

Architecture

Program Requirements

M. Architectural Studies (6.0 credits)

General Requirements:

1. 3.5 credits in core courses	3.5
2. 0.5 credit in elective course credit	0.5
3. 2.0 credits in thesis, which must be defended at an oral examination	2.0
Total Credits	6.0

Specific Requirements:

Year 1

Fall Term

ARCH 5301 [0.5]	Seminar: Vitruvian Exercises I
ARCN 5301 [0.5]	Workshop: Daedalic Exercises I
ARCH 5101 [1.0]	Colloquium I

Winter Term

ARCH 5302 [0.5]	Seminar II: Vitruvian Exercises II
ARCN 5302 [0.5]	Workshop: Daedalic Exercises II
ARCH 5101 [1.0]	Colloquium I

Year 2

Fall Term

ARCH 5003 [0.5]	Design and Culture Workshop
ARCT 5909 [2.0]	M.A.S. Thesis ¹

Winter Term

ARCT 5909 [2.0]	M.A.S. Thesis ¹
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¹ ARCT 5909 [2.0] normally extends over two terms.

M. Architecture 2-year stream (8.0 credits)

General Requirements (8.0 credits):

1. 2.0 credits in core courses	2.0
2. 1.0 credit in elective courses	1.0
3. 3.0 credits in studio courses	3.0
4. 2.0 credits in Thesis, which must be defended at an oral examination	2.0
Total Credits	8.0

Specific Requirements:

Year 1

Fall Term

ARCH 5200 [0.5]	Graduate Seminar 1: Introduction to Critical Thought in Architecture
ARCC 5100 [0.5]	Advanced Building Systems
ARCS 5105 [1.5]	Graduate Studio 1
ARCC 5200 [0.5] or 0.5 credit elective from courses at the 5000-level or above, approved by the Associate Director (Graduate Programs)	

Winter Term

ARCH 5201 [0.5]	Graduate Seminar 2: Contemporary Theoretical Perspectives in Architecture
ARCS 5106 [1.5]	Graduate Studio 2
0.5 credit in elective from courses at the 5000-level or above, approved by the Associate Director (Graduate Programs)	

Year 2

Fall Term

ARCS 5909 [2.0]	Thesis - Independent Study (See Note 1, below)
or ARCN 5909 [2.0]	Thesis - Directed Research Studio (DRS)

ARCC 5200 or 0.5 credit elective from courses at the 5000-level or above, approved by the Associate Director (Graduate Programs)

Winter Term

ARCS 5909 [2.0]	Thesis - Independent Study (See Note 1, below)
or ARCN 5909 [2.0]	Thesis - Directed Research Studio (DRS)

0.5 credit in elective from courses at the 5000-level or above, approved by the Associate Director (Graduate Programs)

M. Architecture 3-year stream (13.0 credits)

General Requirements (13.0 credits) - Program Core Curriculum

1. 1.5 credits in core courses	1.5
2. 6.0 credits in studio courses	6.0
3. 1.0 credit in History/Theory elective	1.0
4. 2.5 credits in electives	2.5
5. 2.0 credits in:	2.0
ARCN 5909 [2.0]	Thesis - Directed Research Studio (DRS) (which must be defended at an oral examination)
Total Credits	13.0

In addition to the Program Core Curriculum, the following courses are required in order to meet the Accreditation requirements (Student Performance Criteria) of the Professional Program. The following Professional Curriculum may serve to fulfill the elective requirements in the Core Program.

1. 3.0 credits in Architectural Technology courses	3.0
2. 1.5 credits in comprehensive studio courses	1.5
3. 0.5 credit in Computer Modeling	0.5
4. 1.0 credit in History/Theory of Architecture courses	1.0
Total Credits	6.0

Specific Requirements - Core Curriculum

Year 1

Fall Term

0.5 credit in elective	
ARCS 5102 [1.5]	M.Arch. 1 - Studio I
0.5 credit in History and Theory elective	

Winter Term

0.5 credit in elective	
ARCS 5103 [1.5]	M.Arch. 1 - Studio II
0.5 in elective	

Year 2

Fall Term

ARCH 5200 [0.5]	Graduate Seminar 1: Introduction to Critical Thought in Architecture
0.5 credit in elective	
ARCS 5105 [1.5]	Graduate Studio 1

Winter Term

ARCH 5201 [0.5]	Graduate Seminar 2: Contemporary Theoretical Perspectives in Architecture
0.5 credit in elective	

ARCS 5106 [1.5]	Graduate Studio 2	
Year 3		
Fall Term		2.5
ARCN 5909 [2.0]	Thesis - Directed Research Studio (DRS)	
ARCC 5200 [0.5]	Professional Practice	
Winter Term		0.5
ARCN 5909 [2.0]	Thesis - Directed Research Studio (DRS)	
0.5 credit in History and Theory elective		
Total Credits		13.0

Professional Curriculum Course List

ARCC 5096 [0.5]	Building Technology I
ARCH 5010 [0.5]	History and Theory of Modern Architecture
ARCC 5097 [0.5]	Building Technology II
ARCN 5000 [0.5]	Directed Studies in Computer-Aided Design
ARCN 5005 [0.5]	Theory and Practice of Architectural Representation
ARCC 5098 [0.5]	Building Technology III
ARCC 4500 [0.5]	Design Economics
ARCS 5104 [1.5]	M.Arch. 1 - Studio III
ARCC 5099 [0.5]	Building Technology IV
ARCC 5100 [0.5]	Advanced Building Systems

Core and Professional Curriculum

Year 1		
Fall Term		3.0
ARCC 5096 [0.5]	Building Technology I	
ARCS 5102 [1.5]	M.Arch. 1 - Studio I	
ARCH 5010 [0.5]	History and Theory of Modern Architecture	
ARCN 5005 [0.5]	Theory and Practice of Architectural Representation	
Winter Term		2.5
ARCC 5097 [0.5]	Building Technology II	
ARCS 5103 [1.5]	M.Arch. 1 - Studio II	
ARCN 5000 [0.5]	Directed Studies in Computer-Aided Design	
Summer		2.0
ARCC 5098 [0.5]	Building Technology III	
ARCS 5104 [1.5]	M.Arch. 1 - Studio III	
Year 2		
Fall Term		2.5
ARCC 4500 [0.5]	Design Economics	
ARCC 5100 [0.5]	Advanced Building Systems	
ARCS 5105 [1.5]	Graduate Studio 1	
Winter Term		2.5
ARCH 5201 [0.5]	Graduate Seminar 2: Contemporary Theoretical Perspectives in Architecture	
ARCC 5200 [0.5]	Professional Practice	
ARCS 5106 [1.5]	Graduate Studio 2	
Year 3		
Fall Term		3.0
ARCH 5200 [0.5]	Graduate Seminar 1: Introduction to Critical Thought in Architecture	
ARCC 5099 [0.5]	Building Technology IV	

ARCN 5909 [2.0]	Thesis - Directed Research Studio (DRS)	
Winter Term		0.0
ARCS 5909 [2.0]	Thesis - Independent Study	
Total Credits		15.5

Notes:

1. ARCS 5909 [2.0] Thesis - Independent Study and ARCN 5909 [2.0] Thesis - Directed Research Studio (DRS) normally extend over two terms. This project will follow guidelines prescribed by the Associate Director (Graduate Programs).
2. The thesis is expected to include both a written text and a design component with appropriate modes of two and three-dimensional representation, including digital. Final thesis documentation must satisfy the requirements established by the Faculty of Graduate and Postdoctoral Affairs.

Ph.D. Architecture (10.0 credits)

Students admitted to the PhD program in Architecture will be required to complete the following 10.0 credits:

- 1.0 credit in core Workshop courses
- 1.0 credit in core Seminar courses
- 2.0 credits in PhD. Colloquium
- 1.0 credit in comprehensive examination
- 1.0 credit in dissertation proposal examination
- 4.0 credits in oral defence of thesis

Specific Requirements:

Year 1		
Fall term		
ARCH 6001 [0.5]	Seminar: Vitruvian Exercises I	
ARCN 6001 [0.5]	Workshop: Daedalic Exercises I	
ARCH 6101 [1.0]	Colloquium I *	
Winter term		
ARCH 6002 [0.5]	Seminar II: Vitruvian Exercises II	
ARCN 6002 [0.5]	Workshop: Daedalic Exercises II	
ARCH 6101 [1.0]	Colloquium I *	
Year 2		
ARCH 6102 [1.0]	Colloquium II	
ARCH 6907 [1.0]	Ph.D. Comprehensive Examination	
ARCH 6908 [1.0]	Ph.D. Proposal Examination *	
Year 3		
ARCH 6909 [4.0]	Ph.D. Dissertation	

Note(s):

* ARCH 6101 [1.0] Colloquium I, ARCH 6102 [1.0] Colloquium II, ARCH 6907 [1.0] Ph.D. Comprehensive Examination, ARCH 6908 [1.0] Ph.D. Proposal Examination are 1.0-credit courses and extend over two terms.

Graduate Diploma in Architectural Conservation (4.0 credits)

Requirements:

Fall term		
CDNS 5401 [0.5]	Heritage Conservation I: History, Principles, and Concepts	0.5

ARCH 4002 [0.5]	Canadian Architecture	0.5
ARCU 5402 [0.5]	Workshop: Urban Studies in Heritage Conservation	0.5
ARCH 4200 [0.5]	Architectural Conservation Philosophy and Ethics	0.5
Winter term		
CDNS 5402 [0.5]	Heritage Conservation II: Theory in Practice	0.5
ARCN 5100 [0.5]	Representation and Documentation in Architectural Conservation	0.5
ARCH 5402 [0.5]	Evaluation of Heritage Properties	0.5
ARCC 5401 [0.5]	Workshop: Technical Studies in Heritage Conservation	0.5
Total Credits		4.0

Architecture-MAS (ARCT) Courses

ARCT 5909 [2.0 credits]

M.A.S. Thesis

A scholarly written thesis supported by methods of two and three-dimensional representation. Research undertaken by the student is expected to engage a topic in the culture of practice in Architecture. Proposals must be approved by the graduate committee of the Azrieli School of Architecture and Urbanism. Urban (ARCU).

Architecture - Studio (ARCS) Courses

ARCS 5102 [1.5 credit]

M.Arch. 1 - Studio I

Sensory components of architecture: use, effect, and symbolic potential. Light, lighting, sound, sensation of heat and cold, and related phenomena studied in modest building proposals. Social considerations of architecture. The conventions of architectural drawing. Computer Modeling as a medium of architectural analysis, documentation, and presentation.

ARCS 5103 [1.5 credit]

M.Arch. 1 - Studio II

Building materials and practices within the context of increasingly complex building programs. Social context of architecture in relation to material expression. Modeling is stressed. (Core course).

ARCS 5104 [1.5 credit]

M.Arch. 1 - Studio III

A comprehensive studio dealing with issues of program and site as the culturally defining aspects of architectural practice within complex urban and social situations, using difficult sites and hybrid programs. Projects brought to a high degree of technical, formal, and graphic resolution. (Core Course).

ARCS 5105 [1.5 credit]

Graduate Studio 1

An architectural investigation within a contemporary urban setting, usually dealing with central-city sites and complex programs. Projects address the question of urban architecture both from practical and theoretical perspectives. Architecturally relevant building technology and systems will be introduced in the Studio as required.

ARCS 5106 [1.5 credit]

Graduate Studio 2

The design of a large-scale and culturally significant building project, set within a prominent urban or natural landscape. Integrated resolution of the combined issue of site, program, and expression is expected. Architecturally relevant building technology and systems will be introduced in the Studio as required.

Prerequisite(s): ARCS 5105.

ARCS 5909 [2.0 credits]

Thesis - Independent Study

Student-initiated design investigation, developed with a thesis supervisor, supported by text and appropriate methods of two and three-dimensional representation. Proposals must be approved by the Graduate Committee of the Azrieli School of Architecture and Urbanism. M.A.S. Thesis (ARCT).

Architecture - Technical (ARCC) Courses

ARCC 5000 [0.5 credit]

Directed Studies in Architecture and Technology

Reading and research tutorials.

Prerequisite(s): permission of the School.

ARCC 5001 [0.5 credit]

Introduction to Design and Multimedia

Multimedia and interactive design as they relate to architecture and the field of design. Special topics include virtual environments, user interface in software, Web and product design, perceptual and cognitive science, navigation, film/video and sound editing and animation technologies.

ARCC 5002 [0.5 credit]

Topics in Design and Multimedia: Information Architecture and the World Wide Web

Introduction to the design of Web-based applications, focusing on process, site architecture, usability testing, and Web functionality. Students synthesize and customize software applications. Client and server-side functionality. Introduction to relational database design, JavaScript, cgi scripts, and «middleware» products such as WebObjects and ColdFusion.

ARCC 5003 [0.5 credit]

Design and Technology Workshop

The prime objective of the workshop is to investigate issues in architectural design in relation to technology as a cultural paradigm. The workshop operates as a directed study with specific content, objectives, and scheduling arranged between student and academic advisor.

ARCC 5096 [0.5 credit]

Building Technology I

General introduction to materials and methods of construction with particular focus on wood and timber frame construction. Site conditions, foundations, structure and envelope in terms of their response to local climate: sun (light and heat), wind, moisture.

ARCC 5097 [0.5 credit]**Building Technology II**

Technical issues involved in architectural design of buildings from ancient times to the present. Technological innovation and materials related to structural developments, and the organization and design of structures. Basic concepts of equilibrium, and mechanics of materials. Final projects developed in conjunction with design studio.

ARCC 5098 [0.5 credit]**Building Technology III**

Wood frame, post and beam, steel and concrete systems and construction techniques. Structural systems and building envelope principles and practice are explored in conjunction with mechanical and electrical systems in small buildings. Final projects developed in conjunction with design studio.

ARCC 5099 [0.5 credit]**Building Technology IV**

Medium scale steel, concrete, and wood frame buildings as case studies to explore approaches to building science principles, building envelope design, advanced construction methods and materials, acoustics and sound control, and fire protection, with a focus on sustainable design strategies and environmental impact.

ARCC 5100 [0.5 credit]**Advanced Building Systems**

Introduction to advanced design in building technology and systems integration. Leading edge building materials, technologies and philosophies will be explored through intensive case study research and analysis, comparing, and critically evaluating, traditional methods with current computer modeling and analysis techniques.

ARCC 5200 [0.5 credit]**Professional Practice**

The practice of architecture. Professional organization and conduct, the architect's services, business law, office organization and management, contract documents, building codes, contract management, cost control, accounting and site supervision. Guest speakers and case studies.

Precludes additional credit for ARCU 4200.

ARCC 5401 [0.5 credit]**Workshop: Technical Studies in Heritage Conservation**

Prerequisite(s): permission of the School.

ARCC 5500 [0.5 credit]**Advanced Design Economics**

Principles of building economics. Determinants and prediction of building costs. Uncertainty and investment economics. Creative cost control for buildings during schematic design, design development, construction document preparation and construction. Economic evaluation during all phases of design process; emphasis on sustainable strategies.

ARCC 5909 [2.0 credits]**M.Arch. Post-Professional Thesis (Design and Technology)**

Basic or applied research in architectural, industrial, and digital design. Areas include interactive education/training, product/interface design, programming/scripting, culture/technology, or research as defined by the student. Proposals must be approved by the Graduate Committee of the Azrieli School of Architecture and Urbanism. Final thesis documentation must satisfy the requirements established by the Faculty of Graduate Studies.

Architecture - Techniques (ARCN) Courses**ARCN 5000 [0.5 credit]****Directed Studies in Computer-Aided Design**

Reading and research tutorials.

Prerequisite(s): permission of the School.

ARCN 5001 [0.5 credit]**Directed Studies in Architecture and Morphology**

Reading and research tutorials.

Prerequisite(s): permission of the School.

ARCN 5005 [0.5 credit]**Theory and Practice of Architectural Representation**

Free-hand drawing as a way of observing and understanding the world. Various media and techniques introduced through a wide range of studio and outdoor exercises. (Theory/History Elective).

ARCN 5100 [0.5 credit]**Representation and Documentation in Architectural Conservation**

An in-depth study of the conventions and history of heritage recording including traditional field survey, photogrammetry, laser scanning technologies, and hybrid representations.

Workshop, six hours a week (including field trips and on-site work).

ARCN 5101 [0.5 credit]**Interactive Design Workshop I**

An intensive introduction to the design of interactive environments, using multimedia software including Adobe Photoshop, Illustrator, Premiere, Macromedia, Dreamweaver, Fireworks, Director, 3D Modeling programs, and sound editing. Basic design, graphic design, and software literacy. Presentations by design professionals.

ARCN 5102 [0.5 credit]**Interactive Design Workshop II**

An introduction to the logistic aspects of producing multimedia products with an emphasis on usability testing and user interface design. Topics include: storyboarding and graphic design, instructional design, rapid prototyping, project streaming, management and marketing, technical writing and product evaluation. Organized as a seminar. Work is done in teams.

ARCN 5301 [0.5 credit]**Workshop: Daedalic Exercises I**

Experimental mediation, materiality and making.

ARCN 5302 [0.5 credit]**Workshop: Daedalic Exercises II**

Innovative mediation, materiality and making.

ARCN 5909 [2.0 credits]**Thesis - Directed Research Studio (DRS)**

An intensive research-based design project. The unit is initiated and guided by a faculty member engaged in organized research. Proposals must be approved by the Graduate Committee of the Azrieli School of Architecture and Urbanism.

ARCN 6001 [0.5 credit]**Workshop: Daedalic Exercises I**

Experimental mediation, materiality and making. This course is required of all first year doctoral students in architecture.

ARCN 6002 [0.5 credit]**Workshop: Daedalic Exercises II**

Experimental mediation, materiality and making. This course is required of all first year doctoral students in architecture.

ARCN 6901 [0.5 credit]**Placement in Architecture**

An opportunity to earn academic credit by engaging in research activities under the supervision of a professional architect or researcher in architectural, government, non-governmental or other professional settings. Placement research must be related to the preparation of the doctoral research. Design Studios/Design Thesis/Research (ARCS).

Architecture - Theory/History (ARCH) Courses**ARCH 5000 [0.5 credit]****Directed Studies in History and Theory of Architecture**

Reading and research tutorials.

Prerequisite(s): permission of the School.

ARCH 5001 [0.5 credit]**Architecture Seminar 1**

An introduction to the intellectual frameworks connecting design and culture as manifest in theories of culture and architecture. The seminar builds on previous undergraduate studies, and is not an introduction to these fields. The field of inquiry is both historical and contemporary.

ARCH 5002 [0.5 credit]**Architecture Seminar II**

A continuation of ARCH 5001, this seminar follows the same general description, but concentrates more on architectural design, on the contemporary condition, and on the ways of thinking that characterize embodiment of cultural content in architecture and other artifacts.

Prerequisite(s): ARCH 5001.

ARCH 5003 [0.5 credit]**Design and Culture Workshop**

The prime objective of the workshop is to investigate cultural issues in architectural design. The workshop operates as a directed study with specific content, objectives, and scheduling arranged between student and academic advisor.

ARCH 5010 [0.5 credit]**History and Theory of Modern Architecture**

Architectural and urban ideals of modernism with emphasis upon the development of the avant-garde in the early twentieth century. The phenomenon of modern architecture within the broader framework of the development of western thought.

ARCH 5100 [0.5 credit]**Directed Studies in Architecture and Society**

Reading and research tutorials.

Prerequisite(s): permission of the School.

ARCH 5101 [1.0 credit]**Colloquium I**

This seminar brings together graduate students with architectural faculty to present their work-in-progress. It focuses on an immersion in conventions of theoretical and methodological approaches to advanced architectural research, including research ethics, proposal writing and research funding.

ARCH 5200 [0.5 credit]**Graduate Seminar 1: Introduction to Critical Thought in Architecture**

Critical theories and research approaches relevant to the field of architecture. Identification of issues through a coordinated series of lectures and readings. Development of analytical and interpretative skills through seminar discussions and writing culminating in a scholarly position paper by the student.

ARCH 5201 [0.5 credit]**Graduate Seminar 2: Contemporary Theoretical Perspectives in Architecture**

Lectures, readings, and case studies on contemporary issues in architecture and allied fields of study. Critical analysis of trends and possibilities set against traditional modes of architectural thought and practice. This course serves as a forum for a preliminary articulation of the thesis proposal.

Prerequisite(s): ARCH 5200.

ARCH 5301 [0.5 credit]**Seminar: Vitruvian Exercises I**

Investigation of the cunning and graphic intelligence of architects: i.e. architectural modes of research.

ARCH 5302 [0.5 credit]**Seminar II: Vitruvian Exercises II**

Seminar II builds upon the fall term with a focus on the study of the fabric of architectural theory stretched within the marble loom of construction. This course is required of all first year M.A.S. students.

ARCH 5402 [0.5 credit]**Evaluation of Heritage Properties**

The cultural, political, economic and legal factors that shape our definition of heritage architecture. Processes for and implications of heritage designation, cultural value and costs associated with restoration and ongoing preservation. (Theory/History Elective).

Lectures, three hours a week.

ARCH 5600 [0.5 credit]**Housing and Culture Seminar**

Housing as a function of social organization, demographics, market demand and governmental policies.

The evolution of housing form, the role of the state, and the participation of architects in the housing marketplace promoting design as a form of social reform.

Precludes additional credit for ARCH 4201.

ARCH 5909 [2.0 credits]**M.Arch. Post-Professional Thesis (Architecture and Cultural Diversity)**

A scholarly, written thesis supported by appropriate methods of two and three-dimensional representation.

Research undertaken by the student is expected to engage one of the research topics outlined above.

Proposals must be approved by the graduate committee of the Azrieli School of Architecture and Urbanism. Final thesis documentation must satisfy the requirements established by the Faculty of Graduate and Postdoctoral Affairs.

ARCH 6001 [0.5 credit]**Seminar: Vitruvian Exercises I**

Investigation of the cunning and graphic intelligence of architects: i.e. architectural modes of research. This course is required of all first year doctoral students in architecture.

ARCH 6002 [0.5 credit]**Seminar II: Vitruvian Exercises II**

Seminar II builds upon the fall term with a focus on the study of the fabric of architectural theory stretched within the marble loom of construction. This course is required of all first year doctoral students in architecture.

ARCH 6101 [1.0 credit]**Colloquium I**

This seminar brings together doctoral students with architectural faculty to present their work-in-progress. Immersion in conventions of theoretical and methodological approaches to advanced architectural research, including research ethics, proposal writing and research funding. This course is required of all first year doctoral students in architecture.

ARCH 6102 [1.0 credit]**Colloquium II**

This seminar continues to bring together doctoral students with architectural faculty and guest lecturers to present their work-in-progress. This course is required of all students enrolled in the Ph.D. program from the second year through until completion of the dissertation.

ARCH 6907 [1.0 credit]**Ph.D. Comprehensive Examination**

Students must demonstrate to their thesis advisory committees a sufficiently broad background in the theoretical and topical area literatures and constructions relevant to their individual projects.

ARCH 6908 [1.0 credit]**Ph.D. Proposal Examination**

Students must demonstrate to thesis advisory committees their ability to link theory to a work or practice of architecture. This examination requires the preparation of a drawing or a model, to then be discussed within a theoretical framework during the oral part of the exam.

ARCH 6909 [4.0 credits]**Ph.D. Dissertation**

The dissertation will be comprised of two critical modes of investigation of equal importance: a speculative project and a research text. The speculative project is realized using specific traditional and non-traditional media as deemed appropriate.

Architecture - Urban (ARCU) Courses**ARCU 5000 [0.5 credit]****Directed Studies in Architecture and the City**

Reading and research tutorials.

ARCU 5402 [0.5 credit]**Workshop: Urban Studies in Heritage Conservation**

Prerequisite(s): permission of the School.

Summer session: some of the courses listed in this Calendar are offered during the summer. Hours and scheduling for summer session courses will differ significantly from those reported in the fall/winter Calendar. To determine the scheduling and hours for summer session classes, consult the class schedule at central.carleton.ca

Not all courses listed are offered in a given year. For an up-to-date statement of course offerings for the current session and to determine the term of offering, consult the class schedule at central.carleton.ca