Review Process

This was the second formal review of the undergraduate program in Architecture undertaken using the University of Waterloo’s (UW’s) Guidelines and the fifth review by the Canadian Architectural Accreditation Board. The Master’s program was judged in “Good Quality” by the Ontario Council on Graduate Studies (OCGS) in 2000. Since the architectural accreditation process overlaps greatly with the undergraduate program review process, UW used the accreditation program report together with an addendum to satisfy the requirements of the undergraduate program review process for the Architecture program. The architectural program is evaluated for accreditation over 30 performance criteria; nine areas of critical thinking and communication; 12 areas of design and technical skills; four areas of comprehensive design; and five areas of leadership and practice. The program’s self study was submitted January 27, 2011; the site visit was conducted March 5 to 9, 2011; the report of the visiting team on the accreditation visit was received June 22, 2011. Accreditation was granted to Architecture for six years for the professional program: Master of Architecture. There will be a focused evaluation at the end of year three on Accreditation Condition 6, Human Resource Development which states “programs must have a clear policy outlining both individual and collective opportunities for faculty and student growth within and outside the program.”

Characteristics of the Program

Historical Overview

In the mid-1960s, seeking to meet the needs of a rapidly expanding population, a boom in construction and the expansion of cities, the Government of Ontario created two new Schools of Architecture. In fall 1967, the first class of students was admitted to the new Architecture Program within the Systems Design section of the Department of Civil Engineering. Shortly after the program was established Architecture left Engineering to become part of a new academic unit, the Division of Environmental Studies (now the Faculty of Environment).

For the first 15 years of its existence the School of Architecture was housed off campus in Phillip Street. This played a critical role in the evolution of an independent culture and society within the School. This intensity produced a great deal of political unrest, culminating, in the resignation of the Director. An even more turbulent interregnum followed.

During the seventies, the profile of the School changed thanks to the expansion of the faculty complement in the design studios, the program of studies in Italy in 1979, and the publication of Ten Schools: Student Work from Canadian Schools of Architecture which focussed national attention on the quality of design at Waterloo.

In the early eighties, the School moved into a newly constructed addition the Environmental Studies Building on campus. While the space and facilities provided were from the outset, less than adequate, the students, faculty and staff members became more involved in the life of the University.

The current Director, who took over in January 1988, encouraged curriculum revisions aimed at strengthening instruction in professional and environmental areas, and expanded overseas connections. New priorities were set in the 1999 Strategic Plan entitled “Outside the Walls”. As a result a graduate program was started in 2000; the School relocated to new facilities in Cambridge in 2004; and in 2005 returned to its original academic home in the Faculty of Engineering.
During these 30 years the academic structure of the Waterloo program with its double degree has been remarkably stable. The Bachelor of Environmental Studies (BES) was a three-year pre-professional degree, co-op and fully architectural. It was followed by a two-year program, also co-op, leading to the Bachelor of Architecture (BArch). Until the fall of 2000 specific courses and requirements had changed, but there had been no structural modification to the overall plan.

In 1999, the School embarked on an initiative designed to respond to issues raised specifically in the 1998 Accreditation Visiting Team Report, and, more broadly, to changes in architectural education and practice.

The three-year BES was replaced with a four-year Honours Co-op Pre-Professional BES. The BArch became a Master of Architecture (MArch), which requires a minimum of one year to complete. The implementation of the Honours BES and the MArch occurred virtually simultaneously. Students already in the program were given the opportunity to complete the BES/BArch program under which they entered. Rather than waiting more than four years for the students who entered the new BES in fall 2000 to reach the MArch, qualified students were given the opportunity to enter the MArch when they had completed fourth year. This resulted in a complex transition that came to an end in August 2005. Since that time there has been only one program at UW’s School of Architecture.

Space provision for the School had been criticized in all the Accreditation Reports and in the OCGS Report. However, in November 2000 a group of Cambridge business leaders made a proposal to relocate the School of Architecture to their city. This initiative gained support; a building was purchased in 2001; renovation began in January 2004; and the School began operations at Cambridge in fall 2004.

The School made yet another change, unforeseen in the 1999 plan. An unsuccessful Dean search in 2003-04 specifically provoked a discussion of the academic affiliation of the School of Architecture. In October 2004, faculty members voted unanimously in favour of returning to the Faculty of Engineering. The move received support. On May 1, 2005 the School of Architecture formally became one of seven Departments/Schools in the Faculty of Engineering. In the realignment the School’s academic program did not change, but the undergraduate degree was renamed the Honours Bachelor of Architectural Studies. The first of these degrees was awarded at the fall convocation of 2005.

The last five years have seen a consolidation of the School in its new location in Cambridge. The School has been a catalyst for a profound change in the city. Cambridge’s recent economic development strategy called “Designing the Future”, contains 27 recommendations, of which more than half involve the School of Architecture. The result of the relocation has meant that Waterloo’s School of Architecture has become a model for collaboration between city and university across the province and the country.

**Program Objectives**

The mission statement adopted by the School in 1997 continues to underpin the program’s direction and development. It states:

“The University of Waterloo, School of Architecture is dedicated to providing its students an excellent education which builds on the traditions of a profession rooted in the liberal arts and the art of construction, balances elements of theory and practice, incorporates new and emerging areas of influence and engages in discourse and design activity at a local, national and international level. The School is committed to maintain a fully supportive educational environment in which teaching, design and research form a common project in which faculty, staff and students act as much as possible as collaborators.”
When the School joined the Faculty of Engineering in 2005 it did create a set of goals for the School in line with those in the Faculty’s Vision 2010 plan. Progress towards these goals is reported annually. The next iteration of the Faculty of Engineering’s strategic plan entitled Vision 2015 is underway and will focus on the undergraduate experience.

**Distinctiveness/Benchmarking**

Two items distinguish the School of Architecture;

Within the academic program Cultural History is the feature that is unique to the School of Architecture. The Cultural History stream rests on the idea that neither Architecture nor Architectural History are isolated disciplines, but rather forms of cultural praxis, humanistic study and fields of cultural specialization. Fourteen of the 48 term courses in the pre-professional program are in the Cultural History area.

The “identity” of Waterloo Architecture has become a model for collaboration between city and University.

**Academic Programs Offered**

Two academic plans of study make up the five years of architectural studies:

the four-year Bachelor of Architectural Studies (BAS) comprising eight academic terms of study, which involves eight studio courses, and six four-month co-op work terms, the first of which is in the winter term of the second year. This degree is followed by a nominal one-year curriculum course of study with a self-directed thesis requirement for the Master of Architecture.

The program’s conception and the elements that define the educational experience; that is, the co-op program, the academic courses, the design studios and the Master’s thesis are conceived to produce the foundation for entry into the architectural profession.

**Students**

The applicant pool to the School of Architecture has grown from 967 in 2006 to 1,354 in 2010. In 2010, about 10% of applicants and students admitted come from the local communities. The normal entrant from high school has a grade average of about 90%. The average would be higher if the academic record was the sole criterion by which applicants were judged. Since the application process includes a personal interview, portfolio review and a précis test it is possible for students with lower averages to be admitted on the basis of critical ability, maturity, capacity in abstract thought, judgment, graphic ability, creativity or innovation. The School makes a major commitment each year in selecting the incoming class. Normally 500 to 600 students are invited for an interview. The cut-off mark for an interview varies from year to year but is in the range of 82%. Offers are sent to about 85 applicants to produce a class of 72 to 77 students.

In 2010, 14% of students admitted from high school had an average in the 95 to 100%; another 40% were in the 90 to 95% range; 36% were in the 85 to 90% range; and the remainder was in the 80 to 85% range. Only 63% of the entering students in 2010 came directly from high school, this compares with 69% in Civil Engineering, 79% in Systems Design Engineering and 94% in the School of Planning.

The academic program is demanding, students must carry a work load of seven or eight courses per term. Class averages in the Honours BAS academic courses and design studios fall in the range of 75 to 78%.
With a student faculty ratio consistently below 15:1 there is adequate time for effective exchange between faculty members and students.

The retention and completion rates of students in the undergraduate program are high. In the BAS program 79% of students complete their degree in the minimum time – five years, and the overall completion of the degree by students is 84%.

By the time a Waterloo Architecture student graduates with the BAS degree he/she will likely have two to three years of professional experience through the co-op program and some of that experience will be international. The number of students seeking co-op employment outside of Canada topped 56% in 2005 with London and New York the main destinations. Since the financial collapse in 2008, the location shifted back to Canada, with 40% of jobs being in the Greater Toronto area. In 2009, the level of international placements fell to 26%, but has, as of 2010, closed at about 37%. The emphasis on London and New York has dwindled with the emphasis now being more global with placements in Germany, Italy, Portugal, Finland, Turkey, China, Australia, Singapore and Japan. Overall the rate of co-op employment for Architecture students is virtually 100% most terms.

The co-op process in Architecture has been under review since 2008 and various innovations have been implemented that have greatly assisted the students.

From 2006 to 2010 inclusive, an annual average of 87% of Architecture students has received scholarship support. The annual amount distributed is on average $324,000. Nearly half of all Architecture students receive a President’s Scholarship.

Students evaluate their courses each term. However, no student evaluation data on courses has been forthcoming.

The Director of the program meets regularly with student leaders. On a weekly basis the Undergraduate Student Services Coordinator meets with leaders of the undergraduate student association to discuss operational details, student concerns and the overall direction of the School.

**Faculty**

There were 19 faculty members in the School of Architecture at the time of the site visit. Seventeen held full-time appointments while two had fractional appointments. The 19 faculty positions represent a 12% increase in overall faculty complement since 2006. Of the 17 full-time faculty members, one was a Full Professor; 12 were Associate Professors; three were Assistant Professors; and one Continuing Lecturer. Five of the 19 faculty members are graduates from the University of Waterloo’s School of Architecture; all but two of these have advanced degrees from other institutions. There are more than 30 part-time appointments each year, many of whom are practicing architects, others are experts in mechanical systems, acoustics, computing and timber design.

On average over the last five years 25 guest lecturers, 52 visiting critics and 26 external thesis readers are invited to the School annually.

The School is supported by six full-time academic support staff members, three computing and media support staff members and 66% of one technical support staff person.

Over the past six years faculty members in the School have published 1.4 articles or reviews, and made 1.7 presentations/guest lectures annually. Five books and eight book chapters have been published in addition to the many creative projects undertaken. Most faculty members have been involved in at least
three projects annually for the last six years. Many of these creative activities are funded by SSHRC and Canada Council. The research funding in the School in 2009 was $500,000.

In addition, faculty members have acted as jurists in many design competitions and exhibited in countries such as Italy, Mexico, Denmark, Holland and the USA.

Faculty members have received many awards, prizes and honours. A sample follows:

- Representing Canada at the Venice Biennale
- Far Eastern International Digital Architecture Award
- Ontario Association of Architects Architectural Excellence Award
- Fellow of the Royal Architecture Institute of Canada
- Applied Arts Magazine Award
- Prize Winner for a European Competition for the Redesign of Piazza S. Cosimato in Trastevere
- Winner of Sculpture Competition for Pearson International Airport, Toronto
- Co-Winner of the Canada Council Priz de Rome.

Main Strengths

The main strengths of the School are: its robust co-op –based pre-professional Bachelor’s degree; its strong cultural history focus; its Rome program; and its high quality and very motivated students.

Concerns and Opportunities for Improvement

Although 44 of the 46 conditions for accreditation were met, two need improvement: Human Resource Development and Accessibility.

Human Resource Development: Although the nature and intensity of scholarly and creative activity has increased significantly since the previous accreditation visit, the general faculty profile in Architecture with respect to the university’s expectations and measure of scholarship has, however, changed little over the period. It would appear that most faculty members, by choice or circumstance, do not seek advancement.

Accessibility: Although accessibility is discussed and analysed in the course on Acts and Codes, application of this criterion appears in consistent in the comprehensive design projects suggesting that the principles of accessibility, which are essential aspects of any design regardless of the particular focus of the studio, are not fully integrated into the design work, particularly in early years.