

# Faculty of Architecture

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## Environmental Design Program

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### Introduction to the Faculty of Architecture

The teaching of architecture began in 1913 as a four-year degree program within the Faculty of Arts. In 1920 the program became a part of the newly established Faculty of Engineering and Architecture. In 1938 a three year diploma program in interior decoration was established. In 1945 the departments of Architecture and Interior Decoration were combined in the School of Architecture and Fine Arts. In 1948 the entire school was reorganized as the School of Architecture. The professional architecture degree became a five year program; and a new four year Bachelor of Interior Design degree was also introduced. In 1949 a one year graduate program in Community Planning was established. In 1957 the Manitoba Legislature approved a grant for the construction of a building for the School of Architecture, the first in Canada to be designed exclusively for architecture education. In 1963 the school was reconstituted as the Faculty of Architecture and a two-year graduate program leading to the degree, Master of City Planning, was introduced.

In 1966 the curriculum in Architecture was reorganized so that the degree, Bachelor of Environmental Studies, became the prerequisite for the professional programs in Architecture and Landscape Architecture. This was followed in 1970 with a new curriculum leading to the professional degree, Master of Architecture, and two years later with new curriculum leading to a Master of Landscape Architecture. In 1990 an admissions year of 30 credit hours of Arts and Sciences courses became a prerequisite for entry into Environmental Design.

In 1998 the Bachelor of Environmental Design (B.Env.D.) became an undergraduate program consisting of two years of shared design studies followed by a third year in one of the 'professional options'. These options included Architecture, City Planning, Interior Design, and Landscape Architecture. University 1 was introduced as a prerequisite for admission to the Environmental Design Program. In 2006 the Faculty of Architecture began to reform the Environmental Design Program to create a four year undergraduate design program by including University 1 in its curriculum offerings. In 2007 the Faculty of Architecture introduced a four year design program consisting of two years of common 'Foundation Studies' (ED1/U1 and ED2) followed by two years of pre-professional 'Intermediate Studies' years (ED3 and ED4). The third and fourth years are referred to as the 'Option Years' and include Architecture, Interior Environments and Landscape + Urbanism (a shared option between City Planning and Landscape Architecture).

The B.Env.D. program is envisioned as a strong multidisciplinary undergraduate degree in its own right. It provides a solid base of design education for students intending to pursue careers and/or graduate studies in a wide variety of disciplines, including the Faculty's Master's degrees in Architecture, City Planning, Interior Design and Landscape Architecture, and at other institutions globally.

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## SECTION 1: Degree Programs Offered

Programs		
Program/Degree	*Years to Complete	Total Credit Hours
Bachelor of Environmental Design	4	129
Bachelor of Environmental Design AMP (does not require the completion of University 1)	2	66

### Available Options

Effective September 2008, the Bachelor of Environmental Design Degree Program has been reformed to require students to declare a specific program Option after the second year of studies (ED2) in the Environmental Design Program. Of the approximately 100 students moving into the third year of studies (ED3), admission into the Options will be divided equally. Students will be required to rank their program options in order of preference (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> choice). The selection of students into these Options will be based on the GPA, a Portfolio and Statement of Intent. Students entering the program should be aware that entry into the Options will be assigned on a competitive basis, and that not all students may be successfully placed in their first choice. Students who have not completed 2<sup>nd</sup> year studios or who still have more than 1 three credit hour lecture course to complete will not be eligible for admission into the Option years.

### Architecture Option

The Architecture Option offers a program of studies that focuses on transforming the lessons of history, technology, culture, the environment, and

regional and social aspirations into a program for architecture. Students have the academic freedom, one of the program's highlights, to experiment with ideas and methods as they develop their own personal and critical approaches to architectural design. The sequential design studios and supporting courses cover a wide spectrum of investigations ranging in scale from urban design to individual buildings to their construction details, examining the impact of all of these on the environment.

#### Interior Environments Option (not available to AMP students)

The Interior Environments Option provides an opportunity to study the design of interior spaces within the context of architecture and to investigate the design of objects within the contexts of the human body and interior spaces. Students enrol in a series of design studios and courses to explore the impact of interior environments on human beings and vice versa. The impact of technology – especially sustainable strategies – on buildings and their inhabitants is also studied.

#### Landscape + Urbanism Option (not available to AMP students)

The departments of Landscape Architecture and City Planning offer a joint option in Landscape + Urbanism for students who have a broad interest in understanding and shaping human settlement and habitat. Design studios and supporting courses recognize that we live in an increasingly globalized world where issues of natural resource depletion, climate change and the demand for sustainable development are paramount. Design and planning issues are addressed within the social, economic, and political contexts that drive development and of the cultural and ecological forces that create the built environment.

#### Available Streams (only available to AMP students)

AMP students entering either Stream one or Stream Two of the program will enter into the Architecture Option years three (AMP 1's) or four (AMP 2's) as outlined above.

## SECTION 2: Admission Requirements

### 2.1 Bachelor of Environmental Design (B.Env.D)

To be considered for admission into the Bachelor of Environmental Design Program an applicant must have completed 30 credit hours of university-level coursework with an overall minimum adjusted grade point average of 2.50. For a detailed outline of the admission requirements please see our web site at [umanitoba.ca/environmentaldesign](http://umanitoba.ca/environmentaldesign).

### 2.2 Bachelor of Environmental Design Architecture Masters Preparation Program (AMP)

Enrollment in the Environmental Design Masters Preparation Program is competitive and limited. Students will be admitted on the basis of an annual selection process. Applicants satisfying the minimum academic requirements are eligible for consideration at the discretion of the Department of Architecture Admissions Selection Committee. For a detailed list of the admission requirements please see our web site at [umanitoba.ca/architecture](http://umanitoba.ca/architecture).

## SECTION 3: Faculty Academic Regulations

### 3.1 Undergraduate Scholastic Standards

A Grade Point Average (GPA) of 2.00 is required as an acceptable standard of performance.

A minimum grade of 'C' is required to pass all courses offered by the Environmental Design Program and by the Departments within the Faculty. All courses offered by the Environmental Design Program stipulate a grade of "C" in the prerequisite course(s).

To be eligible for the degree of Bachelor of Environmental Design a student is required to complete a minimum of two full academic years of studies in the Environmental Design Program including Years 3 and 4.

### 3.2 Supplementary Regulations

Special regulations governing admission, attendance, withdrawals, examinations, grading procedures and curriculum requirements are on file in the general office of the Environmental Design Program, Faculty of Architecture.

### 3.3 Dean's Honour List

Students who achieve a term GPA of 4.0 or better, while registered in 80 per cent of a full course load will be included in the Dean's Honour List for the Faculty of Architecture.

## SECTION 4: Program and Graduation Requirements

### 4.1 Bachelor of Environmental Design

The Bachelor of Environmental Design Degree is a four year program of studies consisting of two years of common 'Foundation Studies' (ED1/U1 and ED2) followed by two years of 'pre-professional 'Intermediate Studies' (ED3 and ED4). The third and fourth years are referred to as the 'Option Years' and include Architecture, Interior Environments and Landscape + Urbanism (a shared option between City Planning and Landscape Architecture). Typically students entering the Environmental Design Program are admitted after completion of the admission requirements.

		Foundation Studies	
Apply to University 1		ED1 / U1	
Apply to Environmental Design Program	ED2		
		Intermediate Studies (Option Years)	
Apply to Option	ED 3 Arch Option	or ED 3 IE Option	or ED 3 L + U Option
	ED 4 Arch Option	or ED 4 IE Option	or ED 4 L + U Option

The Foundation Studies of the Environmental Design Program provide a solid grounding in the basic knowledge and language shared by all of the environmental design disciplines. It also provides opportunity to develop interdisciplinary perspectives through the other academic units in the University of Manitoba. Students come to understand the holistic nature of environmental design and, at an early stage, begin to establish a rich and multidisciplinary dialogue with their peers in the Faculty of Architecture. It also enables students to discover their strengths and interests relating to a particular environmental design discipline.

The Intermediate Studies of the Environmental Design Program provide opportunities to pursue a specific professional design discipline including Architecture, City Planning, Interior Design and Landscape Architecture. The third and fourth years are spent studying in the Option Years where students are exposed to, and challenged by, academic and professional design theories and practices specific to a particular design discipline.

Overall, the curriculum is structured around a design studio sequence that provides a forum for exploring the complex relationships between humans and the natural and built environments that constitute the places and artifacts of cultural production. Over a four year period, a student will develop the necessary knowledge and skills to pursue work in a wide variety of design practices.

The professional options are an important curriculum link to the graduate programs. Students holding a B.Env.D degree are eligible to apply to the graduate departments of Architecture, City Planning, Interior Design and Landscape Architecture and to other graduate programs globally. Students who have completed a design degree may be eligible to apply to the graduate program. Interested students should consult the *Graduate Calendar*, Faculty of Architecture.

In order to be eligible for the Bachelor of Environmental Design Degree students must complete ED2, ED3 and ED4 (total 129 credit hours). Admission enrollment is limited to 100 students on a competitive basis.

## Course Sequence

### Foundation Studies (Years 1 and 2)

#### Year 1/Admissions Requirement

Course No.	Credit Hours
EVDS 1600 Introduction to Environmental Design	3
EVDS 1602 Visual Literacy	3
EVDS 1660 History of Culture, Ideas and Environment 1	3
EVDS 1670 History of Culture, Ideas and Environment 2	3
Arts/Environment	3
Arts/Environment	3
Science/Environment	3
Science/Environment	3
Arts/Science/Environment	3
Arts/Science/Environment	3
Total Credit Hours	30

#### Year 2

EVDS 2100 Urban Media Lab (Pre-Fall)	3
EVDS 2600 Tectonic Precedent	3
EVDS 2200 Ecology and Design	3
EVDS 2300 Materials, Structures and Assemblies	3
EVDS 2702 Natural and Human Systems	3
EVDS 2400 Visual Media 1	3
EVDS 2800 Visual Media 2	3
EVDS 2500 Design Studio 1	6
EVDS 2900 Design Studio 2	6
Total Credit Hours	33

### INTERMEDIATE STUDIES (Option Years 3 and 4)

#### Year 3: Architecture Option

EVAR 3000 Pre-Modern Architecture History and Theory 1	3
EVAR 3002 Pre-Modern Architectural History and Theory 2	3
EVAR 3004 Architectural Technology 1- Structural and Sustainable Use of Materials	3
EVAR 3006 Architectural Technology 2 – Building Construction, Structures and Envelopes	3
EVAR 3008 Architecture Design Studio 1	9
EVAR 3010 Architecture Design Studio 2	9
EVAR 3014 Drawing: Freehand & Digital	3
Total Credit Hours	33

#### Year 4: Architecture Option

EVAR 4000 Modern Architectural History and Theory 1	3
EVAR 4006 Modern Architectural History and Theory 2	3
EVAR 4002 Architectural Technology 3 - Building Systems	3
EVAR 4008 Architectural Technology 4 - Comprehensive Design Technology Report	3
EVAR 4004 Architecture Design Studio 3	9
EVAR 4010 Architecture Design Studio 4	9
Elective	3
Total Credit Hours	33

#### Year 3: Interior Environments Option

EVIE 3002 Interior Design History and Theory 1	3
EVIE 3004 Materials, Assemblies and Detailing	3
EVIE 3006 Interior Design Media	3
EVIE 3008 Interior Design Studio 3.1	6
EVIE 3010 Interior Design Studio 3.2	6
EVIE 3012 Interior Light and Colour	3
EVIE 3014 Human Factors and Environmental Experience	3
EVIE 3000 Field Studies	3
EVIE 4000 Interior Design History and Theory 2	3
Total Credit Hours	33

#### Year 4: Interior Environments Option

EVIE 4002 Indoor Systems 1	3
EVIE 4004 Indoor Systems 2	3
EVIE 4006 Design Methods and Processes	3
EVIE 4008 Digital Media	3
EVIE 4010 Interior Design Studio 4.1	6
EVIE 4012 Interior Design Studio 4.2	6
EVIE 4014 Advanced Interior Design Media	3

Elective- EVIE 3016 Topics in Interior Design	3
Total Credit Hours	33

#### Year 3: Landscape + Urbanism Option

\*Students must choose Alternate 1 or 2 to fulfill Year 3 L + U course requirements.

EVLU 3000 History of Designed Environments	3
EVLU 3002 Site Planning	3
EVLU 3004 Ecology + Design 2	3
EVLU 3006 Studio 3: Dwelling / Precinct / Everyday Life	9
EVLU 3008 Studio 4: Networks and Infrastructure	9
EVLU 3010 Landscape + Urbanism Theory	3
EVLU 3012 Site Morphology + Grading (Alternate 1)*	3
EVLU 3014 Placemaking Fundamentals (Alternate 2)*	3
Total Credit Hours	33

#### Year 4: Landscape + Urbanism Option

\*Students must choose Alternate 1 or 2 or 3 and Alternate 4 or 5 respectively to fulfill Year 4 L + U Option course requirements.

EVLU 4000 Philosophy, Ethics and Aesthetics	3
EVLU 4002 Construction Materials (Alternate 1)*	3
EVLU 4004 Inquiry by Design (Alternate 2)*	3
EVLU 4006 Special Topics in Community Design (Alternate 3)*	3
EVLU 4008 Plants, Ecosystems and Design (Alternate 4)*	3
EVLU 4010 Community Design Process and Method (Alternate 5)*	3
EVLU 4012 Studio 5: Possible Urbanism(s)	9
EVLU 4014 Studio 6: Emergent Futures	9
EVLU 4016 History of Landscape + Urbanism	3
EVLU 4018 Principles of Urban Design	3
Total Credit Hours	33

#### Electives

University credit courses may be taken as electives. They may come from the Faculties of Arts, Science, Engineering, Fine Arts, Management, Agricultural and Food Sciences among others, or with the permission of the Environmental Design Program Chair in special circumstances.

#### Supplies and Expenses

The Faculty of Architecture has introduced an Information Technology Program Fee of \$400.00 for all enrolling students. The Information Technology Program Fee includes \$100.00 to go to a technology endowment fund. Remaining funds will be expended on current technology items of direct benefit to students.

In addition to tuition, student fees, and related expenses, the estimated cost of materials, equipment, and textbooks for students in Environmental Design is approximately \$7,000 per year.

The Environmental Design Program offers Field Studies in Years 2, 3 and 4 either as stand alone courses or in conjunction with a design studio offering. These may be regional, national or international. All related costs are to be borne by the students. A valid passport is required. A visa may also be required.

The Environmental Design Program has revised its mandatory computer purchase policy for all students entering Year 2 of the Environmental Design Program, beginning September 2008. Please refer to the Environmental Design website to note laptop computer and software specifications.

The Environmental Design Program has introduced the Urban Media Lab Fee of \$350.00 (replacing the Sketch Camp fee). The Urban Media Lab course is offered in Year 2 and is hosted off campus in advance of the regular academic session (late August to early September).

For information about professional studies leading to the degrees of Master of Architecture, Master of City Planning, Master of Interior Design and Master of Landscape Architecture, please refer to the *Graduate Calendar*.

### 4.2 Bachelor of Environmental Design Architecture Masters Preparation Program (AMP)

The Faculty of Architecture offers an Architecture Masters Preparation Program (AMP – previously known as the Architecture Pre-Masters Program) for students who have a recognized first degree in either a non-design or a

design-related field of study and wish to apply to the Master of Architecture Program. These students may apply and be admitted through the AMP Program to the Department of Architecture Option in Environmental Design where they will be enrolled in the Environmental Design Program: Architecture Option. There are two different streams available:

### Stream One

Architecture Masters Preparation 1 (AMP 1 – two years of study). For those who have little or no formal design education and have a recognized undergraduate first degree (or are currently enrolled in the final year of a degree program) who wish to apply to the Master of Architecture Program. Upon successful completion of all of the requirements for this two year program, students will be eligible to receive a Bachelor of Environmental Design Degree.

In order to be eligible for the Environmental Design AMP Degree students must complete the Architecture Option ED 3 and ED4 (total of 66 credit hours).

### Stream Two

Architecture Masters Preparation 2 (AMP 2 – one year of study). For those who already have an undergraduate design degree (or are currently enrolled in the final year of a design degree program) in an allied design field such as interior design, landscape architecture or for those who have an architecture technical applied degree, and wish to apply to the Master of Architecture Program. These students may be considered on a case-by-case basis for placement into the Environmental Design: Year 4 Architecture Option, but will be ineligible to receive the Bachelor of Environmental Design Degree.

Please refer to our web site for further information on admissions and applications procedures at [umanitoba.ca/architecture](http://umanitoba.ca/architecture)

Enrollment will be limited to 15 students per year on a competitive basis.

### Course Sequence

EVAR 3012 Arch Tech Prep (pre term block course)	3
<b>Year 3</b>	
EVAR 3000 Pre-Modern Architectural History and Theory 1	3
EVAR 3002 Pre-Modern Architectural History and Theory 2	3
EVAR 3004 Architectural Technology 1 - Structural and Sustainable use of Materials	3
EVAR 3006 Architectural Technology 2 - Building Construction, Structures and Envelopes	3
EVAR 3008 Architecture Design Studio 1	9
EVAR 3010 Architecture Design Studio 2	9
EVAR 3014 Drawing: Freehand & Digital	3
Total Credit Hours	33
<b>Year 4</b>	
EVAR 4000 Modern Architectural History and Theory 1	3
EVAR 4006 Modern Architectural History and Theory 2	3
EVAR 4002 Architectural Technology 3 – Building Systems	3
EVAR 4008 Architectural Technology 4 – Comprehensive Technology Report	3
EVAR 4004 Architecture Design Studio 3	9
EVAR 4010 Architecture Design Studio 4	9
Elective	3
Total Credit Hours	33

### Electives

University credit courses may be taken as electives. They may come from the Faculties of Arts, Science, Engineering, Fine Arts, Management, Agricultural and Food Sciences among others, or with the permission of the Department of Architecture in special circumstances.

### Supplies and Expenses

The Faculty of Architecture has introduced an Information Technology Program Fee of \$400.00 for all enrolling students. The Information Technology Program Fee includes \$100.00 to go to a technology endowment fund. Remaining funds will be expended on current technology items of direct benefit to students.

The Faculty of Architecture offers Field Studies in Years 3 and 4 either as stand alone courses or in conjunction with a design studio offering. These may be regional, national or international. All related costs are to be borne by the students. A valid passport is required. Visas may also be required.

The Faculty of Architecture has revised its mandatory computer purchase policy for all enrolling students beginning September 2008. Please refer to

the Faculty of Architecture website to note laptop computer and software specifications.

In addition to tuition, student fees, and related expenses, the estimated cost of materials, equipment, and textbooks for students in Environmental Design After Degree is approximately \$7,000 per year.

## Section 5: Course Descriptions

### 5.1 Bachelor of Environmental Design

**EVAR 3000 Pre-Modern Architectural History and Theory I Cr.Hrs.3** Provides a historical and theoretical understanding of early Greek, Roman, Gothic and non-western architectural topics and their influence. Content is explored using primary texts where possible, and through critical analysis of selected topics. May not be held for credit with the former EVDS 2690, EVDS 2610, ARCH 6320 or ARCH 6420.

**EVAR 3002 Pre-Modern Architectural History and Theory II Cr.Hrs.3** Provides a historical and theoretical understanding of Gothic and Renaissance architectural topics and their influence, up to the work of Claude Perrault. Content is explored using primary texts where possible, and through critical analysis of selected topics. May not be held for credit with EVDS 2620 or ARCH 6340.

**EVAR 3004 Architectural Technology 1 – Structural and Sustainable Use of Materials Cr.Hrs.3** Construction materials and structural theory in the analysis and design of simple wood-frame, masonry and light steel construction; fundamental passive energy systems and design strategies for material and energy reduction. May not be held for credit with EVDS 1690 or ARCH 6480.

**EVAR 3006 Architectural Technology 2-Building Construction, Structures & Envelopes Cr.Hrs.3** Architectural, environmental and technical aspects of construction focusing on low-rise and medium sized wood, steel and masonry construction focusing on low-rise and medium sized wood, steel and masonry construction including issues of material production/manufacturing, soils, foundation, envelope systems, basic mechanical systems and their integration and acoustic concerns. May not be held for credit with the former EVDS 2670, EVDS 2700, ARCH 6520 or ARCH 6530

**EVAR 3008 Architecture Design Studio 1 Cr.Hrs.9** An architectural study of the human condition in relation to the natural and built environment through design oriented research exploration, analysis, evaluation and interpretation of a selected subject of inquiry. Various ways of seeing and making are applied as tools for critical thinking to align content with modes of representation. May not be held for credit with former EVDS 2630 or ARCH 6380.

**EVAR 3010 Architecture Design Studio 2 Cr.Hrs.9** Building upon first term explorations, architectural propositions are developed that seek to clarify relations between human inhabitation and the physical environment in a regional context. Design principles influenced by programmatic, theoretical, historical, technological material and environmental criteria are examined. Prerequisite: EVAR 3008. May not be held for credit with former EVDS 2640 or ARCH 6390.

**EVAR 3012 Architecture Technology Preparation: Structural Concepts Cr.Hrs.3** A preparatory block course introducing the fundamentals of structural concepts in architecture that prepares students for the foundation technology courses in architecture. May not be held for credit with EVDS 2300 (or former EVDS 1690), EVDS 1700 or ARCH 6480.

**EVAR 3014 Drawing: Freehand/Digital Cr.Hrs.3** An introduction to drawing skills that allows students to become articulate in proposing and studying architecture through drawing. The course covers a range of media. May not be held for credit with the former ARCH 6532 or ARCH 6370 For AMP 1 Students only.

**EVAR 4000 Modern Architectural History and Theory I Cr.Hrs.3** Provides a historical and theoretical understanding of the origins of modernity in architecture. Content is explored using primary texts where possible, and through critical analysis of selected topics. May not be held for credit with former EVAR 3700, EVAR 3470, ARCH 6460 or ARCH 6450.

**EVAR 4002 Architectural Technology 3-Building Systems Cr.Hrs.3** Intergrated building systems focusing on multi-story steel and concrete construction including: passive and active heating, cooling, and ventilation methods, strategies and designs, electrical, water, communication, security, fire protection, and vertical transportation systems; and building code constraints. May not be held for credit with the former EVAR 3560, EVAR 3570, ARCH 6500 or ARCH 6510.

**EVAR 4004 Architecture Design Studio 3 Cr.Hrs.9** This studio focuses on the broader cultural implications of social interaction and the collective inhabitation of the built and natural environments. Architecture design explorations are influenced by a thorough examination of programmatic, theoretical, historical, technological, material and environmental criteria. May not be held for credit with the former EVAR 3680 or ARCH 6400

**EVAR 4006 Modern Architectural History and Theory II Cr.Hrs.3** Provides an historical and theoretical understanding of 20th century topics in architecture (western and non-western). Content is explored using primary texts where possible, and through critical analysis of selected topics. May not be held with the former EVAR 3330, EVAR 3480, ARCH 6440 or ARCH 6470.

**EVAR 4008 Architectural Technology 4: Comprehensive Design Technology Report Cr.Hrs.3** A technical knowledge project-based course integrating with Arch Studio 4. Comprehensive technology issues include: site; material; energy; structures; construction; sustainability; environmental factors; building code; life safety. Student's work will include analysis, technical drawings and calculations. Corequisite: EVAR 4010 Arch Studio 4

**EVAR 4010 Architecture Design Studio 4 Cr.Hrs.9** The previous terms investigations are further developed and synthesized into a comprehensively designed environment. Architectural propositions seek to clarify specific relations between details and the overall design, through the integration of complex social, cultural, programmatic, theoretical, historical, technological, material and environmental principles, systems and criteria. Prerequisite: EVAR 4004 Arch Design Studio 3. May not be held with the former EVAR 3690 or ARCH 6410. Corequisite: EVAR 4008 Arch Tech 4.

**EVDS 1600 Introduction to Environmental Design Cr.Hrs.3** An introduction to the philosophy and pragmatics of design and designing processes and methods. The focus will be on design as a creative, aesthetic and scientific endeavor, and will examine the challenges and roles of environmental designers in society. Available to non-Environmental Design students only.

**EVDS 1602 Visual Literacy Cr.Hrs.3** This course examines the contemporary visual environment, its critical historical influences, and more recent cultural impacts. Optics, the structure of images, and the importance of materiality will be examined through various modes of cultural production including emerging media and information networks. Available to non-Environmental Design students only.

**EVDS 1660 History of Culture, Ideas and Environment 1 Cr.Hrs.3** A brief history of the western creative imagination, part 1. Interdisciplinary survey of cultural periods and key works from the Foundations of Civilization to the Enlightenment, including literary readings, film screenings, and illustrated lectures and discussions. Available to non-Environmental Design students only.

**EVDS 1670 History of Culture, Ideas and Environment 2 Cr.Hrs.3** A brief history of the western creative imagination, part 2. Interdisciplinary survey of cultural periods and key works from the 19th to the 21<sup>st</sup> centuries, including literary readings, film screenings, and illustrated lectures and discussion. Prerequisite: EVDS 1660 (or 079.166). Available to non-Environmental Design students only.

**EVDS 2100 Urban Media Lab Cr.Hrs.3** An introduction to visual methods of presentation and related media including drawing, photography and video. The intention is to critically engage the urban and suburban contexts as a laboratory for investigating cultural values, aesthetic issues, design principles, and representational techniques, 'prerequisite' to undertaking design studio work.

**EVDS 2200 Ecology and Design Cr.Hrs.3** An examination of principles of Ecology and Design works in which these tenets are considered, engaged, and/or demonstrated. Topics fundamental to the science of Ecology will theoretically structure the course content. Emphasis will be placed on understanding the forces and systems working within and between natural, social and human environments.

**EVDS 2300 Materials, Structures and Assemblies Cr.Hrs.3** This course provides an introduction to applied statics, construction materials and construction system assemblies for landscape, building, and interior constructions. Construction material properties and applications, including impacts on resource depletion and on sustainable building practices will be introduced along with basic strategies and methods to analyze and calculate forces in simple structures.

**EVDS 2400 Visual Media 1 Cr.Hrs.3** An introduction to technical and free-hand drawing processes and techniques, and in various media - to develop, to express, and to communicate design intentions. The focus will be directed to abstract and concrete methods of representation. Emphasis will be placed on the integral relationship between thinking, drawing, and making in relation to critically observing the world at large, and in relation to design studio work.

**EVDS 2500 Design Studio 1 Cr.Hrs.6** Introduction to the elements and principles of visual and spatial design, design process and techniques, requisite methods of representation and communication, and design intentions. Studio work will explore different ways of space and form-making, beginning at the site of the body, in both abstract and environmental contexts.

**EVDS 2600 Tectonic Precedent Cr.Hrs.3** An examination of seminal built works of environmental design, at a range of scales, from the 19th and 20th centuries, with an emphasis on examples that are representative of diverse positions of key issues in contemporary design practice. Methodologically, this course endeavours to critically evaluate the relationships between perception, intention, and making through the exploration of the material and tectonic nature of the work(s)

**EVDS 2702 Natural and Human Systems Cr.Hrs.3** An application of the scientific principles embodied in the natural laws which govern environmental design. Aspects of the bio-physical factors, energy, human physiology and perception, comfort, and resource management are reviewed in the context of sustainable planning and design practices.

**EVDS 2800 Visual Media 2 Cr.Hrs.3** This course bridges technical and freehand drawing introduced in Visual Media 1, with computer/digital media. This course advances contemporary digital media in relation to emerging modes of 2, 3, and 4 dimensional modes of representation, in the context of design studio work, and in relation to graphic standards associated with professional design practice.

**EVDS 2900 Design Studio 2 Cr.Hrs.6** An exploration of the fundamental relationships between space, form and order in the context of the built environment, from body to place. Pedagogical emphasis will be directed towards design process, cultural intentions, and environmental accountability.

**EVDS 3250 Advanced Computing in Environmental Design Cr.Hrs.3** Advanced Computing in Environmental Design builds upon skills obtained in the introductory course. The advanced course provides an opportunity for students to explore detailed applications of computational technologies in design & planning. Prerequisite EVDS 2800.

**EVDS 3710 Special Topics Cr.Hrs.3** Independent study related to environmental design. Content may vary according to the interest of the community, students, profession, and the faculty. Written consent of the instructor(s) and program coordinator required.

**EVDS 3740 Introduction to AutoCad in Design Cr.Hrs.3** The course will familiarize the student with the AutoCad program. The course content begins at an introductory level and will progress to a level which will prepare the student for work within a professional office. The course will explore the use of AutoCad for the creation of presentation drawings as well as working drawings. Prerequisite: EVDS 2800 or ARCH 6370 or written permission of Instructor.

**EVIE 3000 Field Studies Cr.Hrs.3** This course introduces students to the field of Interior Design through firsthand experience and study of innovative and significant examples of historic and contemporary work from interior design and related fields, in a major design center. The course consists of lectures and a field trip. Location may vary from year to year.

**EVIE 3002 Interior Design History and Theory 1 Cr.Hrs.3** Examination of concepts, theories and writings related to the development of Interior Design as a discipline, to Modernism. Not to be held for credit with the former EVIE 3650.

**EVIE 3004 Materials, Assemblies and Detailing Cr.Hrs.3** Workshop and lecture course on materials, joinery and invention. Review of the principles of framing, bracing, and tension applied to casegoods and furniture; exploration of a variety of soft and hard materials and constructions with an emphasis on sustainability. Not to be held for credit with the former EVIE 3630. Prerequisite: EVDS 2200.

**EVIE 3006 Interior Design Media Cr.Hrs.3** This course develops a student's ability to use drawing as a reflective, problem-solving, designing and visual communication tool; interfaces with digital photography; figure drawing, techniques for representing volume, depth and scale, and interfaces with digital photography and media are focus.

**EVIE 3008 Interior Design Studio 3.1 Cr.Hrs.6** Interior Design studio exploring the body as the primary reference in design, and the semantic and cultural meanings of objects and architectural elements as mediators of space. Integration of drawing, design and making through projects.

**EVIE 3010 Interior Design Studio 3.2 Cr.Hrs.6** An in-depth investigation, by design, of the nature of interiors including the physical and perceptual, spatial elements and order, human involvement and experience. Exploration and development of spatial solutions using a variety of visual media. Not to be held for credit with the former EVIE 3680.

**EVIE 3012 Interior Light and Colour Cr.Hrs.3** This course examines interior lighting and colour theories and concepts emphasizing human and ecological issues, exploration of spatial design strategies and practices. Not to be held for credit with the former EVIE 3610.

**EVIE 3014 Human Factors and Environmental Experience Cr.Hrs.3** Theoretical and practical issues related to human characteristics, needs, behaviours, and interactions with and within the built interior environment.

**EVIE 3016 Topics in Interior Design Cr.Hrs.3** This course will explore topics at the cutting edge of interior design, examining political, economic, sociological and technological influences on current and future directions in interior design; examination of current research, writing, projects and works from related and diverse fields.

**EVIE 4000 Interior Design History and Theory 2 Cr.Hrs.3** Examinations of concepts, theories and writings related to the development of Interior Design as a discipline and profession, from Modernism to the present day. Prerequisite: EVIE 3002 Interior Design History and Theory 1. Not to be held for credit with the former EVIE 3660.

**EVIE 4002 Indoor Systems 1 Cr.Hrs.3** In-depth, whole building examination of various integrated active and passive environmental controls systems. Focus on working with existing commercial building construction and environmental systems when integrating new interior design and ecological concepts and strategies. Introduction to building performance assessment, construction drawings and schedules. Prerequisite: EVIE 3004 and EVIE 3012. Corequisite: EVIE 4010. Not to be held for credit with the former EVIE 3620.

**EVIE 4004 Indoor Systems 2 Cr.Hrs.3** Broad exploration of a variety of contemporary and innovative building technologies and their integration with interior design. Focus on ecological, new building construction concepts and measure, delivered in the context of integrated design team processes and building systems innovation. Integration and coordination of interior architectural elements with active and passive building systems. Prerequisite: EVIE 4002.

**EVIE 4006 Design Methods and Processes Cr.Hrs.3** Development of knowledge and abilities to collect, analyze, synthesize, interpret, and apply information for the purpose of identifying and solving interior design problems. Not to be held for credit with the former EVIE 3640.

**EVIE 4008 Digital Media (AutoCAD) Cr.Hrs.3** Drafting and designing for Interior Design students with AutoCAD. The course will focus on using AutoCAD Release 200X, with exposure to Autodesk's Architectural Desktop and Revit Version X. The course is set up to take students from the basics of using the program to being able to produce a conventionally correct working drawing and a rendered 3D representation. Not to be held for credit with former EVIE 3670.

**EVIE 4010 Interior Design Studio 4.1 Cr.Hrs.6** Projects that explore the interaction between urban context, programmatic requirements and design concepts; integration of building technology and three-dimensional spatial development; development of communication skills and methods. Not to be held with the former EVIE 3690. Prerequisite: EVIE 3010. Corequisite: EVIE 4002.

**EVIE 4012 Interior Design Studio 4.2 Cr.Hrs.6** Design studio with the potential for collaboration, exploring regional and global influences, communication technology, history and temporality in the design of interior environments.

**EVIE 4014 Advanced Interior Design Media Cr.Hrs.3** Advanced visual communications media for interior designers, focusing on 3D computer-aided design and presentation. Development in the use of a selected range of drawing and rendering software applications. Further development in integrating hand and digital methods. Prerequisite: EVIE 4008 or consent of instructor.

**EVLU 3000 History of Designed Environments Cr.Hrs.3** A critical examination and appraisal of design for dwelling in the context of settlement with emphasis on representation of diverse positions on key issues in design practice. Studies will include consideration of cross cultural precedents and lessons from around the world.

**EVLU 3002 Site Planning Cr.Hrs.3** An investigation of the relationship between natural and cultural processes in the formation of the built environment, including a review of the methods and strategies employed for site programming, inventory, analysis, and development at different scales of intervention.

**EVLU 3004 Ecology and Design 2 Cr.Hrs.3** This course will focus on an examination of ecological and technological perspectives on the planning, design and making of the physical environment. This will include a meshing of prediction and advocacy concerning new models of sustainable urbanization, focusing on green technology and infrastructure. Key theories and their application to landscapes at varied scales will be considered along with salient literature, current issues, design precedents and potentials for creative expression and interpretation. Prerequisite: EVDS 2200.

**EVLU 3006 Studio 3: Dwelling/ Precinct/ Everyday Life Cr.Hrs.9** A studio/lecture course that examines the notion of dwelling through spatial design with a concentration at the scale of the precinct in the private to semi-private realm focusing on the needs of the individual, on spatial qualities, materials, and site design detail. Theoretical, analytical, conceptual, design, planning and communication skills in landscape + urbanism will be developed and applied in distinct projects. Emphasis is on habitat by design, issues of contested space, ecological design and sustainability. May include a mandatory field studies trip; location and cost to be determined on a yearly basis. Pre-requisite EVDS 2900.

**EVLU 3008 Studio 4: Networks and Infrastructure Cr.Hrs.9** A critical exploration of analytical, conceptual, and developmental aspects of design of the public realm in an experimental studio setting, Social, political, economic, communication, and ecological networks will be studied at the scale of neighborhood and community in the urban realm.

**EVLU 3010 Landscape and Urbanism Theory Cr.Hrs.3** An examination through lectures, readings, seminars and essay assignments, of twentieth and twenty first century philosophical thinking, which has been influential in the theory and practice of landscape architecture, planning and urbanism. Emphasis is on ideas, paradigms, and manifestos. This will include a study of the social, political, religious, cultural, technological, and aesthetic forces behind landscape and urbanism, and the forms that these forces have generated.

**EVLU 3012 Site Morphology and Grading Cr.Hrs.3** An examination of the means and methods used to create landscapes that are shaped by earthwork grading. This will include the study of the forces, principles, and techniques in the modelling and manipulation of the ground plane and the resolution of cultural, ecological and hydrological design considerations implicit in landform design.

**EVLU 3014 Placemaking Fundamentals Cr.Hrs.3** An introduction to placemaking as an integrated community-based application of landscape and urbanism concepts, based on topical themes, such as the Great Neighbourhood or Edens Lost and Found.

**EVLU 4000 Philosophy, Ethics and Aesthetics Cr.Hrs.3** An examination of philosophical issues and debates regarding ethics and aesthetics, and their influence and potential upon urban design and urban form in the past and present, and to speculate upon the future. Prerequisite: EVLU 3010.

**EVLU 4002 Construction Materials Cr.Hrs.3** A comprehensive introduction to construction materials, methods and processes. Examination of regulatory issues of human safety and techniques for communicating construction proposals with application to how this information is incorporated into contracts. Field trips to nurseries, quarries, lumber yards, and urban sites where students can observe materials transformed to comply with the requirements of designers. Prerequisite: EVLU 3012.

**EVLU 4004 Inquiry by Environmental Design: Researching Space-Place Transformation Cr.Hrs.3** An exploration of the design/research relationship, from a critical and creative thinking perspective will be the core of this course, viewing design and research as linked forms of inquiry into space-place transformation. A focus will be on design/research methods and approaches appropriate to informing and investigating designed environments and community design contexts.

**EVLU 4006 Special Topics in Community Design Cr.Hrs.3** This course will involve a critical examination of specific topics such as: health and community design; inner city environments; and Canadian community planning and design, and its contexts.

**EVLU 4008 Plants, Ecosystems and Design Cr.Hrs.3** The examination of cultural and technical aspects of designing with plants will be explored in an urban context through field investigations, lectures, seminars and assignments. Issues of plant identification, planting design types, their application to contemporary landscape architecture, technical requirements, planting details and ecological integration in the urban environment will be included.

**EVLU 4010 Community Design Process and Method: Advanced Placemaking Cr.Hrs.3** An introduction to the integration of perception, intention and placemaking associated with manifestations of community, especially communities of interest, and systems of 'communities of communities'. A consideration of the relationship of space-place transformation and placemaking, via participatory design processes will be examined as part of a critical design and planning process.

**EVLU 4012 Studio 5: Possible Urbanism(s) Cr.Hrs.9** A radical exploration of analytical, conceptual, and socio-political aspects of urban public place in an experimental studio setting. An emphasis will be placed on design as mediation between competition demands. The studio incorporates the theory and application of three dimensional simulation technology in design.

**EVLU 4014 Studio 6: Emergent Futures Cr.Hrs.9** This studio integrates planning and design from the scale of urban infrastructure through to design detail in the context of landscape and urbanism. An emphasis is placed on the challenges of relevant equitable environmental and social design in the post-industrial world. The studio incorporates the theory and application of CAD and GIS technology in design.

**EVLU 4016 History of Landscape and Urbanism Cr.Hrs.3** An historical survey of human made landscapes and urban settlement form, patterns, and types, including major themes and movements. Prerequisite: EVLU 3000.

**EVLU 4018 Principles of Urban Design Cr.Hrs.3** This course will examine urban design principles, practices, and applications including political and social systems, and their impacts on the contemporary urban condition.

## **5.2 Bachelor of Environmental Design Architecture Masters Preparation Program**

Please see EVAR courses above.