalizing on the particular interests and abilities of a visiting faculty member in structures.

ARCH 505 SPECIAL TOPICS IN ENVIRONMENTAL TECHNOLOGY

Prerequisite: Arch 325

Fall and Winter (3 credit hours)

This course in environmental technology provides a vehicle for either:

1. A topic being explored by a member of the environmental technology faculty, with the possibility of subsequent conversion into a regular course offering, or
2. A course capitalizing on the particular interests and abilities of a visiting faculty member in environmental technology.

ARCH 506 SPECIAL TOPICS IN DESIGN FUNDAMENTALS

Prerequisite: Arch 326 or 416

Fall and Winter (3 credit hours)

This course in design fundamentals provides a vehicle for either:

1. A topic being explored by a member of the design fundamentals faculty, with the possibility of subsequent conversion into a regular course offering, or
2. A course capitalizing on the particular interests and abilities of a visiting faculty member in design fundamentals.

ARCH 507 SPECIAL TOPICS IN CONSTRUCTION

Prerequisite: Arch 417 or 427

Fall and Winter (3 credit hours)

This course in design fundamentals provides a vehicle for either:

1. A topic being explored by a member of the construction faculty, with the possibility of subsequent conversion into a regular course offering, or
2. A course capitalizing on the particular interests and abilities of a visiting faculty member in construction.

ARCH 509 EXPERIMENTAL COURSE

Prerequisite: Graduate standing and permission of instructor

Fall and Winter (1–3 credit hours)

This omnibus course provides a vehicle for either:

1. Subject material offered for the first time on a “trial run” basis with the intention of its subsequent acceptance as a regular course offering, or
2. A “one time only” course offering centered on the particular interests and abilities of a visiting faculty member.

ARCH 513 SOCIAL CHANGE AND THE ARCHITECT

Prerequisite: Graduate standing or permission of instructor

Fall (3 credit hours)

This seminar on professional leadership focuses broadly on the prevailing practice and teaching of architecture in contemporary American society. Organized around topical issues of diversity in design, designer values, and equity of access to environment-shaping resources, all discussion is aimed at clarifying the designer's own personal convictions about people and designed environments.

ARCH 514 FRAME STRUCTURES

Prerequisite: Arch 324

Fall (3 credit hours)

This course provides an understanding of the behavior and strength of framed structures such as portal frames, arches, trusses, and grids as well as an introduction to non-linear behavior. Their behavior is explored through the use of computer programs where students learn to prepare input data, analyze the structures, and use materials design post processors to evaluate the results, including model building and laboratory testing.

ARCH 516 ARCHITECTURAL REPRESENTATION

Prerequisites: Graduate standing

Fall (3 credit hours)

This course focuses on the development and techniques of architectural representation. Modes of representation are not simply neutral depiction but construct a proposition of architecture. Through investigating potentials within the forms and conventions of representation, this course examines and strengthens the relationship between drawing, model, and architectural intention. The course will be broken into two primary and interrelated parts:

1. Development and Theories of Architectural Representation (Lecture)
2. Drawing Methods (Studio Workshop)

Arch 517 (UP 613) Architect/Planner as Developer

Prerequisite: Graduate standing

Fall (3 credit hours)

This lecture/seminar course focuses on the knowledge and skills associated with the planner/architect working as, or with, a real estate developer in the U.S. The emphasis is on the integration of planning, marketing, site analysis, development regulation, and financial analysis with site design. While the project involves a medium density residential development, methods applicable to office projects are covered as well. Microcomputers are used—previous computer or design experience is not required.

ARCH 518 RENAISSANCE ARCHITECTURE

Prerequisite: Arch 323 or permission of instructor

Alternate Fall Terms (3 credit hours)

The course examines the architecture of the Renaissance—the buildings and cities of the fifteenth and sixteenth centuries in Italy, France, and England. They will be discussed in relationship to contemporary theoretical writings, addressing issues of function, structure, and beauty, as well as in relationship to the cultural context of the Renaissance, including philosophical, religious, political, economic, and environmental factors.

ARCH 519 (UP 519) PRINCIPLES AND PRACTICE OF URBAN DESIGN I

Prerequisite: Graduate standing or permission of instructor

Fall (3 credit hours)

The seminar is designed as a critical and collective inquiry into theories of urban design in order to develop an in-depth, interdisciplinary approach toward a more meaningful urban design for the future. Through a series of readings, discussions, case studies, presentations, and research work, students focus on deficiencies and opportunities in current urban design approaches, and formulate their own perspectives and strategies of urban form intervention, based on a critical understanding of the fundamental nature of cities versus the nature of thinking in the field of urban design.

ARCH 524 SURFACE STRUCTURES

Prerequisite: Arch 324

Winter (3 credit hours)

This course provides an understanding of the behavior and strength of continuous surface structures such as plates, grids, and shells, including an

introduction to fabric structures. Their behavior is explored through the use of computer programs where the students learn to prepare input data through CAD and preprocessors as well as analyze the structures using different materials, including model building and laboratory testing.

ARCH 525 COMPUTER APPLICATIONS IN ENVIRONMENTAL TECHNOLOGY

Prerequisite: Graduate standing or permission of instructor

Fall (3 credit hours)

The focus of this course is the application of computers in building technology design. The course provides an understanding of environmental design methods through the use of commercial and newly-developed computer programs. State-of-the-art thermal, lighting and acoustical analysis models are introduced. The application of these models in environmental system design is explored through case studies.

ARCH 526 (UP 526) SOCIOCULTURAL ISSUES IN PLANNING AND ARCHITECTURE

Prerequisites: None

Fall (3 credit hours)

The central premise of this class is that urban design—the practice of shaping the built environment—is a socially and culturally engaged process. In light of this, social and cultural issues are as significant to planning and design processes as are issues of aesthetics, order, and form. This course focuses on the sociocultural effects and implications of architectural design and urban planning—at both the theoretical and site-specific levels.

ARCH 527 BUILDING SYSTEMS

Prerequisite: Arch 314, Arch 315, and Arch 417

Winter (3 credit hours)

This course focuses on the analysis of building codes, the integration of structural and mechanical systems, the development of material assemblies, and the synthesis of building components and systems at the outset of the design process. This comprehensive approach to the design process will be

supported by case study examples that identify integration strategies with regard to life safety codes, building services, and construction technologies.

ARCH 528 BAROQUE ARCHITECTURE

Prerequisite: Arch 323 or permission of instructor

Alternate Fall Terms (3 credit hours)

The course examines the architecture of the Baroque period—the buildings and cities of the late sixteenth to the mid-eighteenth centuries in Italy, France, England, and Central Europe. They will be discussed in relationship to contemporary theoretical writings, addressing issues of function, structure, and beauty, as well as in relationship to the cultural context of the Baroque period, including philosophical, religious, political, economic, and environmental factors.

ARCH 529 (UP 620) PRINCIPLES AND PRACTICE OF URBAN DESIGN II

Prerequisite: Arch 519 or permission of instructor

Winter (3 credit hours)

This seminar focuses upon various themes in urban design and explores them in some depth. Some of the themes are predetermined by the instructor, others by the students enrolled in the seminar, on the advice and with the approval of the instructor. Examples of topics which may be examined in this course include neo-traditional town planning, edge cities, suburban design, future trends in urban design, art in urban design, vernacular architecture, recent urban design theories, urban design in practice, design review, downtowns, etc. Enrolled students are expected to undertake extensive reading and research outside the classroom and to be active participants in class presentations and discussions.

ARCH 531 NETWORKED CITIES

Prerequisite: None

Fall (3 credit hours)

This course examines architecture's emerging relationship with the design of interactivity, interfaces, and information infrastructures. Working mainly in seminar format, in response to short weekly readings, participants debate issues in the past, present and future of technology-laden places. Biweekly lectures explore how places have generally emerged at crossovers between

infrastructures. Biweekly storyboard projects interpret architecture and the city in terms of interaction design. A final project invites a situational design proposition. Emphasis is on how computing now pervades the physical world—however—and not on dematerialization. This course attempts to take apart popular misconceptions of cyberspace, and to reassert the value of embodied architecture in a digital economy.

ARCH 533 19TH CENTURY ARCHITECTURE

Prerequisite: Arch 323 or permission of instructor

Fall (3 credit hours)

The course offers a critical examination of the transformations in architectural theory and practice from the mid-eighteenth through the nineteenth century, with emphasis on elucidating the leading struggles for definition, meaning, and form in the architecture of this period. Also considered is the link between theory and practice; the relationship between conceptual and aesthetic as well as technical factors; and the cultural, economic, social, and political context out of which they evolved.

ARCH 534 REINFORCED CONCRETE STRUCTURES

Prerequisite: Arch 324

Fall (3 credit hours)

This course covers reinforced concrete in architectural structures including its properties in the design, manufacture, and erection of typical elements including prestressing design. Typical forms of construction are studied, including cast in place and precast concrete, foundations, and retaining walls. The use of the material is explored through case studies including the fabrication of model structures that are tested in the laboratory.

ARCH 535 CASE STUDIES IN ENVIRONMENTAL TECHNOLOGY

Prerequisite: Arch 425

Fall and Winter (3 credit hours)

In this course several buildings are studied with regard to the influence of environmental control systems and building services on their design. The course participants develop the building envelope, environmental control systems, and building services for a given project. Basic calculations for sizing the systems and services are performed.

ARCH 536 SITUATION URBANISM BIG BOX

Prerequisite: Graduate standing

Winter (3 credit hours)

SUB surfaces from an interest in doing urban intellectual work that gives credit to the conditions on the ground, as we find them, and in a manner that is open to learning from their complexity and potency. In this course, urbanism will be understood as a dynamic array of processes that both gave us the viability of the dense centered city and took that viability away. The disciplinary turn-style connecting the terms “city” and “urbanism” will momentarily be broken, offering the potential for new techniques and methods for considering urban work.

ARCH 537 (UP 537) HOUSING SYSTEMS

Prerequisite: None

Winter (3 credit hours)

The course will consider the design and development of new housing, the conservation and rehabilitation of existing housing, user needs, and the ways in which housing is related to and dependent on a larger community social, economic, and land use context. The primary objective of the course is to familiarize students with basic aspects of the housing system to enable them to function as effective future members of interdisciplinary teams doing housing planning and design.

ARCH 543 20TH CENTURY ARCHITECTURE

Prerequisite: Arch 323 or permission of instructor

Winter (3 credit hours)

The course offers a critical examination of the transformations in architectural theory and practice from the late nineteenth through the twentieth century, with emphasis on elucidating the leading struggles for definition, meaning, and form in the architecture of this period. Also considered is the link

between theory and practice; the relationship between conceptual and aesthetic as well as technical factors; and the cultural, economic, social, and political context out of which they evolved.

ARCH 544 WOOD STRUCTURES

Prerequisite: Arch 324 Winter (3 credit hours)

This course covers wood framing in architectural structures including its properties in the design, manufacture, and erection of typical elements including laminated timber. Typical forms of construction are studied, including methods of connection using nailing, bolting, and connectors. The use of the material is explored through case studies including the fabrication of model structures that are tested in the laboratory.

ARCH 545 ADVANCED LIGHTING DESIGN

Prerequisite: Graduate standing or permission of instructor

Fall (3 credit hours)

Development of selected advanced, comprehensive lighting design techniques are offered in this course. The student is involved in a case study of lighting design with emphasis on the spatial aspects of the luminous environment and on individual research in an advanced area of study. An extensive bibliography of research reports is made available to students (model studies, graphic techniques, computer programs, daylighting methods, energy optimization, lighting of specific building types, and other topics). Presentations by various professional experts are included. End-of-term class sessions are devoted to student presentations.

ARCH 546 OUTLOOKS: DISCUSSIONS IN CONTEMPORARY CRITICISM

Prerequisite: Graduate or Senior standing

Winter (3 credit hours)

This seminar will look at contemporary architecture and its relationship to larger arenas of cultural criticism. The course will provide a framework for

discussions about such topics as representation, abstraction, “realness” and “fakeness,” and autonomy and the rise of new models of interdisciplinary thinking and practice. The aim throughout will be to promote thoughtful debate and prepare students to relate positions in architecture to broader cultural themes.

ARCH 551 ADVANCED ARCHITECTURAL GRAPHICS

Prerequisite: Arch 211 (421 recommended) and Graduate standing, or permission of instructor

Winter (3 credit hours)

This is a course in information design, with an emphasis on visual explanations of three-dimensional form. It is intended to follow courses in architectural representation and computer-aided design. In the first half of the semester, weekly exercises focus on fundamentals of graphic design, data reporting, and interactivity. The second half provides an opportunity to develop a navigable online document on a chosen architectural topic. As information designers, students learn to increase narrative structure and decrease visual noise in digital productions.

ARCH 552 ARCHITECTURAL DESIGN 2G1/3G4

ARCH 562 ARCHITECTURAL DESIGN 2G2/3G5

ARCH 592 ARCHITECTURAL DESIGN STUDY ABROAD

Prerequisite: Graduate standing

Arch 552—Fall; Arch 562—Winter; Arch 592—Spring (6 credit hours each)

These graduate-level studio design courses, characterized by architectural problems of increasing scale and complexity, usually one semester in length, require solutions that are thorough in their conception, development, and execution. Approximately 12 studio sections are offered in each regular term, each with a unique focus, but all dedicated to comprehensive architectural design. Examples include: aesthetic and symbolic issues, comprehensive building design, facilities planning, housing, community design, urban design, historic preservation and conservation, the architect as developer, structure, energy systems and conservation, professional practice and management, computer applications to design, and honors studio. Detailed

course descriptions for each section are posted during registration. Many sections require that specific 500/600-level architecture lecture/seminar courses be taken prior to or concurrent with the design studio.

ARCH 553 AMERICAN ARCHITECTURE

Prerequisite: Arch 323 or permission of instructor

Alternate Fall Terms (3 credit hours)

The course explores the transformations in American architectural theory and practice from the early nineteenth century to the present, with emphasis on elucidating the leading struggles for definition, meaning, and form in the architecture of this period. Also considered is the link between theory and practice; the relationship between conceptual and aesthetic as well as technical factors; and the cultural, economic, social, and political context out of which they evolved.

ARCH 554 STEEL STRUCTURES

Prerequisite: Arch 324

Winter (3 credit hours)

This course covers constructional steel in architectural structures including its properties in the design, manufacture, and erection of typical elements including composite design. Typical forms of construction are studied, including methods of connection using bolting and welding. The use of the material is explored through case studies including the fabrication of model structures that are tested in the laboratory.

ARCH 555 BUILDING SYSTEMS AND ENERGY CONSERVATION

Prerequisite: Graduate standing or permission of instructor

Fall (3 credit hours)

This course evaluates all building systems and services with regard to their influence on design. Of particular interest are: response to climatic factors and internal functions, integration of building fabric and environmental controls, choice of materials and construction processes, systems operation and energy consumption, energy conservation and management, and first costs versus life-cycle costs. Case studies of various building types and systems analyses are presented.

ARCH 557 ARCHITECTURE OF OBJECTS

Prerequisite: None

Fall or Winter (3 credit hours)

This studio encourages advanced students in architecture, industrial design, and graphic design to work as both designers and the makers of products as well as places. The course is structured to enhance students' hands-on working knowledge of a diverse pallet of materials and processes including plastic molding, metal forming, welding, fabric construction, and coatings. Increasingly, digital fabrication technologies are employed to enhance, rather than replace, traditional craft-based design and fabrication methodologies. Students are encouraged to work on several structured design explorations, both small and of interior scale, to design and fabricate furniture, lighting fixtures, Ikebana containers, and table top objects. Solutions are presented in full scale and model form and reviewed for concept, craftsmanship, manufacturing viability, and aesthetics.

ARCH 562 ARCHITECTURAL DESIGN 2G2/3G5

Prerequisite: Graduate standing

Winter (6 credit hours)

For description, see Arch 552.

ARCH 563 COLONIAL/POST-COLONIAL ARCHITECTURE AND URBANISM

Prerequisite: Arch 323 or permission of instructor

Fall (3 credit hours)

The course examines a range of intellectual and material practices that have shaped the production of architecture and urban discourse in colonial and post-colonial settings. Topics include the production, circulation and reshaping of colonial knowledge(s); the import and export of architectural ideas and styles between colonies and metropolises; material and cultural hybridity in colonial and post-colonial cities; and recent initiatives in theorizing subalternity, post-structuralism, and post-colonial discourse. The course is thematic and comparative and will draw on both "classic" theoretical

formulations and analyses more firmly grounded in specific historical, social, and cultural contexts.

ARCH 564 ADVANCED MATERIALS STRUCTURES

Prerequisite: Arch 324

Fall (3 credit hours)

This course introduces the application and design of alternative materials such as glass, fabrics, aluminum, metal alloys, fiber composites, and laminates that are used structurally in architectural construction. Comparisons are made by studying their application through transfer technology in the automotive, aerospace, biomechanical, and other related industries. Their properties and structural behavior are explored qualitatively through digital design and material stress analysis and applications are studied through prototyping and laboratory testing.

ARCH 565 RESEARCH IN ENVIRONMENTAL TECHNOLOGY

Prerequisite: Graduate standing or permission of instructor

Fall (3 credit hours)

The focus of this course is the introduction to research methods in environmental technology. Qualitative and quantitative research results are studied with regard to their impact on architectural design. Each course participant undertakes an investigation in a selected area of environmental technology. The experimental approach may use physical modeling, computer simulation, or other appropriate methods.

ARCH 568 RUSSIAN ARCHITECTURE

Prerequisite: Arch 323 or permission of instructor

Alternate Winter Terms (3 credit hours)

This course examines the leading tendencies in Russian architecture and allied art from the late 10th century through the Soviet period. Attention will be given to the influences of culture and ideology on the design process and on the transformation of native impulses and foreign influences in shaping the aims and styles of Russian architecture through the ages.

ARCH 571 DIGITAL FABRICATION

Fall and Winter (3 credit hours)

Digital technology is transforming not only the way we conceive of and design buildings but through manufacturing advances in aerospace, automotive, and shipbuilding, it is transforming the way we manufacture and construct buildings. This course explores the crossover between computer-aided design and advanced fabrication techniques. Through a series of hands-on labs and small design projects students learn various software applications and computer-driven hardware tools as a means of introducing basic concepts of manufacturing and construction.

ARCH 572 ARCHITECTURAL THEORY AND CRITICISM

Prerequisites: Graduate standing or permission of instructor

Fall (3 credit hours)

This course examines contemporary architectural theory and criticism through the presentation and study of significant texts and buildings of the present and recent past. The goal of the course is to introduce and investigate the formal, technological, social, political, and economic debates at issue within the discipline. Students learn to evaluate and articulate the interactions between theory and practice, thereby enabling them to formulate and assess strategies for the making of architecture.

ARCH 575 BUILDING ECOLOGY

Prerequisite: Graduate standing or permission of instructor

Fall (3 credit hours)

The objective of this course is to provide students with an understanding of ecological principles in architecture. Principles of life-cycle design, economy of resources and humanistic design are introduced and ecological factors associated with each of these principles are examined. Design strategies to increase environmental sustainability in buildings are investigated. An emphasis is given to how environmental factors (heat, light, and sound) influence thermal, visual, and acoustic qualities in built-in environments. Field trips to visit selected buildings to analyze their ecological characteristics comprise an important part of the course.

ARCH 577 DESIGN DEVELOPMENT OF BUILDING ENCLOSURE SYSTEMS

Prerequisite: Graduate standing or permission of instructor

Winter (3 credit hours)

This course analyzes the design and construction of building enclosure systems from both an aesthetic and technical viewpoint. The objective is for the student to develop an in-depth understanding of design synthesis involved in the creative detailing of exterior walls, including the relationship of the enclosure system to the structural system. The student will select a significant building for analysis of the aesthetic and technical relationships between structure and building skin. An extensive photographic and graphic presentation is required.

ARCH 581 COMPUTER VISUALIZATION

Prerequisite: Arch 521 or permission of instructor

Winter (3 credit hours)

This course provides an investigation of computer-aided visualization techniques through the use of commercially available software for photo-realistic rendering, lighting simulation, animation, scanning, raster graphics, and virtual reality. The course also presents the mathematics, data structures, and algorithms of hidden surface removal, scan line and ray-tracing, and radiosity. The course does not cover topics in 3D computer modeling.

ARCH 582 ALTERNATIVE PRACTICES

Prerequisite: None

Fall or Winter (3 credit hours)

This course offers students the opportunity to investigate the range of emerging career roles in architecture and allied fields, including both shifting opportunities within “traditional” practice as well as the broad range of career choices that can usefully build on a foundation in architecture. The first segment of the course includes readings and discussion of the changing context of architecture and self-assessment exercises. The second and larger segment will include weekly guest speakers who are themselves pursuing alternative practices.

ARCH 583 PROFESSIONAL PRACTICE

Prerequisite: Graduate standing

Fall and Winter (3 credit hours)

This course is intended to provide an opportunity to explore the essential elements of professional practice and related professions. It will equip the student with the fundamental knowledge and skills requisite to an understanding of, and participation in, the conduct of practice in the design profession. Salient areas of administration and management, including organization of the architectural office, professional services of the architect, fee structures and fee management, contracts, and resource management/monitoring/marketing/project delivery are explored in lectures and through case problems.

ARCH 585 ADVANCED BUILDING TECHNOLOGY

Prerequisite: Graduate standing or permission of instructor

Winter (3 credit hours)

The objective of this course is to explore state-of-the-art building and environmental technologies. Recent advancements in building technology promoting intelligence and automation are reviewed and explorations of a new generation of buildings and building technologies are pursued. The main topics of the course are:

1. Direction of technological advancements
2. Building automation and intelligent building technologies
3. Advanced lighting, daylighting, heating, ventilating, and air-conditioning systems
4. Prototype buildings of the future

ARCH 588 HISTORY OF BUILDING TECHNOLOGY

Prerequisite: Arch 323 or permission of instructor

Alternate Winter Terms (3 credit hours)

The course investigates the history of building technology, primarily in the Western world, from ancient times to the present. Building technology is considered in terms of how it develops in relationship to society, science, and technology in general and in terms of how it serves, but also influences, the creation of architectural form.

ARCH 589 SITE PLANNING

Prerequisite: Graduate standing

Fall and Winter (3–4 credit hours)

The primary goal of this course is to introduce the student of architecture to landscape architecture, site engineering, and design. The course is divided into two seven-week segments. The site engineering segment introduces and develops an understanding of site grading skills, the reasons for grading, the effect of grades on water drainage, and the use of storm drainage systems. The site planning segment introduces and develops an understanding of design synthesis by focusing on the constraints and opportunities provided by the landscape, as related to the shaping of architecture. Lectures and studio assignments emphasize the relationship between landscape architecture and architecture for the positive development of site and structure.

ARCH 591 GENERATIVE DESIGN COMPUTING

Prerequisite: 3D Digital modeling experience

Fall or Winter (3 credit hours)

Design computing represents a broad set of topics that greatly extends the potential beyond simply automation of tasks commonly understood as computer aided drafting. Software developers' open source thinking allows users to adapt or create specialized tools able to process or generate form within the framework of a pre-existing digital environment. This course gives students a framework to learn the rules and then apply the thinking to simple design projects.

ARCH 592 ARCHITECTURAL DESIGN STUDY ABROAD

Prerequisite: Graduate standing

Spring (6 credit hours)

For description, see Arch 552.

ARCH 593 TUTORIAL STUDIES IN ARCHITECTURAL HISTORY

Prerequisite: Graduate standing, permission of instructor and approval of the program chair

Fall and Winter (1–3 credit hours)

This course provides an opportunity for a student to undertake individual, in-depth study of an architectural history topic under the direction of a member of the history faculty. The student shall determine a topic and program of study in consultation with and with the approval of the faculty member. No more than three credit hours of Arch 593 may apply towards the M.Arch., M.Sc., or Ph.D. degree.

ARCH 597 ARCHITECTURAL DETAILING

Prerequisites: Graduate standing

Fall (3 credit hours)

The objective of this course is to explore the relationship between the ideas behind a project and the process of giving those ideas substance in architectural terms. The seminar explores “design” as a process which extends through to the completion of a building, where “detailing” is an integral part of the design process and in which the nature and assembly of the parts can be informed by or can inform the larger design issues of the building as a whole. The course does not attempt to develop a catalog of typical detail solutions to be applied, but rather stresses a way of observing, thinking about the issues presented in the seminar and exploring them in each student’s individual projects.

ARCH 600 TUTORIAL STUDIES IN ARCHITECTURE

Prerequisite: Graduate standing, permission of instructor and approval of the program chair

Fall and Winter (1–3 credit hours)

This course provides an opportunity for a student to undertake individual, in-depth study under the direction of a member of the faculty. Areas of study may include extension and enhancement of material offered in

regular graduate-level architecture courses or exploration in an area of professional interest not covered by existing electives. Course completion requirements may include special readings, research, conferences, papers, and documentation suitable to the selected area of study. The student shall identify the area of study and submit an Arch 600 Approval Form. The instructor shall establish requirements regarding the method and extent of documentation and the program chair shall critically review the proposal, all prior to registration. No more than six credit hours of Arch 600 may apply toward the M.Arch. degree.

ARCH 603 SEMINAR IN ARCHITECTURAL HISTORY

Prerequisite: 500 level architectural history course or permission of instructor
Fall and Winter (1–3 credit hours)

This seminar in architectural history provides a vehicle for either:

1. A topic being explored by a member of the architectural history faculty, with the possibility of subsequent conversion into a regular seminar offering
2. A seminar capitalizing on the particular interests and abilities of a visiting faculty member in architectural history

ARCH 605 ENVIRONMENTAL DESIGN SIMULATION

Prerequisite: Graduate standing or permission of instructor
Fall (3 credit hours)

The focus of this course is the application of simulation techniques in design. The course uses computers and thermal, lighting, daylighting, and acoustic facilities for physical modeling in the building technology laboratory as design tools. The use of these design tools will help in the understanding of fundamental principles involved in assessing the environment and creating new applications for simulation techniques.

ARCH 613 NEW ROOTS FOR ENVIRONMENTAL DESIGN AND PLANNING

Prerequisite: Graduate standing
Winter (3 credit hours)

An exploration of new foundations for the practice and teaching of architecture. Specifically, the course seeks to develop a broad, social-ethical-ecological framework for designing; a framework rooted in more

holistic ways of thinking and one intended to extend our visions beyond the polemics of architectural “style.”

ARCH 623 SEMINAR IN THRESHOLDS OF ARCHITECTURAL THEORY

Prerequisite: 500 level architectural history course or permission of instructor
Fall (3 credit hours)

The seminar examines selected writings by some of the seminal theoreticians of architecture—from Vitruvius to Robert Venturi—whose work proved instrumental in shaping the character of architectural thought and production both in their own time and in subsequent periods. In focusing upon the nature and role of ideas in the shaping of architecture, the course is concerned with comparing and contrasting the range of theoretical intentions that have been advanced over time and with examining the variety of ways in which those intentions have informed building design.

ARCH 633 SEMINAR IN RENAISSANCE AND BAROQUE ARCHITECTURE

Prerequisite: Arch 518 or Arch 528 or permission of instructor
Winter (3 credit hours)

The seminar examines a particular topic in Renaissance and/or Baroque architecture. While the topic will determine the particular emphasis, the seminar will consider the relationships existing between architectural form and theoretical ideas, social, political, religious, and philosophical currents, as well as other issues specific to these historical periods.

ARCH 643 SEMINAR IN MODERN ARCHITECTURE

Prerequisite: Arch 543 or permission of instructor
Alternate Fall Terms (3 credit hours)

The seminar examines a particular topic in Modern architecture. While the topic will determine the particular emphasis, the seminar will consider an aspect of Modern architecture in relationship to social, political, and cultural currents, developments in theory, innovations in painting, sculpture, and technology, as well as other issues specific to this historical period.

ARCH 653 SEMINAR IN AMERICAN ARCHITECTURE

Prerequisite: Arch 553 or permission of instructor
Alternate Fall Terms (3 credit hours)

The seminar examines a particular topic in American architecture. While the topic will determine the particular emphasis, the seminar will consider an aspect of American architecture in relationship to developments abroad, social, political and cultural realities and aspirations, philosophical and theoretical concepts, as well as other issues specific to this geographic area.

ARCH 660 THESIS DEVELOPMENT SEMINAR

Prerequisite: Year 6 standing and permission of thesis committee

Fall (3 credit hours) The thesis option is comprised of two components: a three-credit-hour seminar in the fall term and a six-credit-hour thesis studio in the winter term. The thesis option is an independent study opportunity for those students who are sufficiently mature and self-motivated to benefit

from self-directed creative work. Arch 660 takes the form of a seminar plus individual tutorials. Each thesis student selects a faculty thesis advisor to work with throughout the year, as well as an outside consultant—a specialist with knowledge of the particular subject matter of the thesis. The prospective thesis student must present a statement of intent along with portfolio examples to a thesis committee for review and acceptance into the thesis option.

ARCH 662 THESIS STUDIO

Prerequisite: Arch 660 and permission of thesis committee

Winter (6 credit hours)

This studio course constitutes the realization of the research and exploration initiated in Arch 660. The faculty thesis advisor selected in the fall term supervises the work. Faculty thesis advisors and the thesis coordinator provide tutorial assistance, critiques, and advice. The product of the thesis studio is a series of presentations and documentation of the thesis at the end of the winter term.

ARCH 663 SEMINAR IN RUSSIAN AVANT-GARDE ARCHITECTURE

Prerequisite: Arch 543 or Arch 568 or permission of instructor

Alternate Winter Terms (3 credit hours)

The seminar examines avant-garde tendencies in Soviet architecture and art in the 1920s, including the Rationalist and Constructivist tendencies, with an inquiry into their roles in shaping the character of modern Soviet architectural theory and practice in the given period. At the same time, it is concerned with the larger historical, cultural, and artistic settings out of which these tendencies evolved, as well as with the analogous tendencies in Western art and architecture.

ARCH 672 ARCHITECTURAL DESIGN 2G3/3G6

Prerequisite: Year 6 standing

Fall (6 credit hours)

These graduate-level studio design courses are characterized by architectural problems of increasing scale and complexity, usually one semester in length and require solutions that are thorough in their conception, development, and execution. Approximately twelve studio sections are offered in each

regular term—each with a unique focus—but all dedicated to comprehensive architectural design. Examples include: aesthetic and symbolic issues, comprehensive building design, facilities planning, housing, community design, urban design, historic preservation and conservation, the architect as developer, structure, energy systems and conservation, professional practice and management, computer applications to design, and honors studio. Detailed course descriptions for each section are posted during registration. Many sections require that specific 500/600 level architecture lecture/seminar courses be taken prior to or concurrent with the design studio.

ARCH 693 SEMINAR IN COLONIAL ARCHITECTURE/URBANISM

Prerequisites: Arch 563 or permission of instructor

Winter (3 credit hours)

The course examines a particular topic in colonial urbanism and/or colonial architectural discourse. While the topic will determine the particular emphasis, the seminar will examine writings from diverse geographic and disciplinary bases, drawing on works in history, feminist theory, literary criticism, geography, cultural studies, anthropology, and architectural and urban history, among others. The seminar will explore how competing understandings of colonialism and its associated material culture(s) have helped chart new territory in social theory and architectural discourse.

DOCTORAL STUDIES COURSE DESCRIPTIONS

ARCH 710 TUTORIAL STUDIES

Prerequisites: M.Sc. student standing and permission of faculty advisor

Fall and Winter (1–3 credit hours)

This course is for students who are doing a series of directed readings under the supervision of a member of the doctoral faculty.

ARCH 712 ADVANCED TOPICS IN ARCHITECTURAL RESEARCH

ARCH 713 ADVANCED TOPICS IN ARCHITECTURE HISTORY THEORY

ARCH 715 ADVANCED TOPICS IN BUILDING TECHNOLOGY

ARCH 716 ADVANCED TOPICS IN DESIGN STUDIES

Prerequisites: M.Sc. or Ph.D. student standing or permission of instructor

Fall and Winter (3 credit hours)

This course provides advanced instruction in particular topic areas of architectural research. The course explores emerging areas of architectural research and/or techniques and methodologies that have impact on architectural research.

ARCH 719 SUPERVISED RESEARCH

Prerequisites: M.Sc. student standing and permission of faculty advisor

Fall and Winter (1–3 credit hours)

This course is for students who are conducting research under the direction of a member of the doctoral faculty.

ARCH 720 M.SC. SEMINAR

Prerequisites: M.Sc. student standing or permission of faculty advisor

Fall (1–3 credit hours)

This course is a theme-based seminar that introduces students to different research modalities within the discipline of architecture, including science-based research and humanities-based scholarship, design, and practice.

ARCH 721 TEACHING PRACTICUM

Prerequisites: M.Sc. student standing or permission of faculty advisor

Winter (2 credit hours)

This course will address basic skill sets for teaching lectures, seminars, and design studios, including: structuring syllabi and design briefs, preparing lectures, leading discussions, choreographing reviews, and critiquing design work.

ARCH 739 MASTERS THESIS

Prerequisite: M.Sc. student standing and permission of faculty advisor

Fall, Winter, Spring (1–6 credit hours)

This is an independent research project that is undertaken under the direction of the student's faculty advisor.

ARCH 810 TUTORIAL STUDIES

Prerequisite: Ph.D. student standing and permission of faculty advisor

Fall and Winter (1–6 credit hours)

This course is for students who are doing a series of directed readings under the supervision of a member of the doctoral faculty.

ARCH 812 THEORY IN ARCHITECTURAL RESEARCH

Prerequisite: Ph.D. student standing or permission of instructor

Fall (3 credit hours)

This course provides a foundation for architectural research and scholarship by introducing students to the philosophy of knowledge with an emphasis on architecture and by presenting a critical review and evaluation of a broad range of theoretical and methodological perspectives within the field of architecture. It introduces the various approaches to the generation and acquisition of knowledge commonly used in the specialization areas in Doctoral Studies but at the same time explores perspectives that unify these areas into an integrated discipline.

ARCH 813 RESEARCH DESIGN AND METHODS IN ARCHITECTURE

Prerequisite: M.Sc. or Ph.D. student standing or permission of instructor

Fall and Winter (3 credit hours)

This course provides a foundation for architectural research and scholarship by introducing students to the methods and techniques used to investigate architecture and by presenting a critical review and evaluation of these methods. Each section offered provides a specific focus relevant to one or more of the specialization areas within Doctoral Studies.

ARCH 819 SUPERVISED RESEARCH

Prerequisite: Ph.D. student standing and permission of faculty advisor

Fall and Winter (1–6 credit hours)

This course is for students who are conducting research under the direction of a member of the doctoral faculty.

ARCH 823 AREA SEMINAR: ARCHITECTURAL HISTORY AND THEORY

ARCH 824 AREA SEMINAR: DESIGN STUDIES

ARCH 825 AREA SEMINAR: BUILDING TECHNOLOGY

Prerequisite: Arch 812 or permission of instructor

ARCHITECTURE FACULTY

Faculty members are accomplished and diverse, coming from a variety of educational backgrounds and possessing a wide range of professional experiences. They are award-winning architects, respected scholars, and leading researchers. Faculty are actively engaged in teaching, practice, and research in many fields. Cross-disciplinary efforts within the college and across the University are strongly encouraged and supported.

Monica Ponce de Leon is dean of the college; and Jean Wineman is associate dean for research and chairs the Doctoral Program in Architecture. A. Melissa Harris chairs the Architecture Program.

Ellie Abrons
Lecturer in Architecture
Design
Email: eabrons@umich.edu

M. Craig Borum
B.S., M.Arch. University of Virginia
Associate Professor of Architecture
Design, Theory/Criticism
Email: cborum@umich.edu

Robert J. Adams
B.A., M.Arch. Southern California
Institute of Architecture
Assistant Professor of Architecture
Design, Construction,
Representation
Email: robadams@umich.edu

Tom J. Buresh
B.A., M.Arch. University of
California, Los Angeles
Professor of Architecture; Chair,
Architecture Program
Design
Email: tburesh@umich.edu

Joshua Bard
Lecturer in Architecture
Design, Digital Fabrication
Email: jdbard@umich.edu

Steven Christenson
Lecturer in Architecture
Design
Email: stevencc@umich.edu

Caroline Constant
M.Arch. Princeton
Professor of Architecture
Design, Theory/Criticism,
Architectural History
Email: cbconsta@umich.edu

Dawn Gilpin
B.A., M. Arch. Southern California
Institute of Architecture
Lecturer in Architecture
Design, Representation
Email: d-gilpin@sbcglobal.net

Karl Daubmann
B.Arch., M.S. Massachusetts
Institute of Technology
Associate Professor
Design, Technology
Email: kmdaub@umich.edu

William J. Glover
B.S., M.Arch., Ph.D. University of
California, Berkeley
Associate Professor of Architecture
Architectural History
Email: wglover@umich.edu

Robert B. Fishman
A.B., A.M., Ph.D. Harvard University
Professor of Architecture
Urban History, Urban Planning
History, Urban Design, Theory,
Regionalism
Email: fishmanr@umich.edu

Lars Gräebner
Dip.Ing. University of Hannover
Lecturer in Architecture
Design, Construction
Email: graebner@umich.edu

Harry Giles
B.Sc., M.Sc. in Engineering
University of Natal, Durban
Professor of Practice in
Architecture
Structures, Design, Construction
Email: hgiles@umich.edu

Linda N. Groat
B.A., M.A.T., M.F.A., M.Sc., Ph.D.
University of Surrey
Professor of Architecture
Contemporary Architectural
Theory, Development of An
Integrative Theoretical Framework
Combining Architectural and
Environment-Behavior Theory,
Environmental Aesthetics, Nature
of Architecture in Post-Modern
Culture, Facet Theory
Email: lngroat@umich.edu

Danelle Guthrie
B.A., M.Arch. University of
California Los Angeles
Lecturer in Architecture
Design
Email: danelleg@umich.edu

A. Melissa Harris
B.E.D.A., M.Arch. University of
California, Berkeley
Interim Chair, Associate Professor
of Architecture
Design, Representation,
Architecture for Non-Majors
Email: amharris@umich.edu

Andrew Herscher
Assistant Professor of Architecture
Design, Theory/Criticism,
Architectural History
Email: herscher@umich.edu

Eric J. Hill FAIA
B.A., M.Arch., Ph.D. University of
Pennsylvania
Professor of Practice in
Architecture
Professional Practice Management
Email: ejhill@umich.edu

Shaun Jackson
B.S., M. Arch. University of
Michigan
Professor of Architecture
(joint appointment with art and
design)
Design
Email: sjdesign@umich.edu

Coleman Jordan
B.A., M.Arch. Clemson University
Assistant Professor of Architecture
Design, Regional/Cultural Theory,
Construction
Email: caje@umich.edu

Douglas S. Kelbaugh FAIA
B.A., M.Arch. Princeton University
Professor of Architecture and
Urban Planning; Architectural
Design, Urban Design, Community
Planning and Policy, Housing,
Sustainable Design and Planning,
Land Use, New Urbanism
Email: kelbaugh@umich.edu

Michael J. Kennedy
B.F.A., M.Arch. The University of
Texas at Austin
Lecturer in Architecture
Design, Construction
Email: mickk@umich.edu

Jong-Jin Kim
B.S., M.Arch., Ph.D. University of
California, Berkeley
Associate Professor of Architecture
Solar Energy Technology,
Lighting, Daylighting, Computer-
Aided Building Energy Analysis,
Bioclimatic and Energy Parameters
for Buildings
Email: daylight@umich.edu

Amy Kulper
Assistant Professor of Architecture
Design, History/Theory,
Architectural History
Email: akulper@umich.edu

Perry Kulper
Associate Professor of Architecture
Design, Theory/Criticism,
Representation
Email: pkulper@umich.edu

Kit McCullough
B.Arch., M.A.U.D. Harvard
University
Lecturer in Architecture
Urban Design, Community
Planning
Email: kitmcc@umich.edu

Malcolm McCullough
B.A., M.Arch. University of
California, Los Angeles
Associate Professor of Architecture
and Art
Design, Technology,
Contemporary Information and
Communication in Technology,
Digital Design, Computer
Applications
Email: mmmc@umich.edu

Keith Mitnick
B.A., M.Arch. University of
California, Berkeley
Associate Professor of Architecture
Design, Theory/Criticism
Email: kmitnick@umich.edu

Meredith Miller
Lecturer in Architecture
Design
Email: mlmmlm@umich.edu

Thomas Moran
Lecturer in Architecture
Design
Email: tjmoran@umich.edu

Mojtaba Navvab
B.Arch., M.Arch., Cert. in Gaming/
Simulation, Ph.D. University of
Michigan
Associate Professor of
Architecture; Chair Certificate
Program in Simulation/Gaming
Environmental Technology and
Energy Planning, Daylighting,
Acoustics
Email: moji@umich.edu

Cathlyn Newell
Lecturer in Architecture
Design
Email: cnewell@umich.edu

Cynthia Pachikara
Associate Professor of Art and
Design/Architecture
Video Art
Email: cpachika@umich.edu

Tony Patterson
Lecturer in Architecture
Design
tonypat@umich.edu

Monica Ponce de Leon
B.Arch. University of Miami,
M.A.U.D Harvard Graduate School
of Design
Eliel Saarinen Collegiate Professor
of Architecture; Professor of Urban
Planning; Dean of the college
mpdl@umich.edu

Sophia Psarra
Associate Professor of Architecture
Design
Email: spsarra@umich.edu

Mary-Ann Ray
Professor of Practice in
Architecture
Design
maray@umich.edu

B. Neal Robinson
B.S., M.Arch. Rice University
Lecturer in Architecture
Design, Technology
Email: rbneal@umich.edu

Mireille Roddier
B.Arch., M.Arch. University of
California, Berkeley
Assistant Professor of Architecture
Design, Theory/Criticism
Email: mroddier@umich.edu

Joel Schmidt
M.Arch. Harvard University
Lecturer in Architecture
Design, Theory/Criticism
Email: jtschmid@umich.edu

Anatole Senkevitch, Jr.
B.S., M.Arch., Ph.D. Cornell
University
Associate Professor of Architecture
Architectural History, Theory/
Criticism, Preservation Planning
Email: senkanat@umich.edu

Rosalyn Shieh
Lecturer in Architecture
Design
Email: rshieh@umich.edu

Anya Sirota
Lecturer in Architecture
Design
asirota@umich.edu

Lydia Soo
B.S., M.Arch., M.A., Ph.D. Princeton
University
Associate Professor of Architecture
History, Theory/Criticism, Design
Email: lmsoo@umich.edu

Roy Strickland
B.A., M.Arch. Massachusetts
Institute of Technology
Associate Professor of
Architecture; Director, Urban
Design Program
Urban Design
Email: granite@umich.edu

Anca Trandafirescu
Assistant Professor of Architecture
Design, Theory/Criticism,
Representation
Email: ancat@umich.edu

Christian Unverzagt
B. S., M.Arch. Southern California
Institute of Architecture
Lecturer in Architecture
Design, Representation
Email: crumich@umich.edu

Peter von Büelow
B.Arch., M.S., Dr. Ingenieur,
University of Stuttgart
Assistant Professor of Architecture
Structures
Email: pvbuelow@umich.edu

Glenn Wilcox
Assistant Professor of Architecture
Design, Representation,
Computation
Email: gwil@umich.edu

Craig Wilkins
M.S., Ph.D., University of
Minnesota
Taubman College director of UM
Detroit Center
Lecturer in Architecture
Architecture, Urban Design, and
Community Development
Email: clwilks@umich.edu

Jean D. Wineman
B.A., M.U.P., D.Arch. University of
Michigan
Associate Dean for Research
Chair of the Doctoral Program in
Architecture
Professor of Architecture
visual and spatial properties of
buildings and urban spaces;
social, cultural and behavioral
studies; environmental cognition
Email: jwineman@umich.edu

Jason T. Young
B.S., M.Arch. Rice University
Associate Professor of
Architecture
Design, Theory/Criticism
Email: jty@umich.edu

Claire Zimmerman
Assistant Professor of Architecture
(joint appointment with art
history)
Email: zimclair@umich.edu