Twin Cities Campus

Architecture M.S.

School of Architecture

College of Design

Link to a list of faculty for this program.

Contact Information:
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- Program Type: Master's
- Requirements for this program are current for Fall 2020
- Length of program in credits: 30 to 34
- This program does not require summer semesters for timely completion.
- Degree: Master of Science

Along with the program-specific requirements listed below, please read the General Information section of the catalog website for requirements that apply to all major fields.

The School of Architecture offers four distinct master of science in architecture degrees:
1) MS in architecture, sustainable design track (plan A or B);
2) MS in architecture, heritage conservation and preservation track (plan A or B);
3) MS in architecture, metropolitan design track (plan A, B, or C); and,
4) MS in architecture, research practices track (plan C only).

Each of the above has its own unique application requirements, prerequisites, and curriculum structure. Prospective applicants are encouraged to consult the degree programs section of the School of Architecture website for additional information: http://arch.design.umn.edu. Students who successfully complete the a master of science in architecture degree are eligible to receive 936 hours of IDP creditthat is 17% of the 5,600 hours of mandatory internship for registration as an architect. To receive the IDP credit, the MS degree must be earned after receiving the M.Arch degree. The MS metropolitan design track requires summer semester coursework. The other three MS tracks do not require summer semester work.

Program Delivery

This program is available:

- via classroom (the majority of instruction is face-to-face)

Prerequisites for Admission

Other requirements to be completed before admission:
Each of the master of science in architecture programs has its own unique application requirements, prerequisites, and curriculum structure. Prospective applicants are encouraged to consult the degree programs section of the School of Architecture website for additional information: http://arch.design.umn.edu.

Applicants must submit their test score(s) from the following:

- GRE

International applicants must submit score(s) from one of the following tests:

- TOEFL
- IELTS
- MELAB

Key to test abbreviations(GRE, TOEFL, IELTS, MELAB).

For an online application or for more information about graduate education admissions, see the General Information section of the catalog website.

Program Requirements

Plan A: Plan A requires 18 major credits, 6 credits outside the major, and 10 thesis credits.The final exam is oral.

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Plan B: Plan B requires 27 to 28 major credits and 6 credits outside the major.The final exam is oral.

Plan C: Plan C requires 24 to 30 major credits and 0 to 6 credits outside the major.The final exam is oral.

This program may be completed with a minor.

Use of 4xxx courses toward program requirements is permitted under certain conditions with adviser approval.

Joint- or Dual-degree Coursework:M.Arch/MS-ArchitectureMLA/MS-ArchitectureStudent may take a total of 24 credits in common among the academic programs.

Program Sub-plans

A sub-plan is not required for this program.
Students may not complete the program with more than one sub-plan.

Sustainable Design

This sub-plan is limited to students completing the program under Plan A or Plan B.

The sustainable design track of the MS admits from diverse design and environmental backgrounds. Candidates for the program include, practicing design professionals, architecture graduate students, engineering and environmental science professionals, and related disciplines. Ideal applicants will have a clear sustainable design research agenda, experience in environmental design or design production, and a desire to develop new knowledge in the sustainable design field.

The sustainable design track's goals are to foster sustainable design education, research, and practice and to create a significant positive impact on sustainable design in the region and nation. It will achieve these goals by providing courses and research opportunities that:
Promote excellence and innovations in regional and global ecological design practice and research.
Contribute to the evolving and emerging sustainable design practice and research knowledge base, which includes ecological, environmental, social, and economic issues and impacts.
Provide architectural designers and researchers with qualitative and quantitative knowledge, methods, and tools to implement sustainable design in professional practice.

Required Coursework
Take the following courses for a total of 12 credits:
ARCH 8561 - Sustainable Design Theory and Practice (3.0 cr)
ARCH 8567 - Site and Water Issues in Sustainable Design (3.0 cr)
ARCH 8563 - Energy and Indoor Environmental Quality Issues in Sustainable Design (3.0 cr)
ARCH 8565 - Materials Performance in Sustainable Building (3.0 cr)

Architecture Electives
Take at least 6 ARCH elective credits, in consultation with the advisor or director of graduate studies.

Arch Electives
Take 6 - 7 credit(s) from the following:
- ARCH 5521 - Material Investigation: Concrete (4.0 cr)
- ARCH 5523 *{Inactive}*(4.0 cr)
- ARCH 5527 - Material Investigations: Stone and Water (4.0 cr)
- ARCH 5541 *{Inactive}*(3.0 cr)

Electives Outside Architecture
Take at least 6 credits outside the major, in consultation with the advisor or director of graduate studies.
Take 6 - 7 credit(s) from the following:
- SSM 5616 - Building Science I: Fundamentals (4.0 cr)
- DES 5168 - Evidence-Based Design (3.0 cr)
- EEB 5053 - Ecology: Theory and Concepts (4.0 cr)
- ESPM 5242 - Methods for Environmental and Natural Resource Policy Analysis (3.0 cr)
- ESPM 5245 - Sustainable Land Use Planning and Policy (3.0 cr)
- ESPM 5251 - Natural Resources in Sustainable International Development (3.0 cr)
- ESPM 5256 - Natural Resource Law and the Management of Public Lands and Waters (3.0 cr)
- ESPM 5261 - Economics and Natural Resources Management (4.0 cr)
- ESPM 5603 - Environmental Life Cycle Analysis (3.0 cr)
- ESPM 5605 - Recycling: Extending Raw Materials Supplies (3.0 cr)
- HSCI 5244 - Nature's History: Science, Humans, and the Environment (3.0 cr)
- LA 5413 - Introduction to Landscape Architectural History (3.0 cr)
- LA 5514 *{Inactive}*(3.0 cr)

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•PA 5211 - Land Use Planning (3.0 cr)
•PA 5253 *{Inactive}*(3.0 cr)
•PA 5271 - Geographic Information Systems: Applications in Planning and Policy Analysis (3.0 cr)
•PA 5511 - Community Economic Development (3.0 cr)
•PA 5721 - Energy Systems and Policy (3.0 cr)
•PA 5722 - Economics of Environmental Policy (3.0 cr)
•PSY 5960 - Topics in Psychology (1.0 - 4.0 cr)

Plan A Requirements

Take 10 master's thesis credits.
ARCH 8777 - Thesis Credits: Master's (1.0 - 18.0 cr)

Plan B Requirements

Take at least 10 additional credits, in consultation with the advisor or director of graduate studies.

Additional credits

Take 10 - 11 credit(s) from the following:
•ARCH 5521 - Material Investigation: Concrete (4.0 cr)
or ARCH 5523 *{Inactive}*(4.0 cr)
or ARCH 5527 - Material Investigations: Stone and Water (4.0 cr)
or ARCH 5541 *{Inactive}*(3.0 cr)
or SSM 5616 - Building Science I: Fundamentals (4.0 cr)
or DES 5168 - Evidence-Based Design (3.0 cr)
or ESPM 5242 - Methods for Environmental and Natural Resource Policy Analysis (3.0 cr)
or ESPM 5245 - Sustainable Land Use Planning and Policy (3.0 cr)
or ESPM 5251 - Natural Resources in Sustainable International Development (3.0 cr)
or ESPM 5256 - Natural Resource Law and the Management of Public Lands and Waters (3.0 cr)
or ESPM 5261 - Economics and Natural Resources Management (4.0 cr)
or ESPM 5603 - Environmental Life Cycle Analysis (3.0 cr)
or ESPM 5605 - Recycling: Extending Raw Materials Supplies (3.0 cr)
or HSCI 5244 - Nature's History: Science, Humans, and the Environment (3.0 cr)
or LA 5413 - Introduction to Landscape Architectural History (3.0 cr)
or LA 5514 *{Inactive}*(3.0 cr)
or PA 5211 - Land Use Planning (3.0 cr)
or PA 5253 *{Inactive}*(3.0 cr)
or PA 5271 - Geographic Information Systems: Applications in Planning and Policy Analysis (3.0 cr)
or PA 5511 - Community Economic Development (3.0 cr)
or PA 5721 - Energy Systems and Policy (3.0 cr)
or PA 5722 - Economics of Environmental Policy (3.0 cr)
or PSY 5960 - Topics in Psychology (1.0 - 4.0 cr)

Heritage Conservation & Preservation

This sub-plan is limited to students completing the program under Plan A or Plan B.

The heritage conservation and preservation track of the Architecture MS offers courses and research opportunities in the study of the preservation of historic buildings, districts, and landscapes, as well as the design and management of cultural heritage sites. The track explores heritage on several distinct but related levels. It examines the materiality of heritage resources through documentation, diagnosis, and the design of treatment interventions. It also encourages critical analysis and assessment of the cultural values that underlie and define preservation policies, laws, and professional norms. Through fieldwork, case studies, and courses that investigate regional, national, and global heritage, the track focuses on the philosophy, policy, technology, economics, and social implications of heritage preservation.

Required Coursework

Take the following courses for a total of 6 credits:

ARCH 5671 - Historic Preservation (3.0 cr)
ARCH 5673 - Historic Property Research and Documentation (3.0 cr)

Heritage Conservation and Preservation Electives

Take 2 courses from the following list for at least 6 credits:
ARCH 5410 - Topics in Architectural History (3.0 cr)
ARCH 5411 - Principles of Design Theory (3.0 cr)
ARCH 5412 - Architecture: A Global and Cultural History (3.0 cr)
ARCH 5670 - Topics in Historic Preservation (1.0 - 3.0 cr)
ARCH 5672 - Historic Building Conservation (3.0 cr)
ARCH 5674 - World Heritage Conservation (3.0 cr)
ARCH 5676 - Economics of Heritage Preservation (3.0 cr)
ARCH 5677 *{Inactive}*(3.0 cr)
ARCH 5678 *{Inactive}*(3.0 cr)

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Architecture Electives

Take at least 6 ARCH elective credits, in consultation with the advisor or director of graduate studies.
Take 6 - 7 credit(s) from the following:

- ARCH 5441 - Minnesota: Architecture and Landscapes (3.0 cr)
- ARCH 5711 - Theory and Principles of Urban Design (3.0 cr)
- ARCH 4435 - History of American Architecture (3.0 cr)
- ARCH 5609 - Development and Implementation of Research (3.0 cr)

Electives Outside Architecture

Take at least 6 credits outside the major, in consultation with the advisor or director of graduate studies.
Take 6 - 7 credit(s) from the following:

- ESPM 5245 - Sustainable Land Use Planning and Policy (3.0 cr)
- LA 5413 - Introduction to Landscape Architectural History (3.0 cr)
- LA 5514 *{Inactive}*(3.0 cr)
- PA 5211 - Land Use Planning (3.0 cr)
- PA 5253 *{Inactive}*(3.0 cr)
- PA 5271 - Geographic Information Systems: Applications in Planning and Policy Analysis (3.0 cr)
- PA 5511 - Community Economic Development (3.0 cr)
- PA 5221 - Private Sector Development (3.0 cr)
- MST 5011 - Museum History and Philosophy (3.0 cr)
- MST 5012 - Museum Practices (3.0 cr)

Plan A Requirements

Take 10 master's thesis credits.
ARCH 8777 - Thesis Credits: Master's (1.0 - 18.0 cr)

Plan B Requirements

Take an additional 9 to 10 credits, in consultation with the advisor or director of graduate studies.
Take 9 - 10 credit(s) from the following:

- ARCH 5441 - Minnesota: Architecture and Landscapes (3.0 cr)
- ARCH 5711 - Theory and Principles of Urban Design (3.0 cr)
- ARCH 5435 - History of American Architecture (3.0 cr)
- ESPM 5245 - Sustainable Land Use Planning and Policy (3.0 cr)
- LA 5413 - Introduction to Landscape Architectural History (3.0 cr)
- LA 5514 *{Inactive}*(3.0 cr)
- PA 5211 - Land Use Planning (3.0 cr)
- PA 5253 *{Inactive}*(3.0 cr)
- PA 5271 - Geographic Information Systems: Applications in Planning and Policy Analysis (3.0 cr)
- PA 5511 - Community Economic Development (3.0 cr)
- PA 5221 - Private Sector Development (3.0 cr)
- MST 5011 - Museum History and Philosophy (3.0 cr)
- MST 5012 - Museum Practices (3.0 cr)

Metropolitan Design

This sub-plan is limited to students completing the program under Plan A, Plan B, or Plan C.

The metropolitan design track of the architecture MS is an advanced program intended for individuals who are keenly interested in the study of cities and their metropolitan regions. The track combines strong design instruction supported by applied research courses in urban design history and theory. The objective is to train students to work across a large range of urban scales and become familiar with the social, ecological, economic, and political interactions that eventually shape the quality of city living. It is open to professionals from the design disciplines and provides concurrent options for graduate students enrolled in the M.Arch and MLA professional programs. Concurrent students must graduate from the Architecture MS (metropolitan design track) after they have successfully completed their professional programs.

Required Coursework

Take the following courses for a total of 12 credits:
ARCH 5711 - Theory and Principles of Urban Design (3.0 cr)
ARCH 5721 - Case Studies in Urban Design (3.0 cr)
ARCH 8255 - Graduate Architectural Design V (6.0 cr)

Electives Outside Architecture

Take at least 6 credits outside the major, in consultation with the advisor or director of graduate studies.
Take 6 - 7 credit(s) from the following:

- PA 5501 - Theories and Policies of Development (3.0 cr)
- PA 5511 - Community Economic Development (3.0 cr)
- HSG 5467 *{Inactive}*(4.0 cr)
- HSG 5463 - Housing Policy (3.0 cr)
- LA 5405 - Interdisciplinary Studies in Landscape Architecture (1.0 - 6.0 cr)
- LA 5204 - Metropolitan Landscape Ecology (3.0 cr)

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•PA 5721 - Energy Systems and Policy (3.0 cr)
•PA 5722 - Economics of Environmental Policy (3.0 cr)
•PA 5723 - Water Policy (3.0 cr)
•PA 5204 *{Inactive}*(3.0 cr)
•PA 5211 - Land Use Planning (3.0 cr)
•PA 5212 - Managing Urban Growth and Change (3.0 cr)
•PA 5231 - Transit Planning and Management (3.0 cr)
•PA 5261 - Housing Policy (3.0 cr)
•PA 5802 *{Inactive}*(3.0 cr)

Remaining Electives

Take elective credits from the following list, in consultation with the advisor or director of graduate studies, to meet minimum major and total course credit requirements:

Take 6 - 7 credit(s) from the following:

•ARCH 5410 - Topics in Architectural History (3.0 cr)
•ARCH 5441 - Minnesota: Architecture and Landscapes (3.0 cr)
•ARCH 5731 - Territorial City (3.0 cr)
•ARCH 5671 - Historic Preservation (3.0 cr)
•ARCH 5361 *{Inactive}*(3.0 cr)
•ARCH 5750 - Topics in Urban Design (1.0 - 4.0 cr)
•PA 5511 - Community Economic Development (3.0 cr)
•HSG 5467 *{Inactive}*(4.0 cr)
•LA 5405 - Interdisciplinary Studies in Landscape Architecture (1.0 - 6.0 cr)
•ARCH 8561 - Sustainable Design Theory and Practice (3.0 cr)
•LA 5204 - Metropolitan Landscape Ecology (3.0 cr)
•PA 5721 - Energy Systems and Policy (3.0 cr)
•PA 5722 - Economics of Environmental Policy (3.0 cr)
•PA 5723 - Water Policy (3.0 cr)
•PA 5204 *{Inactive}*(3.0 cr)
•PA 5211 - Land Use Planning (3.0 cr)
•PA 5212 - Managing Urban Growth and Change (3.0 cr)
•PA 5231 - Transit Planning and Management (3.0 cr)
•PA 5261 - Housing Policy (3.0 cr)
•PA 5802 *{Inactive}*(3.0 cr)

Plan A Requirements

Take 10 master's thesis credits.

ARCH 8777 - Thesis Credits: Master's (1.0 - 18.0 cr)

Research Practices

This sub-plan is limited to students completing the program under Plan C.

The Research Practices track addresses two goals: providing a structured path to licensure totaling seven years, and integrating research with practice.

MS-RP students are required to maximize their progress toward completing the Architectural Experience Program (AXP) during their MS program. This means work in a firm or other AXP setting is required while enrolled in the program, including each semester and summer between semesters. Exceptions will be made for extraordinary circumstances (such as grant-funded research or personal situation).

Required Coursework

Take the following courses for a total of 18 credits:

ARCH 5609 - Development and Implementation of Research (3.0 cr)
ARCH 5621 - Professional Practice in Architecture (3.0 cr)
ARCH 5651 - Building Stories (3.0 cr)
ARCH 5686 - Research Practices Final Project: Research into Practice (4.0 cr)
ARCH 5687 - Research Practices Final Project: Practice into Research (4.0 cr)
ARCH 5688 - Built Environments Research Practices Colloquium (1.0 cr)

Required Practicum

Take the following course twice:

ARCH 5630 - Practicum: Advanced Issues in Practice (3.0 cr)

Electives

Take two 3-credit elective courses from architecture or non-architecture offerings, in consultation with the adviser or director of graduate studies.

ARCH 5xxx
ARCH 8xxx
xxxx 5xxx

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